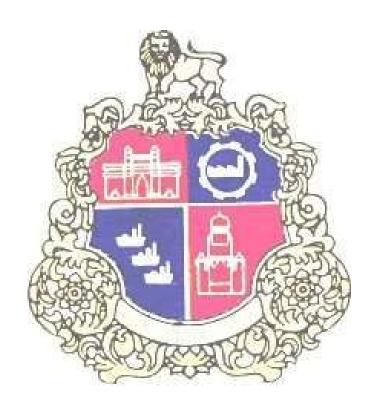
BRIHANMUMBAI MUNICIPAL CORPORATION

HYDRAULIC ENGINEER'S DEPARTMENT



VOLUME - I

UNIFIED SCHEDULE OF RATES FOR
HYDRAULIC ENGINEERING SCHEDULE
2023

PREFACE

Ever since establishment of Bombay Municipal Corporation (now Brihanmumbai Municipal Corporation) in 1888 by the erstwhile British rulers in India, in the last 125 years of the history of its existence B.M.C. has catered to every aspect of the citizen of Mumbai that can be conceived of. Look to heritage buildings like Victoria Terminus (Chhatrapati Shivaji Terminus), Office of Municipal Corporation, Dadabai Naoroji Road, Dr. Babasaheb Ambedkar Road, Marine Drive (Netaji Subhash Road), Prince of Wales Museum, Gateway of India, Malabar Hill Reservoir, Nair Hospital, Lokmanya Tilak Hospital, K.E.M. Hospital etc which are the service centers for the citizens. Municipal Services have also been provided in the suburban and extended suburban areas merged in 1950 & 1957 respectively. The obligatory duties are performed well but still there is need to improve in quantity and quality of services to be provided to the citizens.

Ethical governance and righteous work culture will certainly bring positive changes in design and implementation of projects. One may take an example of the first Municipal Head Quarter Building, that was completed in year 1893, in four years, designed by F W Stevens and the execution part was dealt by Project Engineer Shri Rao Saheb Sitaram Khanderrao Vaidya, who executed the project of 77.70m high structure and saved Rs.68,000/- as against estimated cost of Rs. 11.80 Lakhs.

The need is to work with precision and accuracy. There shall be harmony between planning and execution so as to evolve best economics with focused goals.

B.M.C. is one of the largest local self-government in the Asian Continent. In observance of historic traditions of strong civic activism, with the change in time and living conditions to match with the urbanization, B.M.C. has focused in providing variety of engineering services viz, storm water drain, sewerage, water supply, roads, bridges, solid waste management, environmental services. Beside this, the Corporation is also providing dedicated services in the Health sector by establishing Major and Peripheral hospitals.

To update and modernize the mechanism being used for working on related projects from the stage of conceptualization to execution, the need was realized to revise prevailing "Schedule of Rates" along with specifications which were in operation with various departments and being prepared individually as per their need and revised at different span of time, resulting into various anomalies. To overcome

all these, it was essential to revise the schedule of rates, not only with simple mechanized revision but incorporating major changes to keep up with the pace of urbanization, civilization, construction techniques / mechanization and voluminous developments by restructuring items in the schedule to cover all requirements. This exercise would provide comfort with designs and field necessities and will assist in effective checks on creation of extra items during execution.

A conscious decision has been taken to prepare Unified Schedule of Rates to keep pace with the changing time; a first step forward in this direction. Since long time, there have been demands made by the stake holders like Municipal Engineers and Contractors to remove non-uniformity, anomalies and discrepancies in various schedules of rates for work contracts of various departments of B.M.C. Every department had its own expertise and way of functioning which got reflected in its independent schedule of rates, which however, had no linkage with the fair market rates and schedules of other departments, resulting into extra items and fair rates. In place of earlier 10 Schedule of Rates, the Unified Schedule of Rates is an effort and seeks to rectify the defects, discrepancies and non uniformities which will provide ease and accuracy of estimation to the Engineers.

The Unified Scheduled of Rates is linked with its comprehensive specifications of basic important activities so as to have clarity in execution. These specifications follow a chronology of general scope of the item, material required, processing of material, construction operation, finishing and mode of measurement. Rigid Standard Operating Procedures (S.O.Ps) and complete control on processes will certainly satisfy quality parameter. The need for checking the quality of construction is quite apparent and shall be ensured throughout the construction process. To achieve this, the Unified Scheduled of Rates incorporates quality assurance procedures.

All the rates are also linked to their detailed specifications and wherever required, with drawings. Though there are about 1884 items in SOR-2023 of Hydraulic Engineer (H.E.)., every item is now given a Unique Code No. which will eliminate the repetition.

It has been our endeavour to include all the necessary modern materials and technologies in Unified Schedule of Rates, for example, the concept of green building, which will go a long way to have control on creation of extra items and fair rates. A salient feature of this Unified Schedule of Rates is 'Starring of items' specified categorically which can be used only at certain works or locations.

Another salient feature is 'Dynamic Rate System' which will be based on study of data base of quantities and bidding prices of awarded contracts on the basis of which necessary corrections can be applied to the Unified Schedule of Rates at specified intervals. Accordingly, B.M.C. had finalized Unified Schedule of Rates and same were uploaded in October 2013.

The central government has enacted the law of Goods and Services Tax and issued the directive to implement the goods and services tax with effect from 1st July 2017. With G.S.T. coming into effect force, Octroi, VAT, etc. were abolished and one single tax structure came into effect. The earlier Unified Schedule of Rates 2018 of B.M.C. was revised with the help of M/s Tata consulting Engineers by taking due cognizance of G.S.T. However, during current revision of USOR, GST is excluded and all rates are exclusive of GST.

Highlights of the Revised Schedule:

- The items in schedule of rates are linked to the rate analysis and further the rate analysis is linked to basic material rates, labour rates and machinery rates.
- · Also, various items are linked to their comprehensive specifications of basic important activities and drawings so as to have clarity in execution.
- The new rate analysis format in excel, has been formulated excluding taxes.
- Further revisions in U.S.O.R. shall become a simple process due to the current rate analysis format.
- . All these items are provided with technical specifications, in fixed chronology with unified code for each item with linkages for rate analysis and specifications
- . This will also assist in minimizing and to have effective checks on creation of extra items.
- . This complete exercise is certainly going to facilitate Engineers working in the office for the estimation as well as in execution.



• A new nomenclature with the prefix R3 has been adopted to highlight the revision of schedule.

I am sure that Revised 'Unified Scheduled of Rates' will be a useful in civic governance by B.M.C. This publication shall be of great help and guidance to the officers engaged in the project work of B.M.C.

-sd/-

Hydraulic Engineer Dir.(ES&P)





GENERAL NOTES

A. COMMON GENERAL NOTES

- 1. The schedule of rates will be operative from 01/02/2023
- 2. The unified schedule of rates includes following department:
 - i. Buildings
 - ii. Water Supply Projects
 - iii. Hydraulic Engineering
 - iv. Sewerage Projects
 - v. Storm Water Drainage
 - vi. Roads
 - vii. Bridges
 - viii. Traffic and Signals
 - ix. Mechanical and Electrical
 - x. Garden Works
- Volume-I contains USR, basic rate list and approved makes and Volume-II
 contains specification along with drawings wherever necessary and mandatory
 tests.
- 4. The specification of the items shall be as per latest Indian Standard Codes unless otherwise specified.
- 5. The rates of the items in this schedule of rates are worked out assuming average lead for Greater Mumbai area for all sorts of materials.
- 6. The rates are inclusive of transportation, exclusive of duties, taxes and charges of all Government, Municipal or any other statutory body, applicable from time to timebut exclusive of Works Contract Tax and Labour Cess levied by Government of Maharashtra.
- 7. The rates also includes Overheads @ 5% and Contractor's Profit @10% which is inclusive of labour supervision charges, tools and plants.
- 8. Rates of common material and labour is attached in the Annexure-A in Volume-I.

- 9. The building Schedule of Rates 2023 includes the existing items of FMA, FMB 2009, USOR 2013, USOR 2018, Retrofitting works item with deletion of obsolete items, merger of similar items Fair items for HIC and value addition of new items in line with modern technology and trends in accordance with latest rules, regulation, byelaws etc.
- 10. As per the Government policy the use fly ash is done for framing the items of work in accordance with the latest provisions of IS Codes. Also green building items have been introduced in new schedule to minimize the consumption of energy during construction and occupancy of building and also maintaining ecological balance.
- 11. From safety, health and environment point of view two legged steel tubular scaffolding shall be used, without making any holes in the outer face of the building or any structure. And no extra payment shall be made for works like scaffolding, centering for any height unless otherwise specified.
- 12. All materials shall be as per approved list of BMC or equivalent material having quality standards as per relevant IS codes and shall be of first quality unless otherwise specified.
- 13. Following basic rates are considered in the USR:

i. Cement: Rs. 5,600/ MT

ii. Mild Steel: Rs. 75,000/ MT

iii. HYSD Steel (Fe415): Rs. 52,800/MT

iv. T.M.T. (Fe500): Rs. 50,900/MT

v. Structural Steel: Rs. 56,652/MT

- 14. Rates given in SOR are for estimation purpose. The rates should be finalized with the items uploaded on SAP System.
- 15. Rates of items and specification for excavation, concrete, plaster and brick work shall be referred from common schedule unless and otherwise not mentioned inconcerned department's schedule.

For Earthwork:

16. Lead will be admissible only within BMC limits. The distance between centerlines shall be taken as the lead which shall be measured by the shortest route on the plan and not the actual route taken by the Contractor. Here

Centerlines represents the center point (for area/mass excavation) and the center chainage for linear excavation.

- 17. The Engineer in Charge shall exclusively include these directions in the Tender/Bid document and the Tenders/Bidders shall be insisted to make the declaration of the dumping plot at the time of submission of Bid.
- 18. The Engineer in Charge shall take the quantity in account for the disposal only upto Municipal Limits for the Shortest Route and payment will be made as per the actual distance within municipal limit. The payment will be restricted to the shortest distance upto the Municipal limit for the plot identified outside the Municipal limit.

For Lift:

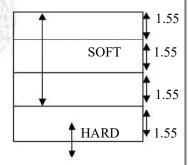
19. For the depth beyond 1.5 meter, the excavated quantity shall be worked out with the base rate plus the rate of respective slab of the lift. This is elaborated as below:

If total depth of excavation is 6 meter, wherein for first 4.5 meter soft soil is there and beyond it hard rock is available, then estimate shall be worked out as follows:

Assumed dimension 1 meter x 1 meter x 6 meter

Upto 4.5 meter depth, amount shall be calculated

For next hard strata excavation (4.5 - 6.0 meter), amount shall be calculated as:



20. Coding of items:

- The Coding procedure for Basic master material is as follows:
 - · Code will start with the common prefix of "MA" which stands for materials

- Followed by Abbreviation code for each schedule of rate for eg B.M. for Building works, SP for Sewerage, WSP for water supply and so on and so forth.
- The first item category in the list will be numbered as "1"
- The last part of the code will be a number starting with "a" to indicate the item number in the master list.
- The alpha numerics will be separated by (dash).
- The code will look like: MA-GN-01
- The Coding procedure for SOR is as follows:
 - Code will start from abbreviation for Department name "HE" or "WSP" or "SP" The USR will be subdivided into chapters according to the item classification; these chapters will be numbered as 1, 2, 3
 - The items under the chapter will be numbered from 1
 - The sub items will be numbered as a, b, c
 - The code will look like R2-CS-CW-1-a-1
- Abbreviations to be used for Department

Sr. No.	Department	Abbreviation
1	Building works/Common Schedule	CS
2	Roads	RW
3	Traffic and Signaling	RT
4	Bridges	BW
5	Water Supply Projects	WSP
6	Hydraulic Engg.	HE
7	Sewerage Projects	SE
8	Storm Water Drains	SWD
9	Mechanical and electrical	ME
10	Garden Works	GW

B. SALIENT FEATURES OF SOR FOR BUILDING WORKS

- 1) All the rates are for all heights and levels unless noted otherwise.
- 2) Chloropyrifos EC 20 has been considered for anti termite treatment.
- Artificial sand (crushed sand) has been considered for flooring bedding and for concrete work.
- 4) All the items are excluding fixtures otherwise not specified in respective item. In such case, items of Hardware section shall be used for fixtures.
- 5) For plastering and mortar work, river sand has been considered.
- 6) For plastering work all the rates are for all heights and levels and architectural decorative surface.
- 7) All external plaster items are including waterproofing compound except plastering item for structures like compound wall, masonry pedestals, pillars, etc.
- 8) Items for ashlar masonry, dewatering, self compacting concrete, vacuum dewatered concrete flooring and TMT steel bars have been introduced.
- 9) Rates of all the items in roofing work are inclusive of staging or scaffolding for any height.
- 10) Non-asbestos cement sheet provided in place of asbestos cement sheet roofing.
- 11) Concreting of pile shall be done with RMC only.
- 12) Rates of piling are inclusive of Chiseling of intermediate local boulders. No separate payment shall be made for the same
- 13) While estimating the quantity for Grouting of bentonite slurry in bored precast piles shall be measured as per bore dia. and pile dia. Exact quantity can be measured while execution and shall be paid accordingly
- 14) Rates considered in concrete items are including pumping of concrete upto placing point.
- 15) New items like Self compacting concrete, vacuum dewatered concrete flooring and TMT steel bars have been introduced.
- 16) The dismantling and demolishing chapter covers only removing old items and repair work covers both removing old items and re-fixing the new.
- 17) For heritage works the rate includes the statutory charges for heritage committee and conservation architect and no extra payment will be made.
- 18) APP (Atactic poly-propylene) modified polymeric membrane water proofing will be used only for trial basis on approval of City Engineer and/or Chief Engineer (B.M.).
- 19)In plumbing waterless urinals, fly ash bricks, fly ash concrete for green building concept have been introduced.

Star Rating:

In view of ambiguity related to choice of quality or grade of materials and subsequent items of works to be used at Ward level projects, Centralized projects or Special projects of and for smooth functioning during planning stage of a project, the new concept of Star Rating has been introduced for building works depending on the life expectancy of building, degree of occupancy of building and comfort to the end user. The buildings or structures rated are as follows:

- i. Two Star **- Ward offices and Central dept. Offices, schools, Small Hospitals, Primary Health Center, Fire Station, Crematorium, Slaughter Houses, Markets, Swimming Pools, Zoos, Chowkies, Libraries, Staff quarters andresidential colonies, Public Toilets and Water tanks.
- ii. Three Star ***- Super specialty Hospitals, Drama Theatres, BMC Mayor's and Officer's bungalow, Heritage Structures, Head Office and Engineer's Hub.

The items or work not marked as two star or three star are assumed to be applicable for all the star buildings or structures mentioned above.

For 3 star rating items specific approval of Dir.(ES&P) shall be taken

A. GENERAL NOTES HYDRAULIC ENGINEERING DEPARTMENT

List of Units used:

Sr. No.	Units	Abbreviation Symbol	Remark
1	Length (Running Meter)	Rmt	
2	Weight (Metric Tonne)	MT	
3	Weight Kilogram	Kg	
4	Length (Meter)	Mtr	
5	Length (Millimeter)	mm	
6	Time	Shift	Shift Refers to a time duration of 8 Hrs
7	Time (Hour)	Hr	
8	Quantity (Numbers)	Each/Nos	Each refers to a single quantity per entity
9	Quantity (Lump sum)	LS	
10	Volume	Cum	
11	Area (Square Meter)	Sqm	

List of Abbreviation Used:

Sr. No.	Units	Abbreviation Symbol	Remark
1	CI	Cast Iron	
2	DI	Ductile Iron	
3	MS	Mild Steel	
4	HDPE	High Density Polyethylene	
5	MDPE	Medium Density Polyethylene	
6	PE	Poly Ethylene	
7	GRP	Glass Reinforced Plastic	
8	GI	Galvanized Iron	
9	SBR	Styrene Butadiene Rubber	
10	S& S	Socket & Spigot	
11	IS	Indian Standard Code	
12	AWWA	American Water Works Association	

13	EEWW	Executive Engineer	
		Water Works	

Salvation Cost for Materials:

The salvation cost of metals have been considered taking into account current market scrap rates.

The salvation cost of different materials is as follows:

CI/DI/GI: 42 Rs/Kg
Mild Steel: 45 Rs/Kg
Gun Metal: 107 Rs/Kg
SS 314/416: 95 Rs/Kg

HDPE material: 25 Rs/Kg

Basis for labour and material Coefficients used:

The labour, material and hire charges coefficients adopted in rate analysis are worked out taking into consideration the coefficients adopted (for similar or same item) in MJP SOR, PWD SOR, Pune Mahanagar Palika SOR and MCGM HE SOR 2011.

The final amount appearing in SOR is completely rounded off, no decimal digits are considered.

The final amount for an item worked out in RA template is rounded up to two decimal places.

Chapter wise Notes, Assumptions and References

Chapter 1: CI/DI Pipes (supplying, laying, jointing works):

• Items related to CI DI Pipes & Specials etc are included in this chapter.

Chapter 2: Mild Steel Pipe Fabrication, Transportation and welding works:

- Items for M.S. Pipe including transportation and lowering in trenches is added.
- The civil work for valve chamber i.e masonry, plastering brickwork concrete work will be paid separately as per relevant item included in Common Schedule.
- Items related to Mild Steel Pipes & Specials etc are included in this chapter

Chapter 3: Valves and appurtenances:

Items related to Valves etc., are included in this chapter.

Chapter 4: Cross Connection Works:

• Items related to Cross Connections Works etc., are included in this chapter.

Chapter 5: GRP Pipe works:

 Items related to GRP Pipes , Fittings & Specials etc., are included in this chapter.

Chapter 6: Cl Mechanical Joints & Specials:

• Items related to CI Mechanical Joints & Specials etc., are included in this chapter.

Chapter 7: Galvanized Iron Pipe works:

• Items related to GI Pipes, Fittings & Specials etc., are included in this chapter.

Chapter 8: Civil General Items & Items for Fire Hydrants:

• Items related to Civil General Items & Items for Fire Hydrants etc., are included in this chapter.

Chapter 9: HDPE/MDPE Pipe and Fitting works:

• Items related to HDPE Pipes, fitting & Specials etc., are included in this chapter.

Chapter 10: Mortar lining works:

Items related to Cement Mortar Lining works etc., are included in this chapter.

Chapter 11: Rain water harvesting works:

• Items related to rain water harvesting works included in this chapter.

Chapter 13: Quick repair works:

 Items related to quick repair works like providing and fixing of quick Tee saddle, handiband couplings, dismantling joints flange adaptors etc included in this chapter.

Chapter 14: Replacing and Refixing:

 Items related to Replacing and refixing works like Gland Packing, Check nut, Spindle etc. included in this chapter.

Chapter 15: Anticorrosive Epoxy Painting and Cathodic Protection:

- Items for Identification of pipeline location & its depth measurement for installation of Cathodic Protection (CP) to prevent External Corrosion.
- Items for soil resistivity survey & route survey for installation of Cathodic Protection system.
- Items for design & detailed engineering drawings of ICCP system.
- Items for Supply & installation of Distributed Horizontal Anode bed & Vertical or Deep well Anode bed of 50 A and 75 A rating.
- Items for Supply & installation of MS Anode Junction Box & MS Cathode Junction Box.
- Items for supplying and Laying of Cables & Restoration of Cable trench required for Cathodic Protection System
- Items for Supplying & Laying of B Class Galvanized Iron (GI) Conduit of 100mm diameter required for Cathodic Protection system.
- Items for Cable terminations required for Cathodic Protection system
- Items for Supply & Installation of 50V / 50A & 75V / 75A transformer rectifier unit (TR Unit)
- Items for Supply & Installation of maintenance free chemical earthing.
- Items for Construction of foundation for Anode Junction Box, Cathode Junction Box and Transformer Rectifier Unit with provision for cable network / passing arrangement
- Items for Supply and Installation of MS Power supply Box
- Items for Pipe to cable connection by Thermit Welding / Pin Brazing with Weld consumables
- Items for Supply and Installation of Permanent Reference Electrode for Transformer Rectifier Unit of Cathodic Protection System

- Item for Liasoning for successful installation & commissioning of Entire Corrosion Protection System.
- Items for Commissioning of overall Cathodic Protection System
- Items for Security & Warehousing of Corrosion Protection materials, equipment's and machineries
- Items for supply, Installation & Commissioning of GSM based Remote Monitoring System to monitor Transformer Rectifier Unit
- Items for Supply, installation, testing and commissioning of Magnesium Sacrificial Anodes.

HE SCHEDULE 2023

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11	R3-HE-11	Rain Water Harvesting Works	R3-HE-11-1 to R3-HE-11- 10	110-111
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15	R3-HE-15	Anticorrosive Epoxy Painting & Cathodic Protection	R3-HE-15-1 to R3-HE-15-35	126-133

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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-1-1	Supplying ISI mark C.I. Class 'LA', S/S pipes of following diameters conforming to IS:1536, excluding all taxes (Central and local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to any municipal stores / site, unloading stacking etc complete in all respect and as directed by Engineer in Charge.		
1	R3-HE-1-1-a	80 mm.	Rmt	1162.00
2	R3-HE-1-1-b	100 mm.	Rmt	1307.00
3	R3-HE-1-1-c	150 mm.	Rmt	1703.00
4	R3-HE-1-1-d	250 mm.	Rmt	3106.00
5	R3-HE-1-1-e	300 mm.	Rmt	4186.00
6	R3-HE-1-1-f	450 mm.	Rmt	8790.00
7	R3-HE-1-1-g	600 mm.	Rmt	12408.00
8	R3-HE-1-1-h	750 mm.	Rmt	35009.00
9	R3-HE-1-1-i	900 mm	Rmt	47736.00
10	R3-HE-1-1-j	1000 mm	Rmt	57348.00
	R3-HE-1-2	Lowering, laying and jointing in trenches C.I. Class 'LA', S/S pipes with CI / MS specials of following diameter including chamfering cut edges of pipes for specials and fixing with Styrene Butadiene Rubber (SBR) gaskets in proper position, grade and alignment etc complete in all respect and as directed by Engineer in Charge including conveyance of material from any municipal stores in Greater Mumbai to site of work and from Stacking Place to the actual lowering site including cost of jointing materials and rubber rings labour, giving hydraulic testing up to 6 kg/sqm pressure etc complete as directed by Engineer in Charge		
11	R3-HE-1-2-a	90 mm	D _m ,4	106.00
12	R3-HE-1-2-b	80 mm. 100 mm.	Rmt Rmt	106.00 126.00
13	R3-HE-1-2-c	150 mm.	Rmt	191.00
14	R3-HE-1-2-d	250 mm.	Rmt	273.00
15	R3-HE-1-2-e	300 mm.	Rmt	284.00
16	R3-HE-1-2-f	450 mm.	Rmt	718.00
17	R3-HE-1-2-f	600 mm.	Rmt	1166.00
18	R3-HE-1-2-g	750 mm.	Rmt	1723.00
	10 110 1 4 5			
		900 mm	Rmt	1 2024 00
19 20	R3-HE-1-2-i R3-HE-1-2-j	900 mm 1000 mm	Rmt Rmt	2024.00 2093.00

Sr.No. Material Code Material Description Unit Circle			SECTION 1		
Supplying, lowering, laying and jointing in trenches C.I. Class T.A.', SS pipes conforming to IS:1536 with CI' MS specials of following diameter including clambering cate deges of pipes for specials and fixing with Styrene Butadiene Rubber (SBR) gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 in proper position, gaskets conforming to IS:5382 & IS:12820 except and as directed by Engineer in Charge in Cha	Sr.No.	Material Code	Material Description	Unit	(Excl. GST and other
LA', SS pipes conforming to IS:1536 with CI / MS specials of following diameter including chamfering cut edges of pipes for specials and fixing with Styrene Butadiene Rubber (SIR) gaskets conforming to IS:5382 & IS:12820 in proper position, grade and alignment etc complete in all respect and as directed by Engineer in Charge including conveyance of material from any municipal stores in Greater Mumbai to site of work, including cost of jointing materials and rubber rings labour, giving hydraulic testing upto 6 kg/sqm pressure etc complete as directed by Engineer in Charge	1	2	3	4	5
22 R3-HE-1-3-b 100 mm. Rmt 1433.00 23 R3-HE-1-3-c 150 mm. Rmt 1893.00 24 R3-HE-1-3-c 250 mm. Rmt 379.00 25 R3-HE-1-3-c 300 mm. Rmt 4469.00 26 R3-HE-1-3-c 450 mm. Rmt 379.00 27 R3-HE-1-3-c 600 mm. Rmt 3573.00 28 R3-HE-1-3-c 750 mm. Rmt 36732.00 29 R3-HE-1-3-c 900 mm Rmt 49759.00 30 R3-HE-1-3-c 1000 mm Rmt 49759.00 30 R3-HE-1-3-c 1000 mm Rmt 49759.00 40 R3-HE-1-4-1 D.I. K-7 R3-HE-1-4-1 D.I. K-7 31 R3-HE-1-4-1-a 80 mm. Rmt 881.00 32 R3-HE-1-4-1-b 100 mm. Rmt 498.00 33 R3-HE-1-4-1-b 100 mm. Rmt 499.00 34 R3-HE-1-4-1-b 100 mm. Rmt 499.00 35 R3-HE-1-4-1-b 100 mm. Rmt 499.00 36 R3-HE-1-4-1-b 250 mm. Rmt 2361.00 37 R3-HE-1-4-1-f 450 mm. Rmt 2376.00 38 R3-HE-1-4-1-f 450 mm. Rmt 2376.00 39 R3-HE-1-4-1-f 190 mm. Rmt 2376.00 30 R3-HE-1-4-1-f 190 mm. Rmt 2376.00 31 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 32 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 33 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 34 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 35 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 36 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 37 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 38 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 39 R3-HE-1-4-1-f 250 mm. Rmt 21705.00 R3-HE-1-4-1-f 250 mm. Rmt 21705.00 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 46 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 46 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 47 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 48 R3-HE-1-4-2-c 250 mm. Rmt 2392.00			'LA', S/S pipes conforming to IS:1536 with CI / MS specials of following diameter including chamfering cut edges of pipes for specials and fixing with Styrene Butadiene Rubber (SBR) gaskets conforming to IS:5382 & IS:12820 in proper position, grade and alignment etc complete in all respect and as directed by Engineer in Charge including conveyance of material from any municipal stores in Greater Mumbai to site of work, including cost of jointing materials and rubber rings labour, giving hydraulic testing upto 6 kg/sqm pressure etc complete as		
22 R3-HE-1-3-b 100 mm. Rmt 1433.00 23 R3-HE-1-3-c 150 mm. Rmt 1893.00 24 R3-HE-1-3-c 250 mm. Rmt 379.00 25 R3-HE-1-3-c 300 mm. Rmt 4469.00 26 R3-HE-1-3-c 450 mm. Rmt 379.00 27 R3-HE-1-3-c 600 mm. Rmt 3573.00 28 R3-HE-1-3-c 750 mm. Rmt 36732.00 29 R3-HE-1-3-c 900 mm Rmt 49759.00 30 R3-HE-1-3-c 1000 mm Rmt 49759.00 30 R3-HE-1-3-c 1000 mm Rmt 49759.00 40 R3-HE-1-4-1 D.I. K-7 R3-HE-1-4-1 D.I. K-7 31 R3-HE-1-4-1-a 80 mm. Rmt 881.00 32 R3-HE-1-4-1-b 100 mm. Rmt 498.00 33 R3-HE-1-4-1-b 100 mm. Rmt 499.00 34 R3-HE-1-4-1-b 100 mm. Rmt 499.00 35 R3-HE-1-4-1-b 100 mm. Rmt 499.00 36 R3-HE-1-4-1-b 250 mm. Rmt 2361.00 37 R3-HE-1-4-1-f 450 mm. Rmt 2376.00 38 R3-HE-1-4-1-f 450 mm. Rmt 2376.00 39 R3-HE-1-4-1-f 190 mm. Rmt 2376.00 30 R3-HE-1-4-1-f 190 mm. Rmt 2376.00 31 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 32 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 33 R3-HE-1-4-1-f 250 mm. Rmt 2376.00 34 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 35 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 36 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 37 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 38 R3-HE-1-4-1-f 250 mm. Rmt 2370.00 39 R3-HE-1-4-1-f 250 mm. Rmt 21705.00 R3-HE-1-4-1-f 250 mm. Rmt 21705.00 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 46 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 46 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 47 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 48 R3-HE-1-4-2-c 250 mm. Rmt 2392.00	21	R3-HE-1-3-a	80 mm.	Rmt	1268.00
23					
24 R3-HE-1-3-d 250 mm. Rmt 3379.00 25 R3-HE-1-3-e 300 mm. Rmt 4469.00 26 R3-HE-1-3-f 450 mm. Rmt 4469.00 27 R3-HE-1-3-g 600 mm. Rmt 13573.00 28 R3-HE-1-3-j 500 mm. Rmt 36732.00 29 R3-HE-1-3-j 900 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 59440.00 30 R3-HE-1-3-j 1000 mm Rmt 49759.00 40 R3-HE-1-3-j 1000 mm Rmt 49759.00 50 Froviding & Supplying Ductile Iron pipes (K-7/K-9) of following diameters and conforming to IS : 8329 & SBR Ring Gasket shall confirm IS : 5382 & IS : 12820 excluding all taxes (Central and local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to any municipal stores / site, unloading stacking etc complete in all respect and as directed by Engineer in Charge					
25 R3-HE-1-3-e 300 mm. Rmt 4469.00 26 R3-HE-1-3-f 450 mm. Rmt 9508.00 27 R3-HE-1-3-h 750 mm. Rmt 13573.00 28 R3-HE-1-3-h 750 mm. Rmt 36732.00 29 R3-HE-1-3-h 900 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 59440.00 30 R3-HE-1-3-j 1000 mm Rmt 59440.00 31 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4 R3-HE-1-4-1 R3-HE-1-4-2					
R3-HE-1-3-f					
27 R3-HE-1-3-g 600 mm. Rmt 13573.00 28 R3-HE-1-3-h 750 mm. Rmt 36732.00 30 R3-HE-1-3-j 1000 mm Rmt 49759.00 30 R3-HE-1-3-j 1000 mm Rmt 59440.00 31 R3-HE-1-3-j 1000 mm Rmt 59440.00 32 R3-HE-1-3-j 1000 mm Rmt 59440.00 33 R3-HE-1-4-4 Central and local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to any municipal stores / site, unloading stacking etc complete in all respect and as directed by Engineer in Charge R3-HE-1-4-1 D.I. K-7 Rmt 881.00 32 R3-HE-1-4-1-b 100 mm. Rmt 990.00 33 R3-HE-1-4-1-b 100 mm. Rmt 1418.00 34 R3-HE-1-4-1-c 50 mm. Rmt 2361.00 35 R3-HE-1-4-1-c 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-g 600 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-g 500 mm. Rmt 17683.00 39 R3-HE-1-4-1-j 1000 mm. Rmt 12732.00 39 R3-HE-1-4-1-j 1000 mm. Rmt 17683.00 40 R3-HE-1-4-2-a 80 mm. Rmt 1748.00 41 R3-HE-1-4-2-a 80 mm. Rmt 1134.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 44 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 45 R3-HE-1-4-2-c 250 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 47 R3-HE-1-4-2-f 450 mm. Rmt 3639.00 48 R3-HE-1-4-2-f 450 mm. Rmt 3639.00 49 R3-HE-1-4-2-f 450 mm. Rmt 3639.00 40 R3-HE-1-4-2-f 250 mm. Rmt 3639.00 40 R3-HE-1-4-2-f 250 mm. Rmt 3639.00 40 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 40 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 41 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 42 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 43 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 44 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 45 R3-HE-1-4-2-f 450 mm. Rmt 6449.00 47 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
R3-HE-1-3-h 750 mm. Rmt 36732.00					
R3-HE-1-3-i 900 mm					
R3-HE-1-3-j 1000 mm					
Providing & Supplying Ductile Iron pipes (K-7/K-9) of following diameters and conforming to IS: 8329 & SBR Ring Gasket shall confirm IS: 5382 & IS: 12820 excluding all taxes (Central and local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to any municipal stores / site, unloading stacking etc complete in all respect and as directed by Engineer in Charge R3-HE-1-4-1	30				
R3-HE-1-4-1		· ·			
31 R3-HE-1-4-1-a 80 mm. Rmt 881.00 32 R3-HE-1-4-1-b 100 mm. Rmt 990.00 33 R3-HE-1-4-1-c 150 mm. Rmt 1418.00 34 R3-HE-1-4-1-d 250 mm. Rmt 2361.00 35 R3-HE-1-4-1-e 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-j 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-b 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. R		R3-HE-1-4	following diameters and conforming to IS: 8329 & SBR Ring Gasket shall confirm IS: 5382 & IS: 12820 excluding all taxes (Central and local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to any municipal stores / site, unloading stacking etc complete in all respect and as		
31 R3-HE-1-4-1-a 80 mm. Rmt 881.00 32 R3-HE-1-4-1-b 100 mm. Rmt 990.00 33 R3-HE-1-4-1-c 150 mm. Rmt 1418.00 34 R3-HE-1-4-1-d 250 mm. Rmt 2361.00 35 R3-HE-1-4-1-e 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-j 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-b 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. R					
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33 R3-HE-1-4-1-c 150 mm. Rmt 1418.00 34 R3-HE-1-4-1-d 250 mm. Rmt 2361.00 35 R3-HE-1-4-1-e 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2-b D.I. K-9 Rmt 978.00 41 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1622.00 43 R3-HE-1-4-2-c 150 mm. Rmt 2392.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
34 R3-HE-1-4-1-d 250 mm. Rmt 2361.00 35 R3-HE-1-4-1-e 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2-a 80 mm. Rmt 978.00 41 R3-HE-1-4-2-a 80 mm. Rmt 1134.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1622.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
35 R3-HE-1-4-1-e 300 mm. Rmt 2976.00 36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-b 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-c 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
36 R3-HE-1-4-1-f 450 mm. Rmt 5308.00 37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-b 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-c 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
37 R3-HE-1-4-1-g 600 mm. Rmt 8315.00 38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
38 R3-HE-1-4-1-h 750 mm. Rmt 12732.00 39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
39 R3-HE-1-4-1-i 900 mm Rmt 17683.00 40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
40 R3-HE-1-4-1-j 1000 mm Rmt 21705.00 R3-HE-1-4-2 D.I. K-9 Rmt 978.00 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
R3-HE-1-4-2 D.I. K-9 41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00		10 11D 1 -T-1-J	1000 mm	MIII	21/05.00
41 R3-HE-1-4-2-a 80 mm. Rmt 978.00 42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00		R3-HE-1-4-2	D.I. K-9		
42 R3-HE-1-4-2-b 100 mm. Rmt 1134.00 43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00	41			Rmt	978.00
43 R3-HE-1-4-2-c 150 mm. Rmt 1622.00 44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
44 R3-HE-1-4-2-d 250 mm. Rmt 2392.00 45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
45 R3-HE-1-4-2-e 300 mm. Rmt 3639.00 46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00					
46 R3-HE-1-4-2-f 450 mm. Rmt 6449.00	45				
47 R3-HE-1-4-2-g 600 mm. Rmt 9974.00		R3-HE-1-4-2-f	450 mm.	Rmt	6449.00
	47	R3-HE-1-4-2-g	600 mm.	Rmt	9974.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
48	R3-HE-1-4-2-h			14295.00
		750 mm.	Rmt	
49	R3-HE-1-4-2-i	900 mm	Rmt	18959.00
50	R3-HE-1-4-2-j	1000 mm	Rmt	23221.00
	R3-HE-1-5	Loading, transporting on site, unloading, lowering in trenches, assembling and jointing Ductile Iron pipes (K-9) including conveyance of material from any municipal stores in Greater Mumbai to site of work and from Stacking Place to the actual lowering site including chamfering cut edges of pipes and specials and fixing with Styrene Butadiene Rubber (SBR) Ring Gaskets for following diameters (Tyton joint pipes). The pipe shall confirm IS: 8329 & SBR Ring Gasket shall confirm IS: 5382 & IS: 12820. The rate is inclusive of cleaning, flushing & testing of water mains upto 6 kg/sq.cm etc complete in all respect and as directed by Engineer in Charge (Pipe shall be coated with cement mortar lining from inside and zinc coating followed by bitumen coating from outside as specified).		
	D0 115 4 #			10600
51	R3-HE-1-5-a	80 mm.	Rmt	106.00
52	R3-HE-1-5-b	100 mm.	Rmt	126.00
53	R3-HE-1-5-c	150 mm.	Rmt	191.00
54	R3-HE-1-5-d	250 mm.	Rmt	273.00
55	R3-HE-1-5-e	300 mm.	Rmt	284.00
56	R3-HE-1-5-f	450 mm.	Rmt	765.00
57	R3-HE-1-5-g	600 mm.	Rmt	1166.00
58	R3-HE-1-5-h	750 mm.	Rmt	1723.00
59	R3-HE-1-5-i	900 mm	Rmt	2024.00
60				
60	R3-HE-1-5-j	1000 mm	Rmt	2093.00
	R3-HE-1-6	Providing & Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing Ductile Iron pipes (K-9) including chamfering cut edges of pipes and specials and fixing with Styrene Butadiene Rubber (SBR) Ring Gaskets for following diameters (Tyton joint pipes). The pipe shall confirm IS: 8329 & SBR Ring Gasket shall confirm IS: 5382 & IS: 12820. The rate is inclusive of cleaning, flushing & testing of water mains upto 6 kg/sq.cm etc complete in all respect and as directed by Engineer in Charge (Pipe shall be coated with cement mortar lining from inside and zinc coating followed by bitumen coating from outside as specified).		
61	R3-HE-1-6-a	80 mm.	Rmt	1083.00
62	R3-HE-1-6-b	100 mm.	Rmt	1260.00
63	R3-HE-1-6-c	150 mm.	Rmt	1812.00
64				
	R3-HE-1-6-d	250 mm.	Rmt	2665.00
65	R3-HE-1-6-e	300 mm.	Rmt	3923.00
66	R3-HE-1-6-a-f	450 mm.	Rmt	7214.00
67	R3-HE-1-6-a-g	600 mm.	Rmt	11139.00
68	R3-HE-1-6-a-h	750 mm.	Rmt	16018.00
69	R3-HE-1-6-a-i	900 mm	Rmt	20982.00
70	R3-HE-1-6-a-j	1000 mm	Rmt	25314.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
-	R3-HE-1-7	Supplying at any municipal stores or work site Styrene Butadiene Rubber Ring Gaskets as per IS: 5382 and 12820 etc complete in all respect and as directed by Engineer in Charge		
71	R3-HE-1-7-a	80 mm.	Each	52.00
72	R3-HE-1-7-b	100 mm.	Each	59.00
73	R3-HE-1-7-c	150 mm.	Each	74.00
74	R3-HE-1-7-d	250 mm.	Each	147.00
75	R3-HE-1-7-e	300 mm.	Each	199.00
76	R3-HE-1-7-f	450 mm.	Each	367.00
77	R3-HE-1-7-g	600 mm.	Each	661.00
78	R3-HE-1-7-h	750 mm.	Each	1233.00
78	R3-HE-1-7-i	900 mm	Each	1909.00
80		1000 mm		2202.00
80	R3-HE-1-7-j	1000 Hilli	Each	2202.00
	R3-HE-1-8	Providing push-on-joints to Centrifugally (Spun) C.I. pipes or Ductile iron pipes including the cost of Styrene Butadiene Rubber (SBR) ring gasket, applying grease, testing etc complete in all respect and as directed by Engineer in Charge .(Gasket should conform to IS: 5382 and 12820)		
81	R3-HE-1-8-a	80 mm.	Each	203.00
82	R3-HE-1-8-b	100 mm.	Each	210.00
83	R3-HE-1-8-c	150 mm.	Each	246.00
84	R3-HE-1-8-d	250 mm.	Each	317.00
85	R3-HE-1-8-e	300 mm.	Each	395.00
86	R3-HE-1-8-f	450 mm.	Each	443.00
87	R3-HE-1-8-g	600 mm.	Each	881.00
88	R3-HE-1-8-h	750 mm.	Each	1493.00
	R3-HE-1-9	Cutting of cast iron and CI/DI pipes of all classes with cutting tools, cutting machine and chamfering the edges etc complete in all respect and as directed by Engineer in Charge and for following diameters.		100.00
89	R3-HE-1-9-a	80 mm.	Each	499.00
90	R3-HE-1-9-b	100 mm.	Each	607.00
91	R3-HE-1-9-c	150 mm.	Each	694.00
92	R3-HE-1-9-d	250 mm.	Each	844.00
93	R3-HE-1-9-e	300 mm.	Each	1070.00
94	R3-HE-1-9-f	450 mm.	Each	1469.00
95	R3-HE-1-9-g	600 mm.	Each	2282.00
96	R3-HE-1-9-h	750 mm.	Each	3042.00
97	R3-HE-1-9-i	900 mm	Each	3596.00
98	R3-HE-1-9-j	1000 mm	Each	3639.00
	R3-HE-1-10	Providing and supplying ISI standard CI flanged / S& S specials conforming to IS 1538 excluding all taxes (Central and local), railway freight, insurance, unloading from railway wagon, loading into truck transport to municipal store /site, unloading stacking etc complete in all respect and as directed by Engineer in Charge		

		SECTION 1		
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
		S & S Specials / Plain Ended		
99	R3-HE-1-10-a	S & S specials up to 300 mm dia	Kg	86.00
100	R3-HE-1-10-b	S & S specials over 300 mm dia	Kg	115.00
		Flanged Specials	<u> </u>	
101	R3-HE-1-10-c	Flanged specials up to 300 mm dia	Kg	116.00
102	R3-HE-1-10-d	Flanged specials over 300 mm dia	Kg	124.00
102	16 112 1 10 4	Transpos specials over 500 mm and	115	1200
103	R3-HE-1-11	Loading from any municipal stores in Greater Mumbai, transporting on site, lowering in trenches and assembling of C.I. specials, D.I. specials or M. S. specialsetc complete in all respect and as directed by Engineer in Charge	Kg	14.00
	R3-HE-1-12	Providing & Supplying, loading, transporting on site, unloading, lowering in trenches and assembling of C.I. specials Conforming IS: 1538 etc complete in all respect and as directed by Engineer in Charge		
104	R3-HE-1-12-a	S & S specials upto 300 mm dia	Kg	99.00
105	R3-HE-1-12-b	S & S specials over 300 mm dia	Kg	129.00
106	R3-HE-1-12-c	Flanged specials upto 300 mm dia	Kg	130.00
107	R3-HE-1-12-d	Flanged specials above 300 mm dia	Kg	137.00
108	R3-HE-1-13	Providing & Supplying D.I. pipe specials & fittings of K-12 class with internal cement mortar lining and external Zinc coating with finishing layer of Bitumen coating, sealing rubber gasket of S.B.R, complete with cast iron follower gland and M. S. nut bolts coated suitable for D.I.pipes excluding all taxes etc complete in all respect and as directed by Engineer in Charge and as per IS-9523.	Kg	299.00
109	R3-HE-1-14	Providing & Supplying loading, transporting on site, unloading, lowering in trenches and assembling of D.I. pipe specials & fittings of K-12 class with internal cement mortar lining and external Zinc coating with finishing layer of Bitumen coating, sealing rubber gasket of S.B.R, complete with cast iron follower gland and M. S. nut bolts coated suitable for D.I.pipes excluding all taxes etc complete in all respect and as directed by Engineer in Charge and as per IS-9523.	Kg	312.00
110	R3-HE-1-15	Loading lead from any municipal stores, transporting to site of work and jointing of CI / MS pipes or specials etc. with spun yarn and molten lead including caulking etc. Complete for diameters. (Excluding cost of lead) etc complete in all respect and as directed by Engineer in Charge		401.00
110	R3-HE-1-15-a	80 mm.	Each Each	431.00
111	R3-HE-1-15-b R3-HE-1-15-c	100 mm. 150 mm.	Each	467.00 489.00
113	R3-HE-1-15-d	250 mm.	Each	734.00
	R3-HE-1-15-e	300 mm.	Each	795.00
114	1(3-1112-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			1 ////////

Sr.No. Material Code Material Description Unit (Excl. GS and othe Taxes)		ı			
The complete is all respect and as directed by Engineer in Charge Each 1911.00	Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
The complete is all respect and as directed by Engineer in Charge Each 1911.00	1	2	3	4	5
117 R3-HE-1-15-h 750 mm Each 2675.00 118 R3-HE-1-15-j 1000 mm Each 3009.00 119 R3-HE-1-15-j 1000 mm Each 3181.00 R3-HE-1-16 R3-HE-1-16-h 1000 mm Each 3181.00 R3-HE-1-16 R3-HE-1-16-h 100 mm Each 1000 mm Each 1000 mm 120 R3-HE-1-16-h 100 mm Each 1000 mm Each 1000 mm Each 1000 mm 121 R3-HE-1-16-h 100 mm Each 1000 mm Each 1000 mm Each 1000 mm 122 R3-HE-1-16-h 250 mm Each 1639.00 123 R3-HE-1-16-h 250 mm Each 1639.00 124 R3-HE-1-16-h 300 mm Each 1897.00 125 R3-HE-1-16-h 450 mm Each 5243.00 126 R3-HE-1-16-h 750 mm Each 5243.00 127 R3-HE-1-16-h 750 mm Each 6460.00 128 R3-HE-1-16-h 1000 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 8631.00 130 R3-HE-1-17-h 100 mm Each 9516.00 131 R3-HE-1-17-a 80 mm Each 331.00 132 R3-HE-1-17-b 150 mm Each 480.00 133 R3-HE-1-17-c 250 mm Each 730.00 134 R3-HE-1-17-d 250 mm Each 153.00 135 R3-HE-1-17-d 250 mm Each 153.00 136 R3-HE-1-17-d 250 mm Each 250.00 137 R3-HE-1-17-h 750 mm Each 369.20 137 R3-HE-1-17-h 750 mm Each 4910.00 138 R3-HE-1-17-h 750 mm Each 4910.00 139 R3-HE-1-17-h 750 mm Each 4910.00 130 R3-HE-1-17-h 750 mm Each 4910.00 130 R3-HE-1-17-h 750 mm Each 4910.00 130 R3-HE-1-17-h 750 mm Each 49	_	_			_
R3-HE-1-15-j 900 mm	117				2675.00
Make lead and spun yarn joints for following nominal dia C.I. S&S pipes and specials including supply of jointing materials (refined pig lead and spun yarn) caulking and testing of joints etc complete in all respect and as directed by Engineer in Charge	118		900 mm	Each	3009.00
R3-HE-1-16	119	R3-HE-1-15-j	1000 mm	Each	3181.00
R3-HE-1-16					
121 R3-HE-1-16-b 100 mm. Each 836.00 122 R3-HE-1-16-c 150 mm. Each 1071.00 123 R3-HE-1-16-d 250 mm. Each 1639.00 124 R3-HE-1-16-e 300 mm. Each 1897.00 125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 646.00 128 R3-HE-1-16-h 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 8631.00 129 R3-HE-1-17-h 1000 mm Each 9516.00 130 R3-HE-1-17-a 80 mm. Each 480.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 480.00 133 R3-HE-1-17-c 250 mm. Each 730.00 134 R3-HE-1-17-b 250 mm. Each 1153.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 2597.00 137 R3-HE-1-17-b 750 mm. Each 4910.00 138 R3-HE-1-17-b 750 mm. Each 4910.00 139 R3-HE-1-17-b 750 mm. Each 4910.00 130 R3-HE-1-17-b 750 mm. Each 4910.00 131 R3-HE-1-17-b 750 mm. Each 4910.00 132 R3-HE-1-17-b 750 mm. Each 4910.00 133 R3-HE-1-17-b 750 mm. Each 4910.00 134 R3-HE-1-17-b 750 mm. Each 4910.00 137 R3-HE-1-17-b 750 mm. Each 4910.00 138 R3-HE-1-17-b 750 mm. Each 4910.00 139 R3-HE-1-17-b 750 mm. Each 4910.00 130 R3-HE-1-17-b 750 mm. Each 4910.00 131 R3-HE-1-17-b 750 mm. Each 4910.00 131 R3-HE-1-17-b 750 mm. Each 4910.00 131 R3-HE-1-17-b 750 mm. Each 4910.00 13		R3-HE-1-16	S&S pipes and specials including supply of jointing materials (refined pig lead and spun yarn) caulking and testing of joints etc		
121 R3-HE-1-16-b 100 mm. Each 836.00 122 R3-HE-1-16-c 150 mm. Each 1071.00 123 R3-HE-1-16-d 250 mm. Each 1639.00 124 R3-HE-1-16-e 300 mm. Each 1897.00 125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-h 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 8631.00 129 R3-HE-1-17-h 1000 mm Each 9516.00 130 R3-HE-1-17-a 80 mm. Each 480.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 480.00 133 R3-HE-1-17-c 150 mm. Each 480.00 134 R3-HE-1-17-d 250 mm. Each 1153.00 135 R3-HE-1-17-d 250 mm. Each 1252.00 136 R3-HE-1-17-d 450 mm. Each 2597.00 137 R3-HE-1-17-d 750 mm. Each 4910.00 138 R3-HE-1-17-d 750 mm. Each 4910.00 139 R3-HE-1-17-d 750 mm. Each 4910.00 130 R3-HE-1-17-d 750 mm. Each 4910.00 131 R3-HE-1-17-d 750 mm. Each 4910.00 132 R3-HE-1-17-d 750 mm. Each 4910.00 133 R3-HE-1-17-d 750 mm. Each 4910.00 134 R3-HE-1-17-d 750 mm. Each 4910.00 135 R3-HE-1-17-d 750 mm. Each 4910.00 136 R3-HE-1-17-d 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00	120	R3-HE-1-16-a	80 mm.	Each	728.00
122 R3-HE-1-16-c 150 mm. Each 1071.00 123 R3-HE-1-16-d 250 mm. Each 1639.00 124 R3-HE-1-16-e 300 mm. Each 1897.00 125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-17 Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 331.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-d 250 mm. Each 1252.00 135 R3-HE-1-17-g 600 mm. Each 2597.00 136 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00 131 R3-HE-1-17-h 750 mm. Each 4910.00 132 R3-HE-1-17-h 750 mm. Each 4910.00 133 R3-HE-1-17-h 750 mm. Each 4910.00 134 R3-HE-1-17-h 750 mm. Each 4910.00 135 R3-HE-1-17-h 750 mm. Each 4910.00 136 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 140 R3-HE-1-17-h 750 mm. Each 4910.00 150 R3-HE-1-17-h 750 mm. Each 4910.00					
123 R3-HE-1-16-d 250 mm. Each 1639.00 124 R3-HE-1-16-e 300 mm. Each 1897.00 125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00					
124 R3-HE-1-16-e 300 mm. Each 1897.00 125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-17 Froviding and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 480.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-d 250 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00 131 R3-HE-1-17-h 750 mm. Each 4910.00 132 R3-HE-1-17-h 750 mm. Each 4910.00 133 R3-HE-1-17-h 750 mm. Each 4910.00 134 R3-HE-1-17-h 750 mm. Each 4910.00 135 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00					
125 R3-HE-1-16-f 450 mm. Each 3904.00 126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-17 Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 480.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00 131 R3-HE-1-17-h 750 mm. Each 4910.00 132 R3-HE-1-17-h 750 mm. Each 4910.00 133 R3-HE-1-17-h 750 mm. Each 4910.00 134 R3-HE-1-17-h 750 mm. Each 4910.00 135 R3-HE-1-17-h 750 mm. Each 4910.00 136 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 140 R3-HE-1-17-h 750 mm. Each 4910.00 150 R3-HE-1-17-h 750 mm. Each 4910.00					
126 R3-HE-1-16-g 600 mm. Each 5243.00 127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-j 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 331.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00					
127 R3-HE-1-16-h 750 mm. Each 6460.00 128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-17 Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 480.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 138 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00 131 R3-HE-1-17-h 750 mm. Each 4910.00 132 R3-HE-1-17-h 750 mm. Each 4910.00 134 R3-HE-1-17-h 750 mm. Each 4910.00 135 R3-HE-1-17-h 750 mm. Each 4910.00 136 R3-HE-1-17-h 750 mm. Each 4910.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 130 R3-HE-1-17-h 750 mm. Each 4910.00					
128 R3-HE-1-16-i 900 mm Each 8631.00 129 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-16-j 1000 mm Each 9516.00 R3-HE-1-17 Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm. Each 331.00 131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00 139 R3-HE-1-17-h 750 mm. Each 4910.00 140 R3-HE-1-17-h 750 mm. Each 4910.00 150 R3-HE-1-17-h 750 mm. Each 4910.00					
R3-HE-1-16-j 1000 mm Each 9516.00					8631.00
Providing and making flanged joints to flanged C.I./D.I./M.S. pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge 130 R3-HE-1-17-a 80 mm.					
R3-HE-1-17 pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in Charge					700000
131 R3-HE-1-17-b 100 mm. Each 480.00 132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00		R3-HE-1-17	pipes of all classes/specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc complete in all respect and as directed by Engineer in		
132 R3-HE-1-17-c 150 mm. Each 730.00 133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00	130	R3-HE-1-17-a	80 mm.	Each	331.00
133 R3-HE-1-17-d 250 mm. Each 1153.00 134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00	131	R3-HE-1-17-b	100 mm.	Each	480.00
134 R3-HE-1-17-e 300 mm. Each 1252.00 135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00	132	R3-HE-1-17-c		Each	730.00
135 R3-HE-1-17-f 450 mm. Each 2597.00 136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00	133	R3-HE-1-17-d	250 mm.	Each	1153.00
136 R3-HE-1-17-g 600 mm. Each 3692.00 137 R3-HE-1-17-h 750 mm. Each 4910.00	134	R3-HE-1-17-e	300 mm.	Each	1252.00
137 R3-HE-1-17-h 750 mm. Each 4910.00	135	R3-HE-1-17-f	450 mm.	Each	2597.00
	136	R3-HE-1-17-g	600 mm.	Each	3692.00
	137	R3-HE-1-17-h	750 mm.	Each	4910.00
	138	R3-HE-1-17-i	900 mm	Each	8285.00
	139	R3-HE-1-17-j		Each	9696.00

		SECTION 2		
				Rate in Rs. (Excl.
Sr.No.	Material Code	Material Description	Unit	GST and other
51.110.	Widterial Code	Material Description	Omi	Taxes)
1	2	3	4	5
		Supplying mild steel pipes to site of work / any municipal store		
		fabricated in any ISI/ ISO certified company, from mild steel		
		plates of approved quality and thickness, confirming to IS 3589.		
		The M.S plates shall be procured only from Jindal, TATA		
		mettalics, SAIL, ESSAR or Ispat Steel. The test certificates and		
		Challans from the manufacturer of plates shall be submitted to		
		the corporation. The item includes marking, cutting, rolling		
		bending, welding using automatic submerged arc type welding		
	R3-HE-2-1	machine, factory testing of pipes, loading at fabrication yard/		
	К3-ПЕ-2-1	factory transportation to site of work/ any municipal store using		
		truck/ trailer, unloading and stacking near place of work etc		
		complete as specified and as directed by Engineer in Charge		
		Each pipe shall be about 5 to 7.5 mtr. long, fabricated as per		
		IS:3589 and suitable for 10 kg/cm2 working pressure(spirally		
		welded pipes fabricated from strips are not acceptable)		
1	R3-HE-2-1-a	80 mm. 6 mm thick	Rmt	920.00
2	R3-HE-2-1-b	100 mm. 6 mm thick	Rmt	1135.00
3	R3-HE-2-1-c	150 mm. 6 mm thick	Rmt	1667.00
4	R3-HE-2-1-d	225 mm-250 mm. 6 mm thick	Rmt	2739.00
5	R3-HE-2-1-e	300 mm. 6 mm thick	Rmt	3276.00
6	R3-HE-2-1-f	450 mm. 6 mm thick	Rmt	4882.00
7	R3-HE-2-1-g	600 mm. 6 mm thick	Rmt	6493.00
8	R3-HE-2-1-h	750 mm. 7 mm thick	Rmt	9462.00
10	R3-HE-2-1-i R3-HE-2-1-i	750 mm. 8 mm thick 900 mm. 7 mm thick	Rmt Rmt	10793.00 11343.00
11	R3-HE-2-1-J R3-HE-2-1-k	900 mm. / mm thick	Rmt	13020.00
12	R3-HE-2-1-I	1200 mm. 8 mm thick	Rmt	17348.00
13	R3-HE-2-1-m	1200 mm. 10 mm thick	Rmt	21720.00
14	R3-HE-2-1-m	1200 mm. 12 mm thick	Rmt	25970.00
15	R3-HE-2-1-0	1500 mm. 10 mm thick	Rmt	26937.00
16	R3-HE-2-1-p	1500 mm. 12 mm thick	Rmt	32234.00
17	R3-HE-2-1-q	600 mm. 8 mm thick	Rmt	8630.00
18	R3-HE-2-1-r	600 mm. 10 mm thick	Rmt	10780.00
19	R3-HE-2-1-s	750 mm. 10 mm thick	Rmt	13465.00
20	R3-HE-2-1-t	900 mm. 10 mm thick	Rmt	16129.00
21	R3-HE-2-1-u	900 mm. 12 mm thick	Rmt	19337.00
22	R3-HE-2-1-v	1200 mm 16 mm thick	Rmt	34382.00
23	R3-HE-2-1-w	1500 mm. 16 mm thick	Rmt	42869.00
24	R3-HE-2-1-x	1500 mm. 20 mm thick	Rmt	53556.00
		-		•

			Rate in Rs. (Excl.
Material Code	Material Description	Unit	GST and other
1714101141 0 0 400	Internal 2 conferen	01111	Taxes)
2	3	4	5
R3-HE-2-2	Supplying mild steel specials of required length and degree to site of work / any municipal store fabricated in any ISI/ ISO certified company, from mild steel plates of approved quality and thickness, confirming to IS 3589. The M.S. plates shall bare corresponding ISI mark. The item includes marking, cutting, fit up, rolling bending, welding using automatic submerged arc type welding machine, factory testing of pipes, loading at fabrication yard/ factory transportation to site of work/ any municipal store using truck/ trailer, unloading and stacking near place of work etc complete as specified and as directed by Engineer in Charge.Fabrication work to be carried out as per IS:3589 and suitable for 10 kg/cm2 working pressure.		
R3-HE-2-2-a	Suitable for 80 mm dia 6 mm thick pine	Mtr	944.00
			1164.00
	1 1		1710.00
			2810.00
			3360.00
		Mtr	5007.00
	11	Mtr	6659.00
R3-HE-2-2-h	* *	Mtr	9705.00
R3-HE-2-2-i	* *	Mtr	11633.00
R3-HE-2-2-j	* *	Mtr	11126.00
R3-HE-2-2-k	Suitable for 900 mm dia 8 mm thick pipe.	Mtr	13353.00
R3-HE-2-2-1		Mtr	17792.00
R3-HE-2-2-m	Suitable for 1200 mm dia 10 mm thick pipe.	Mtr	22277.00
R3-HE-2-2-n	Suitable for 600 mm dia 8 mm thick pipe.	Mtr	8851.00
R3-HE-2-2-o	Suitable for 600 mm dia 10 mm thick pipe.	Mtr	11056.00
R3-HE-2-2-0	Suitable for 750 mm dia 10 mm thick pipe.	Mtr	13810.00
R3-HE-2-2-q	Suitable for 900 mm dia 10 mm thick pipe.	Mtr	16543.00
R3-HE-2-2-r	Suitable for 900 mm dia 12 mm thick pipe.	Mtr	19832.00
R3-HE-2-2-s	Suitable for 1200 mm dia 16 mm thick pipe.	Mtr	35264.00
R3-HE-2-2-t	Suitable for 1500 mm dia 16 mm thick pipe.	Mtr	43968.00
R3-HE-2-2-u	Suitable for 1500 mm dia 20 mm thick pipe.	Mtr	54930.00
R3-HE-2-3	Supplying, transporting MS fabricated material on site, aligning, fixing in position, tack welding including marginal cutting, synthetic Rubber packings etc. a) Minor fixtures such s man hole frame & covers, pressure and non-pressure type blank flanges, loose flanges, rings, small pieces to form saddle pieces, ladders, platforms, stiffener rings etc. b) Major fixtures such as tees, domes, bends, branches, flange ring assembling etc.	MT	74395.00
	R3-HE-2-2-a R3-HE-2-2-b R3-HE-2-2-c R3-HE-2-2-d R3-HE-2-2-e R3-HE-2-2-f R3-HE-2-2-f R3-HE-2-2-i R3-HE-2-2-i R3-HE-2-2-i R3-HE-2-2-i R3-HE-2-2-c	Supplying mild steel specials of required length and degree to site of work / any municipal store fabricated in any ISI/ ISO certified company, from mild steel plates of approved quality and thickness, confirming to IS 3589. The M.S. plates shall bare corresponding ISI mark. The item includes marking, cutting, fit up, rolling bending, welding using automatic submerged are type welding machine, factory testing of pipes, loading at fabrication yard/ factory transportation to site of work/ any municipal store using truck/ trailer, unloading and stacking near place of work etc complete as specified and as directed by Engineer in Charge.Fabrication work to be carried out as per IS:3589 and suitable for 10 kg/cm2 working pressure. R3-HE-2-2-a Suitable for 80 mm dia 6 mm thick pipe. R3-HE-2-2-b Suitable for 150 mm dia 6 mm thick pipe. R3-HE-2-2-c Suitable for 150 mm dia 6 mm thick pipe. R3-HE-2-2-g Suitable for 250 mm dia 6 mm thick pipe. R3-HE-2-2-g Suitable for 300 mm dia 6 mm thick pipe. R3-HE-2-2-g Suitable for 600 mm dia 6 mm thick pipe. R3-HE-2-2-j Suitable for 750 mm dia 7 mm thick pipe. R3-HE-2-2-i Suitable for 900 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 900 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 900 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 900 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-i Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 600 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 600 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 600 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 900 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 1000 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 1000 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 1000 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for 1000 mm dia 10 mm thick pipe. R3-HE-2-2-i Suitable for	Supplying mild steel specials of required length and degree to site of work / any municipal store fabricated in any ISI/ ISO certified company, from mild steel plates of approved quality and thickness, confirming to IS 3589. The M.S. plates shall bare corresponding ISI mark. The item includes marking, cutting, fit up, rolling bending, welding using automatic submerged are type welding machine, factory testing of pipes, loading at fabrication yard/ factory transportation to site of work/ any municipal store using truck/ trailer, unloading and stacking near place of work etc complete as specified and as directed by Engineer in Charge.Fabrication work to be carried out as per IS:3589 and suitable for 10 kg/cm2 working pressure. R3-HE-2-2-a Suitable for 80 mm dia 6 mm thick pipe. R3-HE-2-2-b Suitable for 150 mm dia 6 mm thick pipe. R3-HE-2-2-b Suitable for 150 mm dia 6 mm thick pipe. R3-HE-2-2-c Suitable for 500 mm dia 6 mm thick pipe. R3-HE-2-2-f Suitable for 300 mm dia 6 mm thick pipe. R3-HE-2-2-g Suitable for 300 mm dia 6 mm thick pipe. R3-HE-2-1 Suitable for 500 mm dia 6 mm thick pipe. R3-HE-2-2-1 Suitable for 500 mm dia 7 mm thick pipe. R3-HE-2-2-1 Suitable for 900 mm dia 7 mm thick pipe. R3-HE-2-2-1 Suitable for 750 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 750 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-2 Suitable for 100 mm dia 8 mm thick pipe. R3-HE-2-2-1 Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-2 Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-2 Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-2 Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-3 Suitable for 100 mm dia 10 mm thick pipe. R3-HE-2-2-4

		SECTION 2		
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
47	R3-HE-2-4	Fabrication of M.S. covers and frames from steel plates as per design specified by Engineer in charge, including stiffeners etc. complete. (Excluding cost of steel plates).	MT	14200.00
48	R3-HE-2-5	Transporting all fabricated material from stacking yard of factory to laying site or from Municipal stores to factory or any where directed up to a distance of 2 km, including loading & unloading.	MT/Km	399.00
49	R3-HE-2-6	Extra over and above rate of item No.R3-HE-2-5 for transporting the material beyond 2 km.	MT/Km	8.00
50	R3-HE-2-7	Fabricating ,Supplying & transporting M.S. material of required thickness suitable for lead joint / mechanical joints to any municipal chowky or site of work , minor fixtures such as man hole frame & covers, pressure and non-pressure type blank flanges, loose flanges, rings, saddle pieces, small pieces to form saddle pieces, collars, clamp collars, bends / tees of various sizes with or without suitable sockets / flanges, small pieces of pipes with or without suitable sockets / flanges, end caps, ladders, platforms, stiffener rings etc. Payment will be made as per actual weight of material.		76.00
	R3-HE-2-8	Transporting within 500 mtrs. and laying in position to the correct line and level, M.S. specials with/without any out coating such as distance pieces, straps, bends, tapers, etc.as per specification on pedestals or chairs upon formation. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack-welding, complete directed by Engineer-in -Charge. The diameter mentioned below shall be considered as clear internal diamater of pipe		
		5 mm. to 8 mm thick plate.		
51	R3-HE-2-8-a	Upto 250 mm dia pipe	Rs/Rmt	Deleted
52	R3-HE-2-8-b	Above 250 mm upto 500 mm dia pipe.	Rs/Rmt	Deleted
53	R3-HE-2-8-c	Above 500 mm upto 750 mm dia pipe.	Rs/Rmt	Deleted
54	R3-HE-2-8-d	Above 750 mm upto 1000 mm dia pipe.	Rs/Rmt	Deleted
55	R3-HE-2-8-e	Above 1000 mm upto 1250 mm dia pipe.	Rs/Rmt	Deleted

		SECTION 2		
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-2-9	Transporting within 500 meters, laying in position to the correct line and level, M.S. pipes with/without any outcoating on prepared bedding in trenches including marginal cutting wherever required, assembling, tack welding the same. The rate to include loading, unloading, hoisting, etc. complete as specified and as directed by Engineer in Charge.		
		Above 5 mm Upto 8 mm thick plate.		
56	R3-HE-2-9-a	Upto 250 mm dia pipe	Rs/Rmt	Deleted
57	R3-HE-2-9-b	Above 250 mm upto 500 mm dia pipe.	Rs/Rmt	Deleted
58	R3-HE-2-9-c	Above 500 mm upto 750 mm dia pipe.	Rs/Rmt	Deleted
59	R3-HE-2-9-d	Above 750 mm upto 1000 mm dia pipe.	Rs/Rmt	Deleted
60	R3-HE-2-9-e	Above 1000 mm upto 1250 mm dia pipe.	Rs/Rmt	Deleted
- 00	K3-IIL-2-7-C	Above 1000 mm upto 1230 mm dia pipe.	IXS/IXIII	Defeted
	R3-HE-2-10	Transporting within 500 meters, laying in position to the correct line and level, M.S. pipes with/without any outcoating on prepared bedding in trenches including marginal cutting wherever required, assembling, tack welding the same. The rate to include loading, unloading, hoisting, etc. complete as specified and as directed by Engineer in Charge.		
		Above 8 mm Upto 12 mm thick plate.		
61	R3-HE-2-10-a	Above 750 mm upto 1000 mm dia pipe	Rs/Rmt	Deleted
62	R3-HE-2-10-b	Above 1000 mm upto 1250 mm dia pipe.	Rs/Rmt	Deleted
63	R3-HE-2-10-c	Above 1250 mm upto 1500 mm dia pipe.	Rs/Rmt	Deleted
64	R3-HE-2-10-d	Above 1500 mm upto 1750 mm dia pipe.	Rs/Rmt	Deleted
65	R3-HE-2-10-e	Above 1750 mm upto 2000 mm dia pipe.	Rs/Rmt	Deleted
	R3-HE-2-11	Transporting within 500 mtrs. and laying in position to the correct line and level, M.S. specials with/without any out coating such as distance pieces, straps, bends, tapers, etc.as per specification on pedestals or chairs upon formation. The rate to include loading, unloading, hoisting, marginal cutting wherever required, assembling and tack-welding, complete directed by Engineer-in -Charge. The diameter mentioned below shall be considered as clear internal diamater of pipe		
		Above 8 mm Upto 12 mm thick plate.		
66	R3-HE-2-11-a	Above 750 mm upto 1000 mm dia pipe	Rs/Rmt	Deleted
67	R3-HE-2-11-b	Above 1000 mm upto 1250 mm dia pipe.	Rs/Rmt	Deleted
68	R3-HE-2-11-c	Above 1250 mm upto 1500 mm dia pipe.	Rs/Rmt	Deleted

	SECTION 2					
				Rate in Rs. (Excl.		
Sr.No.	Material Code	Material Description	Unit	GST and other		
51.110.	Widterial Code	Muchai Description	Omi	Taxes)		
1	2	3	4	5		
69	R3-HE-2-11-d	Above 1500 mm upto 1750 mm dia pipe.	Rs/Rmt	Deleted		
70	R3-HE-2-11-e	Above 1750 mm upto 2000 mm dia pipe.	Rs/Rmt	Deleted		
70	K3-IIL-2-II-E	Above 1730 mm upto 2000 mm dia pipe.	IXS/IXIIIt	Defeted		
	R3-HE-2-12	Field welding in all position with required number of runs, for M.S. pipes internally and/or externally including gauzing wherever necessary, fixing appurtenances and other accessories in connection of pipe laying work as per specification etc complete as specified and as directed by Engineer in Charge.				
		Butt Jointing				
71	R3-HE-2-12-a	4 mm plate thickness	Rs/Rmt	419.00		
72	R3-HE-2-12-b	5 mm plate thickness	Rs/Rmt	631.00		
73	R3-HE-2-12-c	6 mm plate thickness	Rs/Rmt	1388.00		
74	R3-HE-2-12-d	7 mm plate thickness	Rs/Rmt	1538.00		
75	R3-HE-2-12-e	8 mm plate thickness	Rs/Rmt	1838.00		
76	R3-HE-2-12-f	10 mm plate thickness	Rs/Rmt	2516.00		
77	R3-HE-2-12-g	12 mm plate thickness	Rs/Rmt	2444.00		
	R3-HE-2-13	Field welding in all position with required number of runs, for M.S. pipes internally and/or externally including gauzing wherever necessary, fixing appurtenances and other accessories in connection of pipe laying work as per specification etc complete as specified and as directed by Engineer in Charge.				
		Lap Jointing with convex fillet weld				
78	R3-HE-2-13-a	Leg length 5mm	Rs/Rmt	509.00		
79	R3-HE-2-13-b	Leg length 6mm	Rs/Rmt	654.00		
80	R3-HE-2-13-c	Leg length 8mm	Rs/Rmt	872.00		
81	R3-HE-2-13-d	Leg length 10mm	Rs/Rmt	850.00		
82	R3-HE-2-13-e	Leg length 12mm	Rs/Rmt	1390.00		
	R3-HE-2-14	Gas cutting (either square cut or V cut) pipes, plates etc. complete as specified and as directed by Engineer in Charge. of following thickness				
83	R3-HE-2-14-a	up to 5 mm	Rs/Rmt	267.00		
84	R3-HE-2-14-b	above 5 mm up to 10 mm	Rs/Rmt	368.00		
85	R3-HE-2-14-c	above 10 mm up to 14 mm	Rs/Rmt	462.00		
86	R3-HE-2-14-d	above 14 mm up to 18 mm	Rs/Rmt	602.00		
87	R3-HE-2-14-e	above 18 mm up to 22 mm	Rs/Rmt	872.00		
88	R3-HE-2-14-f	above 22 mm up to 25 mm	Rs/Rmt	1175.00		
	R3-HE-2-15	Gas cutting holes up to 50 mm. dia. (for plugs) thickness of shell				

	SECTION 2					
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other		
1	2	2		Taxes)		
1 89	2 R3-HE-2-15-a	5 mm to 12 mm	4 Each	5 321.00		
90	R3-HE-2-15-b	above 12 mm	Each	441.00		
90	К3-ПЕ-2-13-0	above 12 mm	Each	441.00		
91	R3-HE-2-16	Providing and fixing MS frame and cover with its complete assembly including supply and fixing of the same etc complete for sluice valve, butterfly valves and kinetic air valves chambers as directed and as specified by Engineer In charge. The MS plate used for the cover shall be 20 mm thick. The new MS cover shall have anti skid arrangement. The anti skid arrangement shall be provided of 4mm thick MS flats of specified mm width and 300 mm center to center by continuous lap welding. \Following are the Standard weights of MS frame and cover with its complete assembly with anti skid arrangement. NOTE: Tolerance of +/- 5% of mentioned standard weights acceptable.	Rs./Kg	86.00		
92	R3-HE-2-17	Removing of existing MS frame and cover and replacing it with new MS frame and cover with its complete assembly including supply and fixing of the same etc complete as directed and specified by Engineer In charge. The MS plate used for the cover shall be 20 mm thick. The new MS cover shall have anti skid arrangement. The anti skid arrangement shall be provided by welding 4mm thick MS flats of specified width and 300 mm center to center. Note: (1) Rebate for old removed MS frame and cover is considered in this item. (2) Tolerance of +/- 5% of mentioned standard weights shall be acceptable.	Rs./Kg	62.00		

	SECTION 2						
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)			
1	2	3	4	5			
	R3-HE-2-18	Mild Steel (M.S.) pipe sleeve confirming to jacking pipe, fabricated in any ISI/ ISO certified company, from mild steel plates of approved quality and thickness manufactured confirming to IS 2062; supplied and installed to correct line and grade by pipe jacking for providing water main by trenchless technology etc. complete as per specifications and as directed by the engineer in charge. The M.S. Plates shall bare corresponding ISI mark. The items including marking, cutting, rolling, bending, welding using automatic submerged arc type welding machine, factory testing of pipes, loading at fabrication yards/ factory. Each pipe shall be 3m long, fabricated as per IS:3589 and suitable for 10 kg/cm2 working presuure (spirally welded pipes fabricated from stripes are not acceptable.					
93	R3-HE-2-18-a	1200 mm Dia - 16 mm thick	Rmt	44180.00			
94	R3-HE-2-18-b	1500 mm Dia - 20 mm thick	Rmt	64221.00			
95	R3-HE-2-18-c	1600 mm Dia - 22 mm thick	Rmt	73900.00			
96	R3-HE-2-18-d	1700 mm Dia - 22 mm thick	Rmt	82210.00			
	R3-HE-2-19	Providing & Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing mild steel pipes to site of work fabricated in any ISI/ ISO certified company, from mild steel plates of approved quality and thickness, confirming to IS 3589. The M.S plates shall be procured only from Jindal,TATA mettalics,SAIL, ESSAR or Ispat Steel. The test certificates and Challans from the manufacturer of plates shall be submitted to the corporation. The item includes marking, cutting, rolling bending, welding using automatic submerged arc type welding machine, factory testing of pipes, loading at fabrication yard/ factory transportation to site of work/ any municipal store using truck/ trailer, unloading and stacking near place of work etc complete as specified and as directed by Engineer in Charge. Each pipe shall be about 5 to 7.5 mtr. long, fabricated as per IS:3589 and suitable for 10 kg/cm2 working pressure(spirally welded pipes fabricated from strips are not acceptable). "No separate payment will be made for local transport at Site."	Kint	02210.00			
97	R3-HE-2-19-a	80 mm. 6 mm thick	Rmt	1071.00			
98	R3-HE-2-19-b	100 mm. 6 mm thick	Rmt	1314.00			
99	R3-HE-2-19-c	150 mm. 6 mm thick	Rmt	1925.00			
100	R3-HE-2-19-d	225 mm-250 mm. 6 mm thick	Rmt	3110.00			
101	R3-HE-2-19-e	300 mm. 6 mm thick	Rmt	3667.00			

	SECTION 2				
Sr.No.	Material Code		Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2		3	4	5
102	R3-HE-2-19-f	450 mm.	6 mm thick	Rmt	5876.00
103	R3-HE-2-19-g	600 mm.	6 mm thick	Rmt	7953.00
104	R3-HE-2-19-h	750 mm.	7 mm thick	Rmt	11610.00
105	R3-HE-2-19-i	750 mm.	8 mm thick	Rmt	12940.00
106	R3-HE-2-19-j	900 mm.	7 mm thick	Rmt	13961.00
107		900 mm.	8 mm thick	Rmt	15638.00
108	R3-HE-2-19-1	1200 mm.	8 mm thick	Rmt	20890.00
109	R3-HE-2-19-m	1200 mm.	10 mm thick	Rmt	25262.00
110	R3-HE-2-19-n	1200 mm.	12 mm thick	Rmt	29513.00
111	R3-HE-2-19-o	1500 mm.	10 mm thick	Rmt	30618.00
112	R3-HE-2-19-p	1500 mm.	12 mm thick	Rmt	35915.00
113	R3-HE-2-19-q	600 mm.	8 mm thick	Rmt	10090.00
114	R3-HE-2-19-r	600 mm.	10 mm thick	Rmt	12240.00
115	R3-HE-2-19-s	750 mm.	10 mm thick	Rmt	15613.00
116	R3-HE-2-19-t	900 mm.	10 mm thick	Rmt	18748.00
117	R3-HE-2-19-u	900 mm.	12 mm thick	Rmt	21955.00
118	R3-HE-2-19-v	1200 mm	16 mm thick	Rmt	37924.00
119	R3-HE-2-19-w	1500 mm.	16 mm thick	Rmt	46550.00
120	R3-HE-2-19-x	1500 mm.	20 mm thick	Rmt	57237.00

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-1	Supplying, Loading, transporting on site, unloading, ISI mark Glandless Doubled Flanged sluice valves of PN 1.0 conforming to IS - 14846 in Grey Cast Iron IS: 210-1978 FG-260 along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site/in store as directed by the site Engineer for following diameters. Note: Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.		
1	R3-HE-3-1-a	80 mm.	Each	11398.00
2	R3-HE-3-1-b	100 mm.	Each	15624.00
3	R3-HE-3-1-c	125 mm.	Each	23433.00
4	R3-HE-3-1-d	150 mm	Each	25388.00
5	R3-HE-3-1-e	200 mm.	Each	34022.00
6	R3-HE-3-1-f	250 mm.	Each	55784.00
7	R3-HE-3-1-g	300 mm	Each	70586.00
	R3-HE-3-2	Supplying, Loading, transporting on site, unloading, ISI mark Glandless Doubled Flanged sluice valves of PN 1.6 conforming to IS - 14846 in Grey Cast Iron IS: 210-1978 FG-260 along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site/in store as directed by the site Engineer for following diameters. Note: (1) Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.		
8	R3-HE-3-2-a	80 mm.	Each	13249.00
9	R3-HE-3-2-b	100 mm.	Each	18212.00
10	R3-HE-3-2-c	125 mm.	Each	27228.00
11	R3-HE-3-2-d	150 mm	Each	27056.00
12	R3-HE-3-2-e	200 mm.	Each	39772.00
13	R3-HE-3-2-f	250 mm.	Each	65260.00
14	R3-HE-3-2-g	300 mm	Each	62732.00
17	K5-11L-5-2-g	JVV IIIII	Lacii	02/32.00

		SECTION 3		,
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-3	Loading, transporting on site, unloading sluice valves with its complete appurtenances & dismantling joints, nuts, bolts, washers etc. from any municipal stores in Greater Mumbai, stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tapers, saddles, branches, flanges etc. on CI / DI or MS water mains for following diameters.		
15	R3-HE-3-3-a	80 mm.	Each	2862.00
16	R3-HE-3-3-b	100 mm.	Each	2862.00
17	R3-HE-3-3-c	125 mm.	Each	2862.00
18	R3-HE-3-3-d	150 mm.	Each	2862.00
19	R3-HE-3-3-e	200 mm.	Each	5514.00
20	R3-HE-3-3-f	250 mm.	Each	6487.00
21	R3-HE-3-3-g	300 mm.	Each	6487.00
	R3-HE-3-4	Supplying, Loading, transporting on site, unloading, ISI mark Glandless, Double Flanged sluice valves of PN 1.0 conforming to IS - 14846 in Grey Cast Iron IS: 210-1978 FG-260 without Bevel gear arrangement along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tapers, saddles, flanges, etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. Note: Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.		
22	R3-HE-3-4-a	80 mm.	Each	13051.00
23	R3-HE-3-4-b	100 mm.	Each	17278.00
24	R3-HE-3-4-c	125 mm.	Each	25086.00
25	R3-HE-3-4-d	150 mm	Each	27906.00
26	R3-HE-3-4-e	200 mm.	Each	36525.00
27	R3-HE-3-4-f	250 mm.	Each	59914.00
28	R3-HE-3-4-g	300 mm	Each	74716.00

		SECTION 3		1
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
•	R3-HE-3-5	Supplying, Loading, transporting on site, unloading, ISI mark Glandless, Double Flanged sluice valves of PN 1.6 conforming to IS - 14846 without Bevel gear arrangement along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tapers, saddles, flanges, etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. Note: (1) Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.	•	
29	R3-HE-3-5-a	80 mm.	Each	14903.00
30	R3-HE-3-5-b	100 mm.	Each	19865.00
31	R3-HE-3-5-c	125 mm.	Each	28881.00
32	R3-HE-3-5-d	150 mm	Each	29574.00
33	R3-HE-3-5-e	200 mm	Each	42275.00
34	R3-HE-3-5-f	250 mm.	Each	69390.00
35	R3-HE-3-5-g	300 mm.	Each	66861.00
	R3-HE-3-6	Supplying, Loading, transporting on site, unloading, ISI mark Glandless, Double Flanged sluice valves of PN 1.0 conforming to IS - 14846 in Grey Cast Iron IS: 210-1978 FG-260 without Bevel gear arrangement along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tapers, saddles, flanges, etc. on live mains on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. Note: Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.		
36	R3-HE-3-6-a	80 mm.	Each	17446.00
37	R3-HE-3-6-b	100 mm.	Each	22053.00
38	R3-HE-3-6-c	125 mm.	Each	29862.00
39	R3-HE-3-6-d	150 mm	Each	35069.00
40	R3-HE-3-6-e	200 mm.	Each	43689.00
41	R3-HE-3-6-f	250 mm.	Each	68704.00
42	R3-HE-3-6-g	300 mm.	Each	83506.00

SECTION 3					
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
1					
	R3-HE-3-7	Supplying, Loading, transporting on site, unloading, ISI mark Glandless, Double Flanged sluice valves of PN 1.6 conforming to IS - 2906/ 14846 without Bevel gear arrangement along with its complete appurtenances (i.e. including two nos. of tail pieces) & nuts, bolts, washers, packings etc., stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tapers, saddles, flanges, etc. on live mains on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. Note: (1) Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification.			
43	R3-HE-3-7-a	80 mm.	Each	19297.00	
44	R3-HE-3-7-b	100 mm.	Each	24641.00	
45	R3-HE-3-7-c	125 mm.	Each	33657.00	
46	R3-HE-3-7-d	150 mm	Each	36738.00	
47	R3-HE-3-7-e	200 mm	Each	49439.00	
48	R3-HE-3-7-f	250 mm.	Each	78180.00	
49	R3-HE-3-7-g	300 mm.	Each	75651.00	
	R3-HE-3-8	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adapters, nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters. (Manually operated). The flange adapter used here conforms to AWWA C-219. Note: Butterfly valves, flange adapters and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.			
50	R3-HE-3-8-a	300 mm	Each	141672.00	
51	R3-HE-3-8-b	450 mm.	Each	184095.00	
52	R3-HE-3-8-c	600 mm.	Each	231093.00	
53	R3-HE-3-8-d	750 mm.	Each	372533.00	
54	R3-HE-3-8-e	900 mm.	Each	506861.00	
55	R3-HE-3-8-f	1200 mm.	Each	1190981.00	
56	R3-HE-3-8-g	1350 mm	Each	1738412.00	
57	R3-HE-3-8-h	1500 mm	Each	2065467.00	
58	R3-HE-3-8-i	1800 mm	Each	3463412.00	
59	R3-HE-3-8-j	2200 mm	Each	6280912.00	
60	R3-HE-3-8-k	2400 mm	Each	7833412.00	

		SECTION 3		1
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-9	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adapters, nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters. (Manually operated). The flange adapter used here conforms to AWWA C-219. Note:(1) Butterfly valves, flange adapters and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
61	R3-HE-3-9-a	300 mm	Each	185677.00
62	R3-HE-3-9-b	450 mm.	Each	267182.00
63	R3-HE-3-9-c	600 mm.	Each	382853.00
64	R3-HE-3-9-d	750 mm.	Each	564456.00
65	R3-HE-3-9-e	900 mm.	Each	772412.00
66	R3-HE-3-9-f	1200 mm.	Each	1479662.00
67	R3-HE-3-9-g	1350 mm	Each	1939662.00
68	R3-HE-3-9-h	1500 mm	Each	2399662.00
69	R3-HE-3-9-i	1800 mm	Each	3980912.00
70	R3-HE-3-9-j	2200 mm	Each	6625912.00
71	R3-HE-3-9-k	2400 mm	Each	8580912.00
, 1		- 100 1111		0000712.00
	R3-HE-3-10	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances stacking the same as directed on site for following diameters. (Manually operated) Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given specification.		
72	R3-HE-3-10-a	300 mm	Each	95337.00
73	R3-HE-3-10-b	450 mm.	Each	110639.00
74	R3-HE-3-10-c	600 mm.	Each	151648.00
		750 mm.	Each	226548.00
75	R3-HE-3-10-d			+
	R3-HE-3-10-d R3-HE-3-10-e	900 mm.	Each	298905.00
75 76 77				+
75 76 77 78	R3-HE-3-10-е	900 mm.	Each	298905.00
75 76 77	R3-HE-3-10-e R3-HE-3-10-f	900 mm. 1200 mm.	Each Each	298905.00 874731.00
75 76 77 78	R3-HE-3-10-e R3-HE-3-10-f R3-HE-3-10-g	900 mm. 1200 mm. 1350 mm	Each Each Each	298905.00 874731.00 1192162.00
75 76 77 78 79	R3-HE-3-10-e R3-HE-3-10-f R3-HE-3-10-g R3-HE-3-10-h	900 mm. 1200 mm. 1350 mm 1500 mm	Each Each Each Each	298905.00 874731.00 1192162.00 1404217.00

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-11	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances stacking the same as directed on site for following diameters. (Manually operated). Note :(1) Butterfly valve and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
83	R3-HE-3-11-a	300 mm	Each	133591.00
84	R3-HE-3-11-b	450 mm.	Each	174177.00
85	R3-HE-3-11-c	600 mm.	Each	267182.00
86	R3-HE-3-11-d	750 mm.	Each	378221.00
87	R3-HE-3-11-e	900 mm.	Each	552956.00
88	R3-HE-3-11-f	1200 mm.	Each	1077162.00
89	R3-HE-3-11-g	1350 mm	Each	1335912.00
90	R3-HE-3-11-h	1500 mm	Each	1652162.00
91	R3-HE-3-11-i	1800 mm	Each	3003412.00
92	R3-HE-3-11-j	2200 mm	Each	5188412.00
93	R3-HE-3-11-k	2400 mm	Each	6338412.00
0.4	R3-HE-3-12	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adaptors, nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters. (Electrically operated). The flange adapter used here conforms to AWWA C-219. Note: Butterfly valves, flange adaptors and all other materials shall be supplied as per the acceptance criteria of MCGM as given in the specification.		241022.00
94	R3-HE-3-12-a	300 mm	Each	341932.00
95	R3-HE-3-12-b	450 mm.	Each	393171.00
96	R3-HE-3-12-c	600 mm.	Each	482231.00
97	R3-HE-3-12-d	750 mm.	Each	611412.00
98	R3-HE-3-12-e	900 mm.	Each	795412.00
99	R3-HE-3-12-f	1200 mm.	Each	1371860.00
100	R3-HE-3-12-g	1350 mm	Each	1824662.00
101	R3-HE-3-12-h	1500 mm	Each	2313412.00
102	R3-HE-3-12-i	1800 mm	Each	3402230.00
103	R3-HE-3-12-j	2200 mm	Each	6568412.00
104	R3-HE-3-12-k	2400 mm	Each	8350912.00

		SECTION 3		1
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-13	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adaptors, nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters. (Electrically operated). The flange adapter used here conforms to AWWA C-219. Note:(1) Butterfly valves, flange adapters and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
105	R3-HE-3-13-a	300 mm	Each	359182.00
106	R3-HE-3-13-b	450 mm.	Each	447221.00
107	R3-HE-3-13-c	600 mm.	Each	564456.00
108	R3-HE-3-13-d	750 mm.	Each	709162.00
109	R3-HE-3-13-e	900 mm.	Each	887412.00
110	R3-HE-3-13-f	1200 mm.	Each	1738412.00
111	R3-HE-3-13-g	1350 mm	Each	2169662.00
112	R3-HE-3-13-h	1500 mm	Each	2715912.00
113	R3-HE-3-13-i	1800 mm	Each	4210912.00
114	R3-HE-3-13-j	2200 mm	Each	6970912.00
115	R3-HE-3-13-k	2400 mm	Each	8925912.00
	110 112 0 10 11	- 100 mm		0,20,12,00
	R3-HE-3-14	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances stacking the same as directed on site for following diameters. (Electrically operated) Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in the specification.		
116	R3-HE-3-14-a	300 mm	Each	294591.00
117	R3-HE-3-14-b	450 mm.	Each	317927.00
118	R3-HE-3-14-c	600 mm.	Each	398985.00
119	R3-HE-3-14-d	750 mm.	Each	457603.00
120	R3-HE-3-14-e	900 mm.	Each	587456.00
121	R3-HE-3-14-f	1200 mm.	Each	1055610.00
122	R3-HE-3-14-g	1350 mm	Each	1278412.00
123	R3-HE-3-14-h	1500 mm	Each	1652162.00
124	R3-HE-3-14-i	1800 mm	Each	2625980.00
125	R3-HE-3-14-j	2200 mm	Each	5360912.00
126	R3-HE-3-14-k	2400 mm	Each	6510912.00

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
9	R3-HE-3-15	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances stacking the same as directed on site for following diameters. (Electrically operated) Note: (1) Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in the specification.		
127	R3-HE-3-15-a	300 mm	Each	306091.00
128	R3-HE-3-15-b	450 mm.	Each	352427.00
129	R3-HE-3-15-c	600 mm.	Each	444985.00
130	R3-HE-3-15-d	750 mm.	Each	515103.00
131	R3-HE-3-15-e	900 mm.	Each	667956.00
132	R3-HE-3-15-f	1200 mm.	Each	1335912.00
133	R3-HE-3-15-g	1350 mm	Each	1565912.00
134	R3-HE-3-15-h	1500 mm	Each	1968412.00
135	R3-HE-3-15-i	1800 mm	Each	3233412.00
136	R3-HE-3-15-j	2200 mm	Each	5533412.00
137	R3-HE-3-15-k	2400 mm	Each	6683412.00
	R3-HE-3-16	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adaptors, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. (Manually operated). The flange adapter used here conforms to AWWA C-219. Note: Butterfly valves, flange adaptors and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
138	R3-HE -3-16-a	300 mm	Each	156632.00
139	R3-HE -3-16-b	450 mm.	Each	198049.00
140	R3-HE -3-16-c	600 mm.	Each	241847.00
141	R3-HE -3-16-d	750 mm.	Each	383460.00
142	R3-HE -3-16-e	900 mm.	Each	511844.00
143	R3-HE -3-16-f		Each	1196726.00
144	R3-HE -3-16-g		Each	1747989.00
145	R3-HE -3-16-h		Each	2075043.00
146		1800 mm	Each	3478736.00
147	R3-HE -3-16-j	2200 mm	Each	6296236.00

		1		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
		2400 mm	Each	7848736.00
140	K3-11L -3-10-K	2400 111111	Lacii	/646/30.00
	R3-HE-3-17	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adaptors, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. (Manually operated). The flange adapter used here conforms to AWWA C-219. Note: (1) Butterfly valves, flange adaptors and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
149	R3-HE-3-17-a	300 mm	Each	198106.00
150	R3-HE-3-17-b	450 mm.	Each	281136.00
151		600 mm.	Each	396136.00
152	R3-HE-3-17-d	750 mm.	Each	575383.00
153		900 mm.	Each	777395.00
				
154	R3-HE-3-17-f	1200 mm.	Each	1485407.00
155	R3-HE-3-17-g	1350 mm	Each	1345489.00
156	R3-HE-3h	1500 mm	Each	1647016.00
157		1800 mm	Each	2999761.00
158	R3-HE-3-17-j	2200 mm	Each	6641236.00
159	R3-HE-3-17-k	2400 mm	Each	8596236.00
	R3-HE-3-18	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adaptors, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters. (Electrically operated) Note: Butterfly valves, flange adaptors and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification		
160	R3-HE-3-18-a	300 mm	Each	353356.00
161		450 mm.	Each	402806.00

Sr. NO. ITEM CO 1 2 162 R3-HE-3 163 R3-HE-3 164 R3-HE-3 165 R3-HE-3 166 R3-HE-3 167 R3-HE-3 168 R3-HE-3	3 8-c 600 mm. 8-d 750 mm. 8-e 900 mm. 8-f 1200 mm.	UNIT 4 Each Each Each Each	Rate in Rs. (Excl. GST and other Taxes) 5 489631.00 615633.00
162 R3-HE-3 163 R3-HE-3 164 R3-HE-3 165 R3-HE-3 166 R3-HE-3 167 R3-HE-3	8-c 600 mm. 8-d 750 mm. 8-e 900 mm. 8-f 1200 mm.	Each Each Each	489631.00 615633.00
162 R3-HE-3 163 R3-HE-3 164 R3-HE-3 165 R3-HE-3 166 R3-HE-3 167 R3-HE-3	8-c 600 mm. 8-d 750 mm. 8-e 900 mm. 8-f 1200 mm.	Each Each Each	615633.00
163 R3-HE-3 164 R3-HE-3 165 R3-HE-3 166 R3-HE-3 167 R3-HE-3	8-d 750 mm. 8-e 900 mm. 8-f 1200 mm.	Each Each	615633.00
165 R3-HE-3 166 R3-HE-3 167 R3-HE-3	8-f 1200 mm.		
166 R3-HE-3- 167 R3-HE-3-		Each	800395.00
167 R3-HE-3	8-σ 1350 mm	Each	1379540.00
167 R3-HE-3-	0 S 11330 IIIII	Each	1836560.00
168 R3-HE-3		Each	2325310.00
	8-i 1800 mm	Each	3420456.00
169 R3-HE-3	8-j 2200 mm	Each	6586638.00
170 R3-HE-3		Each	8369138.00
R3-HE-3	etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange for following diameters (Electrically operated). The flange adapter used her conforms to AWWA C-219. Note: (1) Butterfly valves, flang adaptors and all other materials shall be supplied as per that acceptance criteria of MCGM as given in specification.	S e e e e e e e e e e e e e e e e e e e	270606.00
171 R3-HE-3	9-a 300 mm	Each	370606.00
172 R3-HE-3-	9-b 450 mm.	Each	456856.00
173 R3-HE-3	9-c 600 mm.	Each	571856.00
174 R3-HE-3-	9-d 750 mm.	Each	713383.00
175 R3-HE-3	9-e 900 mm.	Each	892395.00
176 R3-HE-3	9-f 1200 mm.	Each	1746092.00
177 R3-HE-3	9-g 1350 mm	Each	2181560.00
178 R3-HE-3	9-h 1500 mm	Each	2727810.00
179 R3-HE-3		Each	4229138.00
180 R3-HE-3		Each	6989138.00
181 R3-HE-3		Each	8944138.00

г		SECTION 3		1
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-20	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange (Manually operated). Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
182	R3-HE-3-20-a	300 mm	Each	108102.00
183	R3-HE-3-20-b	450 mm.	Each	123069.00
184	R3-HE-3-20-c	600 mm.	Each	163072.00
185	R3-HE-3-20-d	750 mm.	Each	240472.00
186	R3-HE-3-20-e	900 mm.	Each	310594.00
187	R3-HE-3-20-f	1200 mm.	Each	881648.00
188	R3-HE-3-20-g	1350 mm	Each	1199842.00
189	R3-HE-3-20-h	1500 mm	Each	1416115.00
190	R3-HE-3-20-i	1800 mm	Each	2699060.00
191	R3-HE-3-20-j	2200 mm	Each	5091638.00
192	R3-HE-3-20-k	2400 mm	Each	6011638.00
	R3-HE-3-21	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange (Manually operated) Note: (1) Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
193	R3-HE-3-21-a	300 mm	Each	146356.00
194	R3-HE-3-21-b	450 mm.	Each	186606.00
195	R3-HE-3-21-c	600 mm.	Each	278606.00
196	R3-HE-3-21-d	750 mm.	Each	392145.00
197	R3-HE-3-21-e	900 mm.	Each	564645.00
198	R3-HE-3-21-f	1200 mm.	Each	1084080.00
199	R3-HE-3-21-g	1350 mm	Each	1343592.00

		SECTION 3		1
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
200	R3-HE-3-21-h	1500 mm	Each	1664060.00
201	R3-HE-3-21-i	1800 mm	Each	3015310.00
202	R3-HE-3-21-j	2200 mm	Each	5206638.00
203	R3-HE-3-21-k	2400 mm	Each	6356638.00
203	10 11L 3 21 K	2 100 Hill	Ducii	0330030.00
	R3-HE-3-22	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange (Electrically operated). Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
204	R3-HE-3-22-a	300 mm	Each	307356.00
205	R3-HE-3-22-b	450 mm.	Each	330356.00
206	R3-HE-3-22-c	600 mm.	Each	410856.00
207	R3-HE-3-22-d	750 mm.	Each	472645.00
208	R3-HE-3-22-e	900 mm.	Each	599145.00
209	R3-HE-3-22-f	1200 mm.	Each	1062528.00
210	R3-HE-3-22-g	1350 mm	Each	1286092.00
211	R3-HE-3-22-h	1500 mm	Each	1664060.00
212	R3-HE-3-22-i	1800 mm	Each	2637878.00
213	R3-HE-3-22-j	2200 mm	Each	5379138.00
214	R3-HE-3-22-k	2400 mm	Each	6529138.00
	R3-HE-3-23	Supplying, loading, transporting on site, unloading butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes along with Long Neck PE and flange (Electrically operated). The flange adapter used here conforms to AWWA C-219. Note: (1) Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
215	R3-HE-3-23-a	300 mm	Each	318856.00
				

		SECTION 3		,
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
216	R3-HE-3-23-b	450 mm.	Each	364856.00
217	R3-HE-3-23-c	600 mm.	Each	456856.00
218	R3-HE-3-23-d	750 mm.	Each	526466.00
219	R3-HE-3-23-е	900 mm.	Each	675966.00
220	R3-HE-3-23-f	1200 mm.	Each	1342830.00
221	R3-HE-3-23-g	1350 mm	Each	1572830.00
222	R3-HE-3-23-h	1500 mm	Each	1980310.00
223	R3-HE-3-23-i	1800 mm	Each	3245310.00
224	R3-HE-3-23-j	2200 mm	Each	5551638.00
225	R3-HE-3-23-k	2400 mm	Each	6701638.00
	10 112 0 20 11	- 100 mm		0,01020100
	R3-HE-3-24	Supplying, loading, transporting on site, unloading Flange Adapter of PN 1.0 conforming AWWA C-219 with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters.		
226	R3-HE-3-24-a	300 mm	Each	47265.00
227	R3-HE-3-24-b	450 mm.	Each	73715.00
228	R3-HE-3-24-c	600 mm.	Each	80040.00
229	R3-HE-3-24-d	750 mm.	Each	145331.00
230	R3-HE-3-24-e	900 mm.	Each	202831.00
231	R3-HE-3-24-f	1200 mm.	Each	318358.00
232	R3-HE-3-24-g	1350 mm	Each	549413.00
233	R3-HE-3-24-h	1500 mm	Each	667575.00
234	R3-HE-3-24-i	1800 mm	Each	788900.00
235	R3-HE-3-24-j	2200 mm	Each	1220150.00
236	R3-HE-3-24-k	2400 mm	Each	1852650.00
	R3-HE-3-25	Supplying, loading, transporting on site, unloading flange adaptors of PN 1.6 conforming to AWWA C-219 with appurtenances nuts, bolts, washers, packings etc. stacking the same as directed on site for following diameters. (Manually operated). Note: This Flange Adaptors shall be used at critical location only with prior sanction of Competent Authority		
237	R3-HE-3-25-a	300 mm	Each	53015.00
238	R3-HE-3-25-b	450 mm.	Each	93265.00
239	R3-HE-3-25-с	600 mm.	Each	116265.00
240	R3-HE-3-25-d	750 mm.	Each	185581.00
241	R3-HE-3-25-e	900 mm.	Each	214331.00
242	R3-HE-3-25-f	1200 mm.	Each	404608.00
243	R3-HE-3-25-g	1350 mm	Each	606913.00
244	R3-HE-3-25-h	1500 mm	Each	753825.00

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
245	R3-HE-3-25-i	1800 mm	Each	990150.00
246	R3-HE-3-25-j	2200 mm	Each	1450150.00
247	R3-HE-3-25-k	2400 mm	Each	2255150.00
	10 112 0 20 11	- 100 mm		
	R3-HE-3-26	Supplying, loading, transporting on site, unloading flange adaptors of PN 1.0 conforming AWWA C-219 with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes		
248	R3-HE-3-26-a	300 mm	Each	54054.00
249	R3-HE-3-26-b	450 mm.	Each	80504.00
250	R3-HE-3-26-c	600 mm.	Each	90857.00
251	R3-HE-3-26-d	750 mm.	Each	155832.00
252	R3-HE-3-26-e	900 mm.	Each	213332.00
253	R3-HE-3-26-f	1200 mm.	Each	328332.00
254	R3-HE-3-26-g	1350 mm	Each	558332.00
255	R3-HE-3-26-h	1500 mm	Each	677359.00
256	R3-HE-3-26-i	1800 mm	Each	792359.00
257	R3-HE-3-26-j	2200 mm	Each	1223609.00
258	R3-HE-3-26-k	2400 mm	Each	1856109.00
	10 112 0 20 11	- 100 mm		1000103100
	R3-HE-3-27	Supplying, loading, transporting on site, unloading flange adaptors of PN 1.6 with appurtenances, nuts, bolts, washers, packings etc. stacking the same as directed on site, hoisting, lowering and positioning the same in true plumb and level with tappers, saddles, branches flanges etc. on CI / DI or MS water mains and for PE pipes. conforming to AWWA C-219. Note: This Flange Adaptors shall be used at critical location only with prior sanction of Competent Authority		
259	R3-HE-3-27-a	300 mm	Each	59804.00
260	R3-HE-3-27-b	450 mm.	Each	100054.00
261	R3-HE-3-27-c	600 mm.	Each	127082.00
262	R3-HE-3-27-d	750 mm.	Each	196082.00
263	R3-HE-3-27-e	900 mm.	Each	224832.00
264	R3-HE-3-27-f	1200 mm.	Each	414582.00
265	R3-HE-3-27-g	1350 mm	Each	615832.00
266	R3-HE-3-27-h	1500 mm	Each	763609.00
267	R3-HE-3-27-i	1800 mm	Each	993609.00
268	R3-HE-3-27-j	2200 mm	Each	1453609.00
269	R3-HE-3-27-k	2400 mm	Each	2258609.00

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-3-28	Supplying, transporting unloading on site Tamper proof Kinetic Air valves of PN 1.0 in Gray Cast Iron IS 210 FG 260 with nuts, bolts, washers etc stacking the same as directed on site/ in store as directed by the site engineer. Note: Kinetic air valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
270	R3-HE-3-28-a	50 mm.	Each	20204.00
271	R3-HE-3-28-b	80 mm.	Each	21848.00
272	R3-HE-3-28-c	100 mm	Each	26281.00
273	R3-HE-3-28-d	150 mm.	Each	47964.00
274	R3-HE-3-28-e	200 mm.	Each	44883.00
	R3-HE-3-29	Supplying, transporting unloading on site Tamper proof Kinetic Air valves of PN 1.6 in Gray Cast Iron IS 210 FG 260 with nuts, bolts, washers etc stacking the same as directed on site/ in store as directed by the site engineer. Note: Kinetic air valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
275	R3-HE-3-29-a	50 mm .	Each	14749.00
276	R3-HE-3-29-b	80 mm.	Each	20065.00
277	R3-HE-3-29-c	100 mm	Each	25023.00
278	R3-HE-3-29-d	150 mm.	Each	45648.00
279	R3-HE-3-29-e	200 mm.	Each	44883.00
	R3-HE-3-30	Supplying, transporting on site and fixing Tamper proof Kinetic Air valves of PN 1.0 in Gray Cast Iron IS 210 FG 260 conforming to AWWA C-512 with sluice valves (double port) with nuts, bolts, washers etc.including making holes in the main and fixing saddle pieces, etc. complete. Note: Kinetic air valves with sluice valves (double port) and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification		
280	R3-HE-3-30-a	50 mm .	Each	38323.00
271		80 mm.	Each	40600.00
282	R3-HE-3-30-c	100 mm	Each	48648.00
283	R3-HE-3-30-d	150 mm.	Each	78381.00
284	R3-HE-3-30-e	200 mm.	Each	83097.00
201				

1	SECTION 3		
ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
2	3	4	5
R3-HE-3-31	Supplying, transporting on site and fixing Tamper proof Kinetic Air valves of PN 1.6 in Gray Cast Iron IS 210 FG 260 conforming to AWWA C-512 with sluice valves (double port) with nuts, bolts, washers etc.including making holes in the main and fixing saddle pieces, etc. complete. Note: (1) Kinetic air valves with sluice valves (double port) and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification.		
R3-HE-3-31-a	50 mm .	Each	34593.00
R3-HE-3-31-b	80 mm.	Each	40668.00
R3-HE-3-31-c	100 mm	Each	49977.00
R3-HE-3-31-d	150 mm.	Each	77733.00
R3-HE-3-31-e	200 mm.	Each	88847.00
R3-HE-3-32	Supply of ISI mark Glandless Doubled Flanged sluice valves of PN 1.0 in Gray Cast Iron IS 210 FG 260 conforming to IS - 14846 along with its complete appurtenances & nuts, bolts, washers, packings etc., for following diameters. Note: Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
<u> </u>			DELETED
+			DELETED
			DELETED
ļ			DELETED DELETED
			DELETED
			DELETED
K3-11L-3-32-g	500 mm.	Lacii	DEELTED
R3-HE-3-33	Supply of ISI mark Glandless Doubled Flanged sluice valves of PN 1.6 in Gray Cast Iron IS 210 FG 260 conforming to IS - 14846 along with its complete appurtenances & nuts, bolts, washers, packings etc., for following diameters. Note: Sluice valves and all other materials supplied shall be as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
	R3-HE-3-31-a R3-HE-3-31-b R3-HE-3-31-c R3-HE-3-31-d R3-HE-3-31-e R3-HE-3-32-a R3-HE-3-32-b R3-HE-3-32-c R3-HE-3-32-d R3-HE-3-32-f R3-HE-3-32-g	R3-HE-3-31- R3-HE-3-32- R3-HE-3-33- R3-HE-	R3-HE-3-31 R3-HE-3-31-8 R3-HE-3-31-8 R3-HE-3-31-6 Supply of ISI mark Glandless Doubled Flanged sluice valves of PN 1.6 in Gray Cast Iron IS 210 FG 260 conforming to IS mm. R3-HE-3-32-6 R3-HE-3-32-6 R3-HE-3-32-6 R3-HE-3-32-7 R3-HE-3-32-7 R3-HE-3-32-8 R3-HE-3-32-8 R3-HE-3-32-8 R3-HE-3-32-8 R3-HE-3-32-9 R3-HE-3-32-9 R3-HE-3-32-9 R3-HE-3-32-100 mm. R3-HE-3-32-100 mm. R3-HE-3-32-10 mm. R

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
297	R3-HE-3-33-a	80 mm.	Each	DELETED
298	R3-HE-3-33-b	100 mm.	Each	DELETED
299	R3-HE-3-33-c	125 mm.	Each	DELETED
300	R3-HE-3-33-d	150 mm	Each	DELETED
301	R3-HE-3-33-e	200 mm	Each	DELETED
302	R3-HE-3-33-f	250 mm.	Each	DELETED
303	R3-HE-3-33-g	300 mm.	Each	DELETED
303	K3-IIL-3-33-g	300 mm.	Lacii	DEELTED
	R3-HE-3-34	Supply of butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances, nuts, bolts, washers, packings etc. for following diameters. (Manually operated). Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
304	R3-HE-3-34-a	300 mm	Each	DELETED
305	R3-HE-3-34-b	450 mm.	Each	DELETED
306	R3-HE-3-34-c	600 mm.	Each	DELETED
307	R3-HE-3-34-d	750 mm.	Each	DELETED
308	R3-HE-3-34-e	900 mm.	Each	DELETED
309		1200 mm.	Each	DELETED
310		1350 mm	Each	DELETED
311	R3-HE-3-34-h	1500 mm	Each	DELETED
312	R3-HE-3-34-i	1800 mm	Each	DELETED
313	R3-HE-3-34-j	2200 mm	Each	DELETED
314	R3-HE-3-34-k	2400 mm	Each	DELETED
	R3-HE-3-35	Supply of butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adapters, nuts, bolts, washers, packings etc. for following diameters. (Manually operated). Note :(1) Butterfly valve and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.	Zuvii	
315	R3-HE-3-35-a	300 mm	Each	DELETED
316	R3-HE-3-35-b	450 mm.	Each	DELETED
317	R3-HE-3-35-с	600 mm.	Each	DELETED
318	R3-HE-3-35-d	750 mm.	Each	DELETED

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
319	R3-HE-3-35-e	900 mm.	Each	DELETED
320	R3-HE-3-35-f	1200 mm.	Each	DELETED
321	R3-HE-3-35-g	1350 mm	Each	DELETED
322	R3-HE-3-35-h	1500 mm	Each	DELETED
323	R3-HE-3-35-i	1800 mm	Each	DELETED
324	R3-HE-3-35-j	2200 mm	Each	DELETED
325	R3-HE-3-35-k	2400 mm	Each	DELETED
323	K3-11L-3-33-K	2400 mm	Lacii	DELETED
	R3-HE-3-36	Supplying of butterfly valves of PN 1.0 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances , nuts, bolts, washers, packings etc. for following diameters. (Electrically operated). Note: Butterfly valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
326	R3-HE-3-36-a	300 mm	Each	DELETED
327	R3-HE-3-36-b	450 mm.	Each	DELETED
328	R3-HE-3-36-c	600 mm.	Each	DELETED
329	R3-HE-3-36-d	750 mm.	Each	DELETED
330	R3-HE-3-36-e	900 mm.	Each	DELETED
331	R3-HE-3-36-f	1200 mm.	Each	DELETED
332	R3-HE-3-36-g	1350 mm	Each	DELETED
333	R3-HE-3-36-h	1500 mm	Each	DELETED
334	R3-HE-3-36-i	1800 mm	Each	DELETED
335	R3-HE-3-36-j	2200 mm	Each	DELETED
336	R3-HE-3-36-k	2400 mm	Each	DELETED
	10 112 0 00 11	- 100 mm		DEELIE
	R3-HE-3-37	Supply of butterfly valves of PN 1.6 conforming to AWWA C-504 in SGI- IS 1865(Grade 500/7) material with appurtenances and flange adapters, nuts, bolts, washers, packings etc. for following diameters. (Electrically operated). Note :(1) Butterfly valve and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
337	R3-HE-3-37-a	300 mm	Each	DELETED
338	R3-HE-3-37-b	450 mm.	Each	DELETED
339	R3-HE-3-37-с	600 mm.	Each	DELETED
340	R3-HE-3-37-d	750 mm.	Each	DELETED
341	R3-HE-3-37-e	900 mm.	Each	DELETED

		SECTION 3		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
342	R3-HE-3-37-f	1200 mm.	Each	DELETED
343	R3-HE-3-37-g	1350 mm	Each	DELETED
344	R3-HE-3-37-h	1500 mm	Each	DELETED
345	R3-HE-3-37-i	1800 mm	Each	DELETED
346	R3-HE-3-37-j	2200 mm	Each	DELETED
347	R3-HE-3-37-k	2400 mm	Each	DELETED
	R3-HE-3-38	Supply of Tamper proof Kinetic Air valves of PN 1.0 in Gray Cast Iron IS 210 FG 260 with nuts, bolts, washers etc. Note: Kinetic air valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
348	R3-HE-3-38-a	50 mm .	Each	DELETED
349	R3-HE-3-38-b	80 mm.	Each	DELETED
350	R3-HE-3-38-c	100 mm	Each	DELETED
351	R3-HE-3-38-d	150 mm.	Each	DELETED
352	R3-HE-3-38-e	200 mm.	Each	DELETED
	R3-HE-3-39	Supply of Tamper proof Kinetic Air valves of PN 1.6 in Gray Cast Iron IS 210 FG 260 with nuts, bolts, washers etc. Note: Kinetic air valves and all other materials shall be supplied as per the acceptance criteria of MCGM as given in specification. This item is to be used only after prior approval of Dy Che. Eng H.E & concerned AMCP.		
353	R3-HE-3-39-a	50 mm .	Each	DELETED
354	R3-HE-3-39-b	80 mm.	Each	DELETED
355	R3-HE-3-39-с	100 mm	Each	DELETED
356	R3-HE-3-39-d	150 mm.	Each	DELETED
357	R3-HE-3-39-e	200 mm.	Each	DELETED

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Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-4-1	Making connection on live CI/DI main of various sizes including cutting of pipes with pipe cutting machine, providing & fixing, DI pipe upto 1 M. length of distance peice on live main , specials such as tee & collar, jointing the pipes with mechanical joint as per IS 13382 / 1992 sealing with rubber gasket of SBR, with cast iron follower gland and mild steel zinc coated nut bolts suitable for CI/DI pipe, pumping out body water, etc complete in all respect as directed by Engineer in Charge Note: (1) The required excavation, shoring, encasement in cement concrete, any pipe/specials/sluice valve provided beyond Tee will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes shall be removed by the contractors as directed.		
1	R3-HE-4-1-a	80 mm x 80 mm connection	Each	7906.00
2	R3-HE-4-1-b	100 mm x 80 mm connection	Each	8363.00
3	R3-HE-4-1-c	100 mm x 100 mm connection	Each	8775.00
4	R3-HE-4-1-d	150 mm x 80 mm connection	Each	10456.00
5	R3-HE-4-1-e	150 mm x 100 mm connection	Each	9108.00
6	R3-HE-4-1-f	150 mm x 150 mm connection	Each	11658.00
7	R3-HE-4-1-g	250 mm x 80 mm connection	Each	17194.00
8	R3-HE-4-1-h	250 mm x 100 mm connection	Each	17263.00
9	R3-HE-4-1-i	250 mm x 150 mm connection	Each	17797.00
10	R3-HE-4-1-j	250 mm x 250 mm connection	Each	19697.00
11	R3-HE-4-1-k	300 mm x 80 mm connection	Each	22337.00
12	R3-HE-4-1-1	300 mm x 100 mm connection	Each	22560.00
13	R3-HE-4-1-m	300 mm x 150 mm connection	Each	23941.00
14	R3-HE-4-1-n	300 mm x 250 mm connection	Each	26365.00
15	R3-HE-4-1-0	300 mm x 300 mm connection	Each	28553.00
13	N3-11L-+-1-0	500 mm x 500 mm connection	Lacii	20333.00
	R3-HE-4-2	Making connection on live CI/DI main of various sizes including cutting of pipes with pipe cutting machine, providing & fixing, DI pipe upto 1 M. length of distance peice on live main, specials such as tee & collar. (suitable for lead joint), jointing the pipes with lead joint and removing body water etc complete in all respect as directed by Engineer in Charge. Note: (1) The required excavation, shoring, encasement in cement concrete, any pipe/specials/sluice valve provided beyond Tee will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes shall be removed by the contractors as directed.		
16	R3-HE-4-2-a	80 mm x 80 mm,	Each	9720.00
17	R3-HE-4-2-b	100 mm x 100 mm,	Each	10857.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
18	R3-HE-4-2-c	150 mm x 80 mm,	Each	12581.00
19	R3-HE-4-2-d	150 mm x 100 mm,	Each	12460.00
20	R3-HE-4-2-e	150 mm x 150 mm,	Each	14788.00
21	R3-HE-4-2-f	250 mm x 80 mm,	Each	21445.00
22	R3-HE-4-2-g	250 mm x 100 mm,	Each	21704.00
23	R3-HE-4-2-h	250 mm x 150 mm,	Each	22410.00
24	R3-HE-4-2-i	250 mm x 250 mm,	Each	24074.00
25	R3-HE-4-2-j	300 mm x 80 mm,	Each	28531.00
26	R3-HE-4-2-k	300 mm x 100 mm,	Each	28708.00
27	R3-HE-4-2-1	300 mm x 150 mm,	Each	29334.00
28	R3-HE-4-2-m	300 mm x 250 mm,	Each	31160.00
29	R3-HE-4-2-n	300 mm x 300 mm	Each	32090.00
	no ne i e		Lucii	32030.00
	R3-HE-4-3	Making connection on live CI/DI water main of various sizes, including cutting of pipes with cutting machine, providing & fixing, DI pipe upto 1 M. length of branch pipe, specials such as saddles, bends, distance pieces, flanges, collars etc. (suitable for lead joint), jointing the pipes with lead joint and pumping out body water etc complete in all respect as directed by Engineer in Charge. Note: (1) The required excavation, shoring, encasement in cement concrete & sluice valve will be paid separately under relevant items.		
30	R3-HE-4-3-a	450 mm x 80 mm	Each	19337.00
31	R3-HE-4-3-b	450 mm x 100 mm	Each	21227.00
32	R3-HE-4-3-c	450 mm x 150 mm	Each	26589.00
33	R3-HE-4-3-d	600 mm x 80 mm	Each	19384.00
34	R3-HE-4-3-e	600 mm x 100 mm	Each	21299.00
35	R3-HE-4-3-f	600 mm x 150 mm	Each	26693.00
36	R3-HE-4-3-g	600 mm x 250 mm	Each	39603.00
37	R3-HE-4-3-h	750 mm x 80 mm	Each	25615.00
38	R3-HE-4-3-i	750 mm x 100 mm	Each	27562.00
39	R3-HE-4-3-j	750 mm x 150 mm	Each	33015.00
40	R3-HE-4-3-k	750 mm x 250 mm	Each	47885.00
41	R3-HE-4-3-1	750 mm x 300 mm	Each	55360.00
42	R3-HE-4-3-m	900 mm x 80 mm	Each	32776.00
43	R3-HE-4-3-n	900 mm x 100 mm	Each	34747.00
44	R3-HE-4-3-o	900 mm x 150 mm	Each	40232.00
45	R3-HE-4-3-p	900 mm x 250 mm	Each	53760.00
46	R3-HE-4-3-q	900 mm x 300 mm	Each	61268.00
47	R3-HE-4-3-r	1200 mm x 80 mm	Each	39400.00
48	R3-HE-4-3-s	1200 mm x 100 mm	Each	41427.00
49	R3-HE-4-3-t	1200 mm x 150 mm	Each	46242.00
50	R3-HE-4-3-u	1200 mm x 250 mm	Each	59964.00
51	R3-HE-4-3-v	1200 mm x 300 mm	Each	67575.00
52	R3-HE-4-3-w	1200 mm x 450 mm	Each	114564.00
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Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
1		3		3
	R3-HE-4-4	Making connection on live CI/DI water main of various sizes, including cutting of pipes with cutting machine, providing & fixing DI pipe upto 1 M. length, specials such as tees, bends, distance pieces, flanges, collars etc. (suitable for lead joint), jointing the pipes with lead joint and pumping out body water etc complete in all respect as directed by Engineer in Charge. Note: (1) The required excavation, shoring, encasement in cement concrete & sluice valve will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes Shall be removed by the contractors as directed.		
53	R3-HE-4-4-a	450 x 250	Each	41490.00
54	R3-HE-4-4-b	450 x 300	Each	45163.00
55	R3-HE-4-4-c	450 x 450	Each	70267.00
56	R3-HE-4-4-d	600 x 300	Each	58926.00
57	R3-HE-4-4-e	600 x 450	Each	75768.00
58	R3-HE-4-4-f	600 x 600	Each	92994.00
59	R3-HE-4-4-g	750 x 450	Each	99792.00
60	R3-HE-4-4-h	750 x 600	Each	116953.00
61	R3-HE-4-4-i	750 x 750	Each	148617.00
62	R3-HE-4-4-i	900 x 450	Each	108870.00
63	R3-HE-4-4-k	900 x 600	Each	126619.00
64	R3-HE-4-4-1	900 x 750	Each	157709.00
65	R3-HE-4-4-m	900 x 900	Each	197410.00
66	R3-HE-4-4-n	1200 x 600	Each	154612.00
67	R3-HE-4-4-o	1200 x 750	Each	186628.00
68	R3-HE-4-4-p	1200 x 900	Each	215907.00
69	R3-HE-4-4-q	1200 x 1200	Each	292722.00
	R3-HE-4-5	Making connection on live MS water main of various sizes, including cost of cutting, supplying, loading, transporting on site, unloading, lowering in trenches, assembling of required MS specials, MS pipe and jointing the pipes / specials etc. with butt and lap welding joint, removing body water etc complete in all respect as directed by Engineer in Charge. For following sizes. Note: (1) The required excavation, shoring, encasement in cement concrete & supply and fixing of sluice valve will be paid separately under relevant item.		
70	R3-HE-4-5-a	450 x 80	Each	18204.00
71	R3-HE-4-5-b	450 x 150	Each	20192.00
72	R3-HE-4-5-c	450 x 250	Each	23281.00
73	R3-HE-4-5-d	450 x 300	Each	24785.00

		SECTION 4		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
74	R3-HE-4-5-e	450 x 450	Each	39212.00
75	R3-HE-4-5-f	600 x 80	Each	18136.00
76	R3-HE-4-5-g	600 x 150	Each	20296.00
77	R3-HE-4-5-h	600 x 250	Each	23452.00
78	R3-HE-4-5-i	600 x 300	Each	24990.00
79	R3-HE-4-5-j	600 x 450	Each	43572.00
80	R3-HE-4-5-k	600 x600	Each	47981.00
81	R3-HE-4-5-1	750 x 80	Each	24727.00
82	R3-HE-4-5-m	750 x 150	Each	26973.00
83	R3-HE-4-5-n	750 x 250	Each	30195.00
84	R3-HE-4-5-o	750 x 300	Each	31767.00
85	R3-HE-4-5-p	750 x 450	Each	50450.00
86	R3-HE-4-5-q	750 x 600	Each	54958.00
87	R3-HE-4-5-r	750 x 750	Each	90039.00
88	R3-HE-4-5-s	900 x 80	Each	30478.00
89	R3-HE-4-5-t	900 x 150	Each	32781.00
90	R3-HE-4-5-u	900 x 250	Each	36071.00
91	R3-HE-4-5-v	900 x 300	Each	37675.00
92	R3-HE-4-5-w	900 x 450	Each	56458.00
93	R3-HE-4-5-x	900 x 600	Each	61067.00
94	R3-HE-4-5-y	900 x 750	Each	96418.00
95	R3-HE-4-5-z	900 x 900	Each	107695.00
96	R3-HE-4-5-aa	1200 x 80	Each	44559.00
97	R3-HE-4-5-ab	1200 x 150	Each	46975.00
98	R3-HE-4-5-ac	1200 x 250	Each	51161.00
99	R3-HE-4-5-ad	1200 x 300	Each	52832.00
100	R3-HE-4-5-ae	1200 x 450	Each	61845.00
101	R3-HE-4-5-af	1200 x 600	Each	72616.00
102	R3-HE-4-5-ag	1200 x 750	Each	129904.00
103	R3-HE-4-5-ah	1200 x 900	Each	137868.00
104	R3-HE-4-5-ai	1200 x 1200	Each	161675.00
105	R3-HE-4-5-aj	1450 x 80	Each	78192.00
106	R3-HE-4-5-ak	1450 x 150	Each	80704.00
107	R3-HE-4-5-al	1450 x 250	Each	85001.00
108	R3-HE-4-5-am	1450 x 300	Each	86728.00
109	R3-HE-4-5-an	1450 x 450	Each	94016.00
110	R3-HE-4-5-ao	1450 x 600	Each	103335.00
111	R3-HE-4-5-ap	1450 x 750	Each	165346.00
112	R3-HE-4-5-aq	1450 x 900	Each	174295.00
113	R3-HE-4-5-ar	1450 x 1200	Each	202810.00
114	R3-HE-4-5-as	1450 x 1450	Each	225033.00
115	R3-HE-4-5-at	1500 x 80	Each	73173.00
116	R3-HE-4-5-au	1500 x 150	Each	75704.00
117	R3-HE-4-5-av	1500 x 250	Each	80023.00
118	R3-HE-4-5-aw	1500 x 300	Each	81761.00
119	R3-HE-4-5-ax	1500 x 450	Each	89082.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
120	R3-HE-4-5-ay	1500 x 600	Each	98435.00
121	R3-HE-4-5-az	1500 x 750	Each	160536.00
122	R3-HE-4-5-ba	1500 x 900	Each	169530.00
123	R3-HE-4-5-bb	1500 x 1200	Each	198224.00
124	R3-HE-4-5-bc	1500 x 1450	Each	215365.00
125	R3-HE-4-5-bd	1500 x 1500	Each	219438.00
126	R3-HE-4-5-be	1800 x 80	Each	84676.00
127	R3-HE-4-5-bf	1800 x 150	Each	87320.00
128	R3-HE-4-5-bg	1800 x 250	Each	91773.00
129	R3-HE-4-5-bh	1800 x 300	Each	93578.00
130	R3-HE-4-5-bi	1800 x 450	Each	103918.00
131	R3-HE-4-5-bj	1800 x 600	Each	110652.00
132	R3-HE-4-5-bk	1800 x 750	Each	172533.00
133	R3-HE-4-5-bl	1800 x 900	Each	181793.00
134	R3-HE-4-5-bm	1800 x 1200	Each	211565.00
135	R3-HE-4-5-bn	1800 x 1450	Each	229263.00
136	R3-HE-4-5-bo	1800 x 1500	Each	233447.00
137	R3-HE-4-5-bp	1800 x 1800	Each	270964.00
	R3-HE-4-6	Diversion of live CI/DI water mains with CI/MS pipes and specials, including cost of supplying, loading, transporting on site, unloading, lowering in trenches, assembling of DI K9 Class pipes / specials upto 2 M. length and MS pipes / specials upto 2 M. length on either side, of required diameter and jointing of CI or MS pipes or specials etc. with spun yarn and molten lead, including caulking etc complete in all respect as directed by Engineer in Charge & including cost of lead for following diameters. Note: (1) The required excavation, shoring, encasement in cement concrete & sluice valve will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes Shall be removed by the contractors as directed.		
138 139	R3-HE-4-6-a R3-HE-4-6-b	80 mm dia. 100 mm dia.	Rmt Rmt	2352.00 2511.00
139	R3-HE-4-6-c	150 mm dia.	Rmt	3498.00
140	K3-HE-4-0-C			
	R3-HE-4-6-d	250 mm dia.	Rmt	4449.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-4-7	Discarding the existing live CI/DI water main by plugging the same including cost of pipes and specials, Supplying, loading, transporting on site, unloading, lowering in trenches, assembling the CI / MS pipes / specials of required diameter, etc. complete including cost of mechanical cap or and with spun yarn and molten lead including caulking etc complete in all respect as directed by Engineer in Charge & including cost of lead for following diameters. The cost of item is for plugging the water main on either side at one location. Note: (1) The required excavation, shoring, encasement in cement cement concrete & sluice valve will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes Shall be removed by the contractors as directed.		
143	R3-HE-4-7-a	80 mm dia.	Each	5808.00
143	R3-HE-4-7-b	100 mm dia.	Each	6065.00
145	R3-HE-4-7-c	150 mm dia.	Each	6167.00
146	R3-HE-4-7-d	250 mm dia.	Each	6886.00
147	R3-HE-4-7-e	300 mm dia.	Each	7762.00
148	R3-HE-4-7-f	450 mm dia.	Each	19778.00
149	R3-HE-4-7-g	600 mm dia.	Each	25209.00
150	R3-HE-4-7-h	750 mm dia.	Each	24606.00
130	KS IIL 17 II	750 mm did.	Lucii	2 1000.00
	R3-HE-4-8	Cutting and Removing of the existing CI/DI/MS pipe section from trenches etc complete in all respect as directed by Engineer in Charge. Note: (1) The required excavation, shoring, breaking of encasement in cement cement concrete will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. Final Rate for item is exclusive of salvation cost of the pipe, salvation cost of pipe section to be removed is worked out, the same is to be subtracted from the total item cost wherever applicable.(3) The amount required for dewatering and plugging of mains in case of live mains will be paid separately wherever applicable.(4) Please note that the pipe above 900 mm Dia. are considered as MS Pipes laid below ground		
151	R3-HE-4-8-a	80 mm.	Rmt	191.00
152	R3-HE-4-8-b	100 mm.	Rmt	214.00
153	R3-HE-4-8-c	150 mm.	Rmt	244.00
154	R3-HE-4-8-d	200 mm.	Rmt	282.00
155	R3-HE-4-8-e	250 mm.	Rmt	427.00

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Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
156	R3-HE-4-8-f	300 mm.	Rmt	445.00
157	R3-HE-4-8-g	350 mm.	Rmt	474.00
158	R3-HE-4-8-h	400 mm.	Rmt	526.00
159	R3-HE-4-8-i	450 mm.	Rmt	657.00
160	R3-HE-4-8-j	500 mm.	Rmt	744.00
161	R3-HE-4-8-k	600 mm.	Rmt	1000.00
162	R3-HE-4-8-1	700 mm.	Rmt	1209.00
163	R3-HE-4-8-m	750 mm.	Rmt	1523.00
164	R3-HE-4-8-n	800 mm	Rmt	2889.00
165	R3-HE-4-8-o	900 mm	Rmt	4356.00
166	R3-HE-4-8-p	1000 mm	Rmt	5474.00
167	R3-HE-4-8-q	1100 mm	Rmt	7874.00
168	R3-HE-4-8-r	1200 mm	Rmt	9448.00
169	R3-HE-4-8-s	1300 mm	Rmt	11810.00
170	R3-HE-4-8-t	1400 mm	Rmt	15747.00
171	R3-HE-4-8-u	1500 mm	Rmt	15747.00
172	R3-HE-4-8-v	1600 mm	Rmt	23620.00
173	R3-HE-4-8-w	1700 mm	Rmt	23620.00
174	R3-HE-4-8-x	1800 mm	Rmt	23620.00
	R3-HE-4-9	Making connection on live HDPE/ MDPE main of various sizes including cutting of pipes with hack saw/ pipe cutting machine, providing & fixing specials such as electrofusion equal tee, long neck pipe(Butt welded) and includes pumping out body water, etc complete in all respect as directed by Engineer in Charge. The jointing of tee shall be done by using electrofusion method of jointing. All the electrofusion products shall comply to ISO 8085-3 and shall be of SDR 11 rating. The long neck pipe shall be jointed by butt welding method. Note: (1) The required excavation, shoring, any pipe/specials/ reducers provided beyond Long neck pipe will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes shall be removed by the contractors as directed.		
175	R3-HE-4-9-a	315 mm	Each	44535.00
176	R3-HE-4-9-b	250 mm	Each	34077.00
177	R3-HE-4-9-c	160 mm	Each	16845.00
170	R3-HE-4-9-d	110 mm	Each	11656.00
178 179	R3-HE-4-9-e	90 mm	Each	10440.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-4-10	Discarding the existing live MS water main by plugging the same including cost of pipes and specials, Supplying, loading, transporting on site, unloading, lowering in trenches, assembling the CI / MS pipes / specials of required diameter, etc. complete including cost of mechanical cap/ Blank Flange or and with spun yarn and molten lead including caulking etc complete in all respect as directed by Engineer in Charge & including cost of lead for following diameters. The cost of item is for plugging the water main on either side at one location. Note: (1) The required excavation, shoring, encasement in cement cement concrete & sluice valve will be paid separately under relevant items.(2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. Final Rate for item is exclusive of salvation cost of the pipe, salvation cost of pipe section to be removed is worked out, the same is to be subtracted form the total item cost wherever applicable.		5
100	D2 HE 4 10	000 1'	г 1	21.522.00
180	R3-HE-4-10-a	900 mm dia.	Each	21523.00
181	R3-HE-4-10-b	1200 mm dia.	Each	20795.00
	R3-HE-4-11	Cutting and Removing of the existing MS pipe section laid above ground etc complete in all respect as directed by Engineer in Charge. Note: (1) The required breaking of encasement in cement cement concrete will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. Final for item is exclusive of salvation cost of the pipe, salvation cost of pipe section to be removed is worked out, the same is to be subtracted form the total item cost wherever applicable.(3) The required for plugging of mains in case of live mains will be paid separately wherever applicable.		
182	R3-HE-4-11-a	1000 mm	Rmt	4288.00
183	R3-HE-4-11-b	1100 mm	Rmt	3609.00
184	R3-HE-4-11-c	1200 mm	Rmt	7551.00
185	R3-HE-4-11-d	1300 mm	Rmt	9439.00
186	R3-HE-4-11-e	1400 mm	Rmt	12585.00
187	R3-HE-4-11-f	1500 mm	Rmt	12585.00
188	R3-HE-4-11-g	1600 mm	Rmt	18877.00
189	R3-HE-4-11-h	1700 mm	Rmt	18877.00
190	R3-HE-4-11-i	1800 mm	Rmt	18877.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-5-1	Supplying, loading, transporting on site, unloading of GRP pipes confirming IS: 12709 suitable for 6 kg / Sq.cm pressure rating and Stiffness class of 2500 N/m2 including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge.		
1	R3-HE-5-1-a	350 mm dia.	Rmt	3533.00
2	R3-HE-5-1-b	400 mm dia.	Rmt	4031.00
3	R3-HE-5-1-c	450 mm dia.	Rmt	4685.00
4	R3-HE-5-1-d	500 mm dia.	Rmt	5354.00
5	R3-HE-5-1-e	600 mm dia.	Rmt	6989.00
6	R3-HE-5-1-f	700 mm dia.	Rmt	8829.00
7	R3-HE-5-1-g	800 mm dia.	Rmt	10945.00
8	R3-HE-5-1-h	900 mm dia.	Rmt	13254.00
9	R3-HE-5-1-i	1000 mm dia.	Rmt	16016.00
10	R3-HE-5-1-j	1100 mm dia.	Rmt	18908.00
11	R3-HE-5-1-k	1200 mm dia.	Rmt	22180.00
12	R3-HE-5-1-1	1300 mm dia.	Rmt	25570.00
13	R3-HE-5-1-m	1400 mm dia.	Rmt	29279.00
14	R3-HE-5-1-n	1600 mm dia.	Rmt	37111.00
15	R3-HE-5-1-o	1800 mm dia.	Rmt	46006.00
16	R3-HE-5-1-p	2000 mm dia.	Rmt	56435.00
17	R3-HE-5-1-q	2400 mm dia.	Rmt	80014.00
	R3-HE-5-2	Lowering and Laying in trenches, assembling and jointing of GRP pipes Conforming IS :12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure etc Complete in all respects and as directed by Engineer In-Charge Any specials such as bends, tees, lamination joints, flanges etc. shall be paid separately.		
18	R3-HE-5-2-a	350 mm dia.	Rmt	148.00
19	R3-HE-5-2-b	400 mm dia.	Rmt	148.00
20	R3-HE-5-2-c	450 mm dia.	Rmt	148.00
21	R3-HE-5-2-d	500 mm dia.	Rmt	241.00
22	R3-HE-5-2-e	600 mm dia.	Rmt	241.00
23	R3-HE-5-2-f	700 mm dia.	Rmt	275.00
24	R3-HE-5-2-g	800 mm dia.	Rmt	275.00
25	R3-HE-5-2-h	900 mm dia.	Rmt	317.00
26	R3-HE-5-2-i	1000 mm dia.	Rmt	370.00
27	R3-HE-5-2-j	1100 mm dia.	Rmt	413.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
28	R3-HE-5-2-k	1200 mm dia.	Rmt	413.00
29	R3-HE-5-2-1	1300 mm dia.	Rmt	455.00
30	R3-HE-5-2-m	1400 mm dia.	Rmt	571.00
31	R3-HE-5-2-n	1600 mm dia.	Rmt	714.00
32	R3-HE-5-2-o	1800 mm dia.	Rmt	1088.00
33	R3-HE-5-2-р	2000 mm dia.	Rmt	1088.00
34	R3-HE-5-2-q	2400 mm dia.	Rmt	1632.00
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	R3-HE-5-3	Supplying, loading, transporting on site, unloading lowering and Laying in trenches, assembling and jointing of GRP pipes Conforming IS:12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure etc Complete in all respects and as directed by Engineer In-Charge Any specials such as bends, tees, lamination joints, flanges etc. shall be paid separately.		
35	R3-HE-5-3-a	350 mm dia.	Rmt	3680.00
36	R3-HE-5-3-b	400 mm dia.	Rmt	4179.00
37	R3-HE-5-3-c	450 mm dia.	Rmt	4833.00
38	R3-HE-5-3-d	500 mm dia.	Rmt	5595.00
39	R3-HE-5-3-e	600 mm dia.	Rmt	7230.00
40	R3-HE-5-3-f	700 mm dia.	Rmt	9104.00
41	R3-HE-5-3-g	800 mm dia.	Rmt	11220.00
42	R3-HE-5-3-h	900 mm dia.	Rmt	13571.00
43	R3-HE-5-3-i	1000 mm dia.	Rmt	16386.00
44	R3-HE-5-3-j	1100 mm dia.	Rmt	19321.00
45	R3-HE-5-3-k	1200 mm dia.	Rmt	22593.00
46	R3-HE-5-3-1	1300 mm dia.	Rmt	26025.00
47	R3-HE-5-3-m	1400 mm dia.	Rmt	29850.00
48	R3-HE-5-3-n	1600 mm dia.	Rmt	37825.00
49	R3-HE-5-3-o	1800 mm dia.	Rmt	47094.00
50	R3-HE-5-3-р	2000 mm dia.	Rmt	57523.00
51	R3-HE-5-3-q	2400 mm dia.	Rmt	81646.00
	R3-HE-5-4	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 350 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		
52	R3-HE-5-4-a	900 bend with 1 coupling	Nos	9441.00
53	R3-HE-5-4-b	600 bend with 1 coupling	Nos	9441.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
54	R3-HE-5-4-c	450 bend with 1 coupling	Nos	5789.00
55	R3-HE-5-4-d	300 bend with 1 coupling	Nos	5789.00
56	R3-HE-5-4-e	22.50 bend with 1 coupling	Nos	5789.00
57	R3-HE-5-4-g	11.250 bend with 1coupling	Nos	5789.00
58	R3-HE-5-4-h	Extra reka coupling	Nos	2372.00
59	R3-HE-5-4-i	Lamination (Butt strap joint) joint	Nos	3986.00
60	R3-HE-5-4-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	6147.00
61	R3-HE-5-4-k	GRP Tee350 mm x 350 mm x any size -	Nos	11085.00
	R3-HE-5-5	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 400 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		
62	R3-HE-5-5-a	900 bend with 1 coupling	Nos	11835.00
63	R3-HE-5-5-b	600 bend with 1 coupling	Nos	11835.00
64	R3-HE-5-5-c	450 bend with 1 coupling	Nos	6992.00
65	R3-HE-5-5-d	300 bend with 1 coupling	Nos	6992.00
66	R3-HE-5-5-e	22.50 bend with 1 coupling	Nos	6992.00
67	R3-HE-5-5-f	11.250 bend with 1coupling	Nos	6992.00
68	R3-HE-5-5-g	Extra reka coupling	Nos	2558.00
69	R3-HE-5-5-h	Lamination (Butt strap joint) joint	Nos	2469.00
70	R3-HE-5-5-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	6985.00
71	R3-HE-5-5-j	GRP Tee 400 mm x 400 mm x any size -	Nos	13899.00
		Supplying, loading, transporting on site, unloading, lowering in		
	R3-HE-5-6	trenches, assembling and jointing of GRP specials for 450 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		
72	R3-HE-5-6-a	900 bend with 1 coupling	Nos	14300.00
73	R3-HE-5-6-b	600 bend with 1 coupling	Nos	14300.00
74	R3-HE-5-6-c	450 bend with 1 coupling	Nos	8372.00
75	R3-HE-5-6-d	300 bend with 1 coupling	Nos	8372.00
76	R3-HE-5-6-e	22.50 bend with 1 coupling	Nos	8372.00
77	R3-HE-5-6-f	11.250 bend with 1coupling	Nos	8372.00
78	R3-HE-5-6-g	Extra reka coupling	Nos	2839.00
79	R3-HE-5-6-h	Lamination (Butt strap joint) joint	Nos	2767.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
80	R3-HE-5-6-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	7764.00
81	R3-HE-5-6-j	GRP Tee 450 mm x 450 mm x any size -	Nos	16871.00
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	R3-HE-5-7	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 500 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		
82	R3-HE-5-7-a	900 bend with 1 coupling	Nos	18390.00
83	R3-HE-5-7-b	600 bend with 1 coupling	Nos	18390.00
84	R3-HE-5-7-c	450 bend with 1 coupling	Nos	10375.00
85	R3-HE-5-7-d	300 bend with 1 coupling	Nos	10375.00
86	R3-HE-5-7-e	22.50 bend with 1 coupling	Nos	10375.00
87	R3-HE-5-7-f	11.250 bend with 1coupling	Nos	10375.00
88	R3-HE-5-7-g	Extra reka coupling	Nos	3269.00
89	R3-HE-5-7-h	Lamination (Butt strap joint) joint	Nos	3232.00
90	R3-HE-5-7-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	9387.00
91	R3-HE-5-7-j	GRP Tee 500 mm x 500 mm x any size -	Nos	21662.00
	R3-HE-5-8	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 600 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		
92	R3-HE-5-8-a	900 bend with 1 coupling	Nos	26910.00
93	R3-HE-5-8-b	600 bend with 1 coupling	Nos	26910.00
94	R3-HE-5-8-c	450 bend with 1 coupling	Nos	14371.00
95	R3-HE-5-8-d	300 bend with 1 coupling	Nos	14371.00
96	R3-HE-5-8-e	22.50 bend with 1 coupling	Nos	14371.00
97 98	R3-HE-5-8-f	11.250 bend with 1coupling Extra reka coupling	Nos Nos	14371.00 4002.00
98	R3-HE-5-8-g R3-HE-5-8-h	Lamination (Butt strap joint) joint	Nos	4631.00
100	R3-HE-5-8-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	12134.00
100	R3-HE-5-8-j	GRP Tee 600 mm x 600 mm x any size -	Nos	31519.00
101	1.0 11L 0 0 J		1,00	21217.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
	R3-HE-5-9	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 700 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
102	R3-HE-5-9-a	900 bend with 1 coupling	Nos	39161.00
103	R3-HE-5-9-b	600 bend with 1 coupling	Nos	39161.00
104	R3-HE-5-9-c	450 bend with 1 coupling	Nos	20349.00
105	R3-HE-5-9-d	300 bend with 1 coupling	Nos	20349.00
106	R3-HE-5-9-e	22.50 bend with 1 coupling	Nos	20349.00
107	R3-HE-5-9-f	11.250 bend with 1coupling	Nos	20349.00
108	R3-HE-5-9-g	Extra reka coupling	Nos	5237.00
109	R3-HE-5-9-h	Lamination (Butt strap joint) joint	Nos	6587.00
110	R3-HE-5-9-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	15694.00
111	R3-HE-5-9-j	GRP Tee 700 mm x 700 mm x any size -	Nos	45597.00
	R3-HE-5-10	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 800 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
112	R3-HE-5-10-a	900 bend with 1 coupling	Nos	54239.00
113	R3-HE-5-10-b	600 bend with 1 coupling	Nos	54239.00
114	R3-HE-5-10-c	450 bend with 1 coupling	Nos	26989.00
115	R3-HE-5-10-d	300 bend with 1 coupling	Nos	26989.00
116	R3-HE-5-10-e	22.50 bend with 1 coupling	Nos	26989.00
117	R3-HE-5-10-f	11.250 bend with 1coupling	Nos	26989.00
118	R3-HE-5-10-g	Extra reka coupling	Nos	5923.00
119	R3-HE-5-10-h	Lamination (Butt strap joint) joint	Nos	9006.00
120	R3-HE-5-10-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	19508.00
121	R3-HE-5-10-j	GRP Tee 800 mm x 800 mm x any size -	Nos	63064.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
	R3-HE-5-11	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 900 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
122	R3-HE-5-11-a	900 bend with 1 coupling	Nos	72591.00
123	R3-HE-5-11-b	600 bend with 1 coupling	Nos	72591.00
124	R3-HE-5-11-c	450 bend with 1 coupling	Nos	35524.00
125	R3-HE-5-11-d	300 bend with 1 coupling	Nos	35524.00
126	R3-HE-5-11-e	22.50 bend with 1 coupling	Nos	35524.00
127	R3-HE-5-11-f	11.250 bend with 1coupling	Nos	35524.00
128	R3-HE-5-11-g	Extra reka coupling	Nos	7108.00
129	R3-HE-5-11-h	Lamination (Butt strap joint) joint	Nos	12086.00
130	R3-HE-5-11-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	22871.00
131	R3-HE-5-11-j	GRP Tee 900 mm x 900 mm x any size -	Nos	84525.00
	R3-HE-5-12	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1000 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
132	R3-HE-5-12-a	900 bend with 1 coupling	Nos	93461.00
133	R3-HE-5-12-b	600 bend with 1 coupling	Nos	93461.00
134	R3-HE-5-12-c	450 bend with 1 coupling	Nos	46798.00
135	R3-HE-5-12-d	300 bend with 1 coupling	Nos	46798.00
136	R3-HE-5-12-e	22.50 bend with 1 coupling	Nos	46798.00
137	R3-HE-5-12-f	11.250 bend with 1coupling	Nos	46798.00
138	R3-HE-5-12-g	Extra reka coupling	Nos	8618.00
139	R3-HE-5-12-h	Lamination (Butt strap joint) joint	Nos	16003.00
140	R3-HE-5-12-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	28806.00
141	R3-HE-5-12-j	GRP Tee 1000 mm x 1000 mm x any size -	Nos	108327.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
	R3-HE-5-13	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1100 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
142	R3-HE-5-13-a	900 bend with 1 coupling	Nos	120706.00
143	R3-HE-5-13-b	600 bend with 1 coupling	Nos	120706.00
144	R3-HE-5-13-c	450 bend with 1 coupling	Nos	59817.00
145	R3-HE-5-13-d	300 bend with 1 coupling	Nos	59817.00
146	R3-HE-5-13-e	22.50 bend with 1 coupling	Nos	59817.00
147	R3-HE-5-13-f	11.250 bend with 1coupling	Nos	59817.00
148	R3-HE-5-13-g	Extra reka coupling	Nos	9998.00
149	R3-HE-5-13-i	Lamination (Butt strap joint) joint	Nos	20408.00
150	R3-HE-5-13-j	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	37613.00
151	R3-HE-5-13-k	GRP Tee 1100 mm x 1100 mm x any size -	Nos	139446.00
	R3-HE-5-14	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1200 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
152	R3-HE-5-14-a	900 bend with 1 coupling	Nos	154496.00
153	R3-HE-5-14-b	600 bend with 1 coupling	Nos	154496.00
154	R3-HE-5-14-c	450 bend with 1 coupling	Nos	75875.00
155	R3-HE-5-14-d	300 bend with 1 coupling	Nos	75875.00
156	R3-HE-5-14-e	22.50 bend with 1 coupling	Nos	75875.00
157	R3-HE-5-14-f	11.250 bend with 1coupling	Nos	75875.00
158	R3-HE-5-14-g	Extra reka coupling	Nos	11548.00
159	R3-HE-5-14-h	Lamination (Butt strap joint) joint	Nos	25921.00
160	R3-HE-5-14-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	43791.00
161	R3-HE-5-14-j	GRP Tee 1200 mm x 1200 mm x any size -	Nos	178203.00
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Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
	R3-HE-5-15	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1300 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
162	R3-HE-5-15-a	900 bend with 1 coupling	Nos	190457.00
163	R3-HE-5-15-b	600 bend with 1 coupling	Nos	190457.00
164	R3-HE-5-15-c	450 bend with 1 coupling	Nos	92883.00
165	R3-HE-5-15-d	300 bend with 1 coupling	Nos	92883.00
166	R3-HE-5-15-e	22.50 bend with 1 coupling	Nos	92883.00
167	R3-HE-5-15-f	11.250 bend with 1coupling	Nos	92883.00
168	R3-HE-5-15-g	Extra reka coupling	Nos	13051.00
169	R3-HE-5-15-h	Lamination (Butt strap joint) joint	Nos	26934.00
170	R3-HE-5-15-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	57097.00
171	R3-HE-5-15-j	GRP Tee 1300 mm x 1300 mm x any size -	Nos	220022.00
	R3-HE-5-16	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1400 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
172	R3-HE-5-16-a	900 bend with 1 coupling	Nos	234645.00
173	R3-HE-5-16-b	600 bend with 1 coupling	Nos	234645.00
174	R3-HE-5-16-c	450 bend with 1 coupling	Nos	113895.00
175	R3-HE-5-16-d	300 bend with 1 coupling	Nos	113895.00
176	R3-HE-5-16-e	22.50 bend with 1 coupling	Nos	113895.00
177	R3-HE-5-16-f	11.250 bend with 1coupling	Nos	113895.00
178	R3-HE-5-16-g	Extra reka coupling	Nos	15100.00
179	R3-HE-5-16-h	Lamination (Butt strap joint) joint	Nos	39346.00
180	R3-HE-5-16-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	64618.00
181	R3-HE-5-16-j	GRP Tee 1400 mm x 1400 mm x any size -	Nos	270302.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
	R3-HE-5-17	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 1600 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
182	R3-HE-5-17-a	900 bend with 1 coupling	Nos	338177
183	R3-HE-5-17-b	600 bend with 1 coupling	Nos	338177
184	R3-HE-5-17-c	450 bend with 1 coupling	Nos	162669
185	R3-HE-5-17-d	300 bend with 1 coupling	Nos	162669
186	R3-HE-5-17-e	22.50 bend with 1 coupling	Nos	162669
187	R3-HE-5-17-f	11.250 bend with 1coupling	Nos	162669
188	R3-HE-5-17-g	Extra reka coupling	Nos	19071
189	R3-HE-5-17-h	Lamination (Butt strap joint) joint	Nos	56219
190	R3-HE-5-17-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	87063
191	R3-HE-5-17-j	GRP Tee 1600 mm x 1600 mm x any size -	Nos	388169
	R3-HE-5-18	trenches, assembling and jointing of GRP specials for 1800 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
192	R3-HE-5-18-a	900 bend with 1 coupling	Nos	469634.00
193		600 bend with 1 coupling	Nos	469634.00
194		450 bend with 1 coupling	Nos	224376.00
195	R3-HE-5-18-d	300 bend with 1 coupling	Nos	224376.00
196	R3-HE-5-18-e	22.50 bend with 1 coupling	Nos	224376.00
197	R3-HE-5-18-f	11.250 bend with 1coupling	Nos	224376.00
198	R3-HE-5-18-g	Extra reka coupling	Nos	23710.00
199	R3-HE-5-18-h	Lamination (Butt strap joint) joint	Nos	78341.00
200	R3-HE-5-18-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	116419.00
201	R3-HE-5-18-j	GRP Tee 1800 mm x 1800 mm x any size -	Nos	538667.00
	R3-HE-5-19	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 2000 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg / Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, up to 6 kg/sq.cm pressure.		

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
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202	R3-HE-5-19-a	900 bend with 1 coupling	Nos	639607.00
203	R3-HE-5-19-b	600 bend with 1 coupling	Nos	639607.00
204	R3-HE-5-19-c	450 bend with 1 coupling	Nos	304102.00
205	R3-HE-5-19-d	300 bend with 1 coupling	Nos	304102.00
206	R3-HE-5-19-e	22.50 bend with 1 coupling	Nos	304102.00
207	R3-HE-5-19-f	11.250 bend with 1coupling	Nos	304102.00
208	R3-HE-5-19-g	Extra reka coupling	Nos	29597.00
209	R3-HE-5-19-h	Lamination (Butt strap joint) joint	Nos	107080.00
210	R3-HE-5-19-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	149924.00
211	R3-HE-5-19-j	GRP Tee 2000 mm x 2000 mm x any size -	Nos	731622.00
	R3-HE-5-20	Supplying, loading, transporting on site, unloading, lowering in trenches, assembling and jointing of GRP specials for 2400 mm dia pipe and Conforming to IS: 12709 suitable for 6 kg/Sq.cm pressure rating, including reka coupling joints for following diameters etc Complete in all respects and as directed by Engineer In-Charge. The item also includes testing of water main after laying, upto 6 kg/sq.cm pressure.		
212	R3-HE-5-20-a	900 bend with 1 coupling	Nos	1082277.00
213	R3-HE-5-20-b	600 bend with 1 coupling	Nos	1082277.00
214	R3-HE-5-20-c	450 bend with 1 coupling	Nos	509382.00
215	R3-HE-5-20-d	300 bend with 1 coupling	Nos	509382.00
216	R3-HE-5-20-e	22.50 bend with 1 coupling	Nos	509382.00
217	R3-HE-5-20-f	11.250 bend with 1coupling	Nos	509382.00
218	R3-HE-5-20-g	Extra reka coupling	Nos	40649.00
219	R3-HE-5-20-h	Lamination (Butt strap joint) joint	Nos	180050.00
220	R3-HE-5-20-i	Flanged tailpiece (length 0.75 mtr.) with 1 coupling -	Nos	221499.00
221	R3-HE-5-20-j	GRP Tee 2400 mm x 2400 mm x any size -	Nos	1235223.00
	R3-HE-5-21	Making connection on live GRP water line of various sizes including cutting of pipes with pipe cutting machine, providing & fixing, GRP Tee with MS flange on live main, REKA coupling at joints ,pumping out body water, etc complete in all respect as directed by Engineer in Charge Note: (1) The required excavation, shoring and any pipe/specials/sluice valve provided beyond Tee will be paid separately under relevant items. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes shall be removed by the contractors as directed.		
222	R3-HE-5-21-a	1400x1200 mm	Nos	116895.00
223	R3-HE-5-21-b	1400x900 mm	Nos	107322.00
224	R3-HE-5-21-c	1400x700 mm	Nos	99835.00
225	R3-HE-5-21-d	1400x600 mm	Nos	96628.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
226	R3-HE-5-21-e	1400x450 mm	Nos	93641.00
227	R3-HE-5-21-f	1400x350 mm	Nos	92161.00
228	R3-HE-5-21-g	1200x900 mm	Nos	85772.00
229	R3-HE-5-21-h	1200x700 mm	Nos	80666.00
230	R3-HE-5-21-i	1200x600 mm	Nos	77458.00
231	R3-HE-5-21-j	1200x450 mm	Nos	74471.00
232	R3-HE-5-21-k	1200x350 mm	Nos	72991.00
233	R3-HE-5-21-1	900x700 mm	Nos	55655.00
234	R3-HE-5-21-m	900x600 mm	Nos	52448.00
235	R3-HE-5-21-n	900x450 mm	Nos	49461.00
236	R3-HE-5-21-o	900x350 mm	Nos	47981.00
237	R3-HE-5-21-p	700x600 mm	Nos	41867.00
238	R3-HE-5-21-q	700x450 mm	Nos	38880.00
239	R3-HE-5-21-r	700x350 mm	Nos	37400.00
240	R3-HE-5-21-s	600x450 mm	Nos	32263.00
241	R3-HE-5-21-t	600x350 mm	Nos	30784.00
242	R3-HE-5-21-u	450x350 mm	Nos	24025.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-6-1	Providing and fixing CI Mechanical joint split collars suitable for repair of cracks/ leakages of CI/ DI pipes (Inclusive of Odd size pipes) as per MCGM specifications complete with sealing rubber gasket made of SBR and galvanized 'T' bolts and nuts. The whole assembly mechanically and Hydraulically tested to the provisions laid down in IS 1538/1993 or IS 13382/1992 whichever is applicable. This item includes dewatering of body water cleaning of pipe and arresting leakages etc complete as directed by Engineer in Charge		
1	R3-HE-6-1-a	80 mm dia.	Each	5468.00
2	R3-HE-6-1-b	100 mm dia.	Each	7635.00
3	R3-HE-6-1-c	150 mm dia.	Each	10360.00
4	R3-HE-6-1-d	200 mm dia.	Each	11855.00
5	R3-HE-6-1-e	250 mm dia.	Each	16995.00
6	R3-HE-6-1-f	300 mm dia.	Each	26761.00
7	R3-HE-6-1-g	350 mm dia.	Each	28831.00
8	R3-HE-6-1-h	400 mm dia.	Each	31534.00
9	R3-HE-6-1-i	450 mm dia.	Each	27644.00
10	R3-HE-6-1-j	500 mm dia.	Each	31749.00
11	R3-HE-6-1-k	600 mm dia.	Each	36464.00
12	R3-HE-6-1-l	750 mm dia.	Each	45549.00
	R3-HE-6-1A	Providing and fixing CI Mechanical joint collars suitable for CI/DI pipes, (dimensionally described in Table - 13 of IS: 13382/1992) inclusive of sealing rubber gasket of SBR (dimensionally described in IS:12820/1989), follower gland of CI and MS nut bolts zinc coated or otherwise protected from rusting etc complete as directed by Engineer in Charge		
13	R3-HE-6-1A-a	80 mm dia.	Each	1105.00
14	R3-HE-6-1A-b	100 mm dia.	Each	1207.00
15	R3-HE-6-1A-c	150 mm dia.	Each	1999.00
16	R3-HE-6-1A-d	200 mm dia.	Each	2573.00
17	R3-HE-6-1A-e	250 mm dia.	Each	3156.00
18	R3-HE-6-1A-f	300 mm dia.	Each	4181.00
19	R3-HE-6-1A-g	350 mm dia.	Each	5498.00
20		400 mm dia.	Each	7799.00
21	R3-HE-6-1A-i	450 mm dia.	Each	10739.00
22	R3-HE-6-1A-j	500 mm dia.	Each	17414.00
23		600 mm dia.	Each	33799.00
24	R3-HE-6-1A-l	750 mm dia.	Each	53705.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-6-2	Providing and fixing CI Mechanical joint ALL Socket Tees, (dimensionally described in Table - 18 of IS:13382 / 1992) inclusive of Sealing Rubber Gasket of SBR (dimensionally described in IS: 12820),Cast Iron Follower Gland and Mild Steel Nut Bolts zinc coated or otherwise protected from rusting and suitable for CI/DI pipes etc complete as directed by Engineer in Charge		
25	R3-HE-6-2-a	80 x 80 x 80 mm dia.	Each	2886.00
26	R3-HE-6-2-b	100 x 100 x 80 mm dia.	Each	3300.00
27	R3-HE-6-2-c	100 x 100 x 100 mm dia.	Each	3713.00
28	R3-HE-6-2-d	150 x 150 x 80 mm dia.	Each	5076.00
29	R3-HE-6-2-e	150 x 150 x 100 mm dia.	Each	5350.00
30	R3-HE-6-2-f	150 x 150 x 150 mm dia.	Each	6279.00
31	R3-HE-6-2-g	200 x 200 x 80 mm dia.	Each	6116.00
32	R3-HE-6-2-h	200 x 200 x 100 mm dia.	Each	6444.00
33	R3-HE-6-2-i	200 x 200 x 150 mm dia.	Each	7726.00
34	R3-HE-6-2-j	200 x 200 x 200 mm dia.	Each	8466.00
35	R3-HE-6-2-k	250 x 250 x 80 mm dia.	Each	9722.00
36	R3-HE-6-2-1	250 x 250 x 100 mm dia.	Each	9791.00
37	R3-HE-6-2-m	250 x 250 x 150 mm dia.	Each	10327.00
38	R3-HE-6-2-n	250 x 250 x 200 mm dia.	Each	11079.00
39	R3-HE-6-2-o	250 x 250 x 250 mm dia.	Each	12229.00
40	R3-HE-6-2-p	300 x 300 x 80 mm dia.	Each	12800.00
41	R3-HE-6-2-q	300 x 300 x 100 mm dia.	Each	13023.00
42	R3-HE-6-2-r	300 x 300 x 150 mm dia.	Each	14403.00
43	R3-HE-6-2-s	300 x 300 x 200 mm dia.	Each	14529.00
44	R3-HE-6-2-t	300 x 300 x 250 mm dia.	Each	16827.00
45	R3-HE-6-2-u	300 x 300 x 250 mm dia.	Each	19016.00
73	K3-IIL-0-2-u	300 X 300 X 300 mm dia.	Lacii	17010.00
	R3-HE-6-3	Providing and fixing CI Mechanical joint Double Socket any degree bends, (dimensionally described in IS:13382/1992) inclusive of Sealing Rubber Gasket of SBR (dimensionally described in IS: 12820), Cast Iron Follower Gland and Mild Steel Nut Bolts zinc coated or otherwise protected from rusting and suitable for CI/DI pipes etc complete as directed by Engineer in Charge		
46	R3-HE-6-3-a	80 mm dia.	Each	2370.00
47	R3-HE-6-3-b	100 mm dia.	Each	2851.00
48	R3-HE-6-3-c	150 mm dia.	Each	5124.00
49	R3-HE-6-3-d	200 mm dia.	Each	7418.00
50	R3-HE-6-3-e	250 mm dia.	Each	10448.00
51	R3-HE-6-3-f	300 mm dia.	Each	15055.00
52	R3-HE-6-3-g	350 mm dia.	Each	20442.00
53	R3-HE-6-3-h	400 mm dia.	Each	22939.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
54	R3-HE-6-3-i	450 mm dia.	Each	27447.00
55	R3-HE-6-3-j	500 mm dia.	Each	51915.00
56	R3-HE-6-3-k	600 mm dia.	Each	77397.00
57	R3-HE-6-3-1	700 mm dia.	Each	82738.00
58	R3-HE-6-3-m	750 mm dia.	Each	128176.00
	10 112 0 0 111	, , , , , , , , , , , , , , , , , , , ,		12017000
	R3-HE-6-4	Providing and fixing CI Mechanical joint Double Socket with Branch Flanged Tees, (dimensionally described in Table - 19 of IS: 13382 / 1992) inclusive of Sealing Rubber Gasket of SBR (dimensionally described in IS:12820), Cast Iron Follower Gland and Mild Steel Nut Bolts zinc coated or otherwise protected from rusting and suitable for CI/DI Pipes etc complete as directed by Engineer in Charge		
59	R3-HE-6-4-a	80 x 80 x 80 mm dia.	Each	2983.00
60	R3-HE-6-4-b	100 x 100 x 80 mm dia.	Each	3809.00
61	R3-HE-6-4-c	100 x 100 x 100 mm dia.	Each	4761.00
62	R3-HE-6-4-d	125 x 125 x 125 mm dia.	Each	6624.00
63	R3-HE-6-4-e	150 x 150 x 80 mm dia.	Each	7525.00
64	R3-HE-6-4-f	150 x 150 x 100 mm dia.	Each	7931.00
65	R3-HE-6-4-g	150 x 150 x 150 mm dia.	Each	9116.00
66	R3-HE-6-4-h	200 x 200 x 80 mm dia.	Each	9229.00
67	R3-HE-6-4-i	200 x 200 x 100 mm dia.	Each	9693.00
68	R3-HE-6-4-j	200 x 200 x 150 mm dia.	Each	10952.00
69	R3-HE-6-4-k	200 x 200 x 200 mm dia.	Each	13104.00
70	R3-HE-6-4-1	250 x 250 x 80 mm dia.	Each	12815.00
71	R3-HE-6-4-m	250 x 250 x 100 mm dia.	Each	13196.00
72	R3-HE-6-4-n	250 x 250 x 150 mm dia.	Each	15375.00
73	R3-HE-6-4-o	250 x 250 x 200 mm dia.	Each	16263.00
74	R3-HE-6-4-p	250 x 250 x 250 mm dia.	Each	2524.00
75	R3-HE-6-4-q	300 x 300 x 80 mm dia.	Each	3336.00
76	R3-HE-6-4-r	300 x 300 x 100 mm dia.	Each	4071.00
77	R3-HE-6-4-s	300 x 300 x 150 mm dia.	Each	4909.00
78	R3-HE-6-4-t	300 x 300 x 200 mm dia.	Each	6462.00
79	R3-HE-6-4-u	300 x 300 x 250 mm dia.	Each	8480.00
80	R3-HE-6-4-v	300 x 300 x 300 mm dia.	Each	11947.00
	R3-HE-6-5	Providing and fixing Mechanical Joint CI Flanged Socket Tail pieces, (described in Table - II of IS:13382 / 1992) inclusive of Sealing Rubber Gasket of SBR (dimensionally described in IS: 12820), rubber ring for flange joint, Cast Iron Follower Gland and Mild Steel Nut Bolts zinc coated or otherwise protected from rusting and suitable for CI/DI pipes etc complete as directed by		
81	R3-HE-6-5-a	Engineer in Charge 80 mm dia.	Each	2782.00
01	13 11L-0-3-a	oo min did.	Lacii	2702.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
82	R3-HE-6-5-b	100 mm dia.	Each	3386.00
83	R3-HE-6-5-c	150 mm dia.	Each	5279.00
84	R3-HE-6-5-d	200 mm dia.	Each	6078.00
85	R3-HE-6-5-e	250 mm dia.	Each	9257.00
86	R3-HE-6-5-f	300 mm dia.	Each	11202.00
87	R3-HE-6-5-g	350 mm dia.	Each	16203.00
88	R3-HE-6-5-h	400 mm dia.	Each	4619.00
89	R3-HE-6-5-i	450 mm dia.	Each	4834.00
90	R3-HE-6-5-j	500 mm dia.	Each	5637.00
91	R3-HE-6-5-k	600 mm dia.	Each	6833.00
92	R3-HE-6-5-1	700 mm dia.	Each	8211.00
93	R3-HE-6-5-m	750 mm dia.	Each	8485.00
	R3-HE-6-6	Providing and fixing CI Mechanical joint Double Socket Reducers, (described in Table - 21 of IS: 13382 /1992) inclusive of Sealing Rubber Gasket of SBR (dimensionally described in IS: 12820), Cast Iron Follower Gland and Mild Steel Nut Bolts zinc coated or otherwise protected from rusting and suitable for CI/DI Pipes etc complete as directed by Engineer in Charge		
94	R3-HE-6-6-a	100 x 80 mm dia.	Each	3807.00
95	R3-HE-6-6-b	150 x 80 mm dia.	Each	5486.00
96	R3-HE-6-6-c	150 x 100 mm dia.	Each	5652.00
97	R3-HE-6-6-d	200 x 150 mm dia.	Each	7872.00
98	R3-HE-6-6-e	250 x 150 mm dia.	Each	8372.00
99	R3-HE-6-6-f	250 x 200 mm dia.	Each	9513.00
100	R3-HE-6-6-g	300 x 150 mm dia.	Each	10055.00
101	R3-HE-6-6-h	300 x 250 mm dia.	Each	12006.00
102	R3-HE-6-6-i	350 x 300 mm dia.	Each	11328.00
103	R3-HE-6-6-j	400 x 300 mm dia.	Each	11875.00
104	R3-HE-6-6-k	400 x 350 mm dia.	Each	13600.00
105	R3-HE-6-6-1	450 x 400 mm dia.	Each	14741.00
106	R3-HE-6-6-m	500 x 450 mm dia.	Each	17514.00
107	R3-HE-6-6-n	600 x 450 mm dia.	Each	18200.00
108	R3-HE-6-6-o	700 x 600 mm dia	Each	86571.00
109	R3-HE-6-6-p	750 x 600 mm dia	Each	98029.00
110	R3-HE-6-6-q	750 x 700 mm dia	Each	19129.00
	1			

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-6-7	Providing & fixing CI mechanical compression collar couplings suitable for CI spun pipes (confirming to IS: 1536 / 1989) and DI pipes (confirming to IS: 8329 / 2000) etc. complete with sealing rubber gaskets of SBR dimensionally described in IS: 12620/1989 and zinc coated MS nut bolts or otherwise protected from rusting and suitable for CI / DI pipes etc complete as directed by Engineer in Charge (Item shall confirm the specifications attached)		
111	R3-HE-6-7-a	80 mm dia.	Each	2166.00
112	R3-HE-6-7-b	100 mm dia.	Each	2506.00
113	R3-HE-6-7-c	150 mm dia.	Each	4057.00
114	R3-HE-6-7-d	250 mm dia.	Each	7129.00
115	R3-HE-6-7-e	300 mm dia.	Each	9559.00
116	R3-HE-6-7-f	450 mm dia.	Each	19170.00
	R3-HE-6-8	1989) and DI pipes (confirming to IS: 8329 / 2000) etc. complete with sealing rubber gaskets of SBR dimensionally described in IS: 12620/1989 and zinc coated MS nut bolts or otherwise protected from rusting and suitable for CI / DI pipes etc complete as directed by Engineer in Charge. (Item shall confirm the specifications attached)		
117	R3-HE-6-8-a	80 mm	Each	2188.00
118	R3-HE-6-8-b	100 mm	Each	2452.00
119	R3-HE-6-8-c	150 mm	Each	3867.00
120	R3-HE-6-8-d	200 mm	Each	2624.00
121	R3-HE-6-8-e	250 mm	Each	3752.00
122	R3-HE-6-8-f	300 mm	Each	3987.00
123	R3-HE-6-8-g	350 mm	Each	5523.00
124	R3-HE-6-8-h	400 mm	Each	7605.00
125	R3-HE-6-8-i	450 mm	Each	7707.00
	R3-HE-6-9	Providing & fixing CI mechanical compression long sleeve couplings suitable for CI spun pipes (confirming to IS: 1536 / 1989) and DI pipes (confirming to IS: 8329 / 2000) etc. complete with sealing rubber gaskets of SBR dimensionally described in IS: 12620/1989 and zinc coated MS nut bolts or otherwise protected from rusting and suitable for CI / DI pipes etc complete as directed by Engineer in Charge (Item shall confirm the specifications attached)		
126	R3-HE-6-9-a	80 mm	Each	3612.00
127	R3-HE-6-9-b	100 mm	Each	4053.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
128	R3-HE-6-9-c	150 mm	Each	6322.00
129	R3-HE-6-9-d	200 mm	Each	7641.00
130	R3-HE-6-9-e	250 mm	Each	11159.00
131	R3-HE-6-9-f	300 mm	Each	13958.00
132	R3-HE-6-9-g	350 mm	Each	20143.00
133	R3-HE-6-9-h	400 mm	Each	30482.00
134	R3-HE-6-9-i	450 mm	Each	33736.00
	R3-HE-6-10	Providing & fixing CI mechanical End Caps suitable for CI/DI pipes etc. complete with sealing rubber gaskets of SBR dimensionally described in IS: 12620/1989 and zinc coated MS nut bolts or otherwise protected from rusting and suitable for CI / DI pipes etc complete as directed by Engineer in Charge		
135	R3-HE-6-10-a	80 mm dia.	Each	745.00
136	R3-HE-6-10-b	100 mm dia.	Each	946.00
137	R3-HE-6-10-c	150 mm dia.	Each	1303.00
138	R3-HE-6-10-d	250 mm dia.	Each	1966.00
139	R3-HE-6-10-e	300 mm dia.	Each	3022.00
140	R3-HE-6-10-f	450 mm dia.	Each	8694.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-7-1	Supplying G.I C Class Pipes having embossed ISI mark on it and Conforming to IS: 1293 (Latest Edition) of the following diameter excluding all local and central taxes,octroi,inspection charges, transportation to stores etc complete in all respect as directed by Engineer in Charge. Note: Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		
1	R3-HE-7-1-a	15 mm	Rmt	104.00
2	R3-HE-7-1-b	20 mm	Rmt	136.00
3	R3-HE-7-1-c	25 mm	Rmt	184.00
4	R3-HE-7-1-d	32 mm	Rmt	234.00
5	R3-HE-7-1-e	40 mm	Rmt	280.00
6	R3-HE-7-1-f	50 mm	Rmt	372.00
7	R3-HE-7-1-g	65mm	Rmt	468.00
8	R3-HE-7-1-h	80mm	Rmt	606.00
	R3-HE-7-2	Supplying, providing laying and jointing GI pipes including all required fittings in trenches of following class and diameter by wrapping them by hessian cloth with tar coating and including any nominal pipe length required to be laid above ground level, conveyance from stores to site work, all labour, necessary excavation in all type of Strata , backfilling, giving satisfactory hydraulic test, etc complete in all respect as directed by Engineer in Charge. Note: Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		
9	R3-HE-7-2-a	15 mm	Rmt	228.00
10	R3-HE-7-2-b	20 mm	Rmt	264.00
11	R3-HE-7-2-c	25 mm	Rmt	348.00
12	R3-HE-7-2-d	32 mm	Rmt	408.00
13	R3-HE-7-2-e	40 mm	Rmt	511.00
14	R3-HE-7-2-f	50 mm	Rmt	625.00
15	R3-HE-7-2-g	65mm	Rmt	858.00
16	R3-HE-7-2-h	80mm	Rmt	1067.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-7-3	Removing and replacing existing GI pipes with new GI pipes including all required fittings in trenches of following class and diameter by wrapping them by hessian cloth with tar coating and including any nominal pipe length required to be laid above ground level, conveyance from stores to site work, all labour, necessary excavation in all type of Strata, backfilling, giving satisfactory hydraulic test, etc complete in all respect as directed by Engineer in Charge Note: (1) The old pipes removed from site will be property of contractor & shall be removed by the contractors as directed. Rebate for salvation cost of old pipe has been considered in the rate analysis. (2) Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		
17	R3-HE-7-3-a	15 mm	Rmt	165.00
18	R3-HE-7-3-b	20 mm	Rmt	183.00
19	R3-HE-7-3-c	25 mm	Rmt	221.00
20	R3-HE-7-3-d	32 mm	Rmt	244.00
21	R3-HE-7-3-e	40 mm	Rmt	321.00
22	R3-HE-7-3-f	50 mm	Rmt	356.00
23	R3-HE-7-3-g	65mm	Rmt	520.00
24	R3-HE-7-3-h	80mm	Rmt	642.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-7-4	The transfer of existing service connections include cutting the existing connections, plugging the holes, supplying & fixing new Gun metal ferrules, required GI fittings(heavy) supplying & fixing new 'C' class G.I.pipes up to 1 meter length and and making the hole with hand tools, including necessary barracading, excavation in all type of Strata, and backfilling etc complete in all respect as directed by Engineer in Charge. Note: (1) The old pipes, ferrules & fittings removed from site will be property of contractor & shall be removed by the contractors as directed. Rebate for salvation cost of old pipe has been considered in the rate analysis. (2) Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		
25	R3-HE-7-4-a	15mm.	Each	3304.00
26	R3-HE-7-4-b	20mm.	Each	3476.00
27	R3-HE-7-4-c	25mm.	Each	3773.00
28	R3-HE-7-4-d	32mm.	Each	5015.00
29	R3-HE-7-4-e	40mm.	Each	5664.00
30		50mm.	Each	6886.00
31	R3-HE-7-4-g	65mm	Each	8680.00 16455.00
32	R3-HE-7-4-h	80mm	Each	10433.00
	R3-HE-7-5	Providing and fixing C class (heavy) GI union couplings with embossed ISI mark including cutting and threading of pipe of following diameters etc complete in all respect as directed by Engineer in Charge .Note: Only MCGM approved GI pipe brands shall be used.		
33	R3-HE-7-5-a	15mm.	Each	191.00
34	R3-HE-7-5-b	20mm.	Each	198.00
35	R3-HE-7-5-c	25mm.	Each	211.00
36		32mm.	Each	237.00
37	R3-HE-7-5-e	40mm.	Each	250.00
38	R3-HE-7-5-f	50mm.	Each	293.00
39	R3-HE-7-5-g	65 mm	Each	405.00
40	R3-HE-7-5-h	80mm	Each	457.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other
				Taxes)
1	2	3	4	5
	R3-HE-7-6	Supplying C class (heavy) GI union couplings with embossed ISI mark for following diameters etc complete in all respect as directed by Engineer in Charge .Note : Only MCGM approved GI pipe brands shall be used.		
41	R3-HE-7-6-a	15mm.	Each	11.00
42	R3-HE-7-6-b	20mm.	Each	17.00
43	R3-HE-7-6-c	25mm.	Each	28.00
44	R3-HE-7-6-d	32mm.	Each	49.00
45	R3-HE-7-6-e	40mm.	Each	60.00
46	R3-HE-7-6-f	50mm.	Each	96.00
47		65 mm	Each	115.00
48	R3-HE-7-6-g R3-HE-7-6-h	80mm	Each	158.00
48	К3-ПЕ-/-0-П	80mm	Eacn	138.00
	R3-HE-7-7	Providing and fixing GI double barrel nipples with embossed ISI mark of following diameters (C class / heavy) etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
49	R3-HE-7-7-a	15 mm dia.	Each	53.00
50	R3-HE-7-7-b	20 mm dia.	Each	62.00
51	R3-HE-7-7-c	25 mm dia.	Each	74.00
52	R3-HE-7-7-d	32 mm dia.	Each	91.00
53	R3-HE-7-7-e	40 mm dia.	Each	113.00
54	R3-HE-7-7-f	50 mm dia.	Each	119.00
55	R3-HE-7-7-g	65 mm dia.	Each	221.00
56	R3-HE-7-7-h	80mm dia.	Each	317.00
	R3-HE-7-8	Supplying C class (heavy) GI Double Barrel Nipples with embossed ISI mark for following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
57	R3-HE-7-8-a	15 mm dia.	Each	7.00
58	R3-HE-7-8-b	20 mm dia.	Each	9.00
59	R3-HE-7-8-c	25 mm dia.	Each	12.00
60	R3-HE-7-8-d	32 mm dia.	Each	16.00
61	R3-HE-7-8-e	40 mm dia.	Each	20.00
62	R3-HE-7-8-f	50 mm dia.	Each	25.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
63	R3-HE-7-8-g	65 mm dia.	Each	85.00
64	R3-HE-7-8-h	80mm dia.	Each	164.00
	R3-HE-7-9	Providing and fixing GI couplings (heavy) with embossed ISI mark of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
65	R3-HE-7-9-a	15 mm dia.	Each	58.00
66	R3-HE-7-9-b	20 mm dia.	Each	72.00
67	R3-HE-7-9-c	25 mm dia.	Each	88.00
68	R3-HE-7-9-d	32 mm dia.	Each	115.00
69	R3-HE-7-9-e	40 mm dia.	Each	143.00
70	R3-HE-7-9-f	50 mm dia.	Each	176.00
71	R3-HE-7-9-g	65 mm dia.	Each	239.00
72	R3-HE-7-9-h	80mm dia.	Each	309.00
	R3-HE-7-10	Supplying C class (heavy) GI couplings (heavy) with embossed ISI mark for following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge.Note: Only MCGM approved GI pipe brands shall be used.		
73	R3-HE-7-10-a	15 mm dia.	Each	11.00
74	R3-HE-7-10-b	20 mm dia.	Each	17.00
75	R3-HE-7-10-c	25 mm dia.	Each	24.00
76	R3-HE-7-10-d	32 mm dia.	Each	36.00
77	R3-HE-7-10-e	40 mm dia.	Each	45.00
78	R3-HE-7-10-f	50 mm dia.	Each	72.00
79	R3-HE-7-10-g	65 mm dia.	Each	100.00
80	R3-HE-7-10-h	80mm dia.	Each	158.00
	R3-HE-7-11	Providing and fixing GI plugs (heavy) of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
81	R3-HE-7-11-a	15 mm dia.	Each	51.00
82	R3-HE-7-11-b	20 mm dia.	Each	61.00
83	R3-HE-7-11-c	25 mm dia.	Each	73.00

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Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
84	R3-HE-7-11-d	32 mm dia.	Each	97.00
85	R3-HE-7-11-e	40 mm dia.	Each	122.00
86	R3-HE-7-11-f	50 mm dia.	Each	135.00
87	R3-HE-7-11-g	65 mm dia.	Each	189.00
88	R3-HE-7-11-h	80mm dia.	Each	214.00
	R3-HE-7-12	Supplying GI plugs (heavy) of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
89	R3-HE-7-12-a	15 mm dia.	Each	5.00
90	R3-HE-7-12-b	20 mm dia.	Each	8.00
91	R3-HE-7-12-c	25 mm dia.	Each	11.00
92	R3-HE-7-12-d	32 mm dia.	Each	21.00
93	R3-HE-7-12-e	40 mm dia.	Each	27.00
94	R3-HE-7-12-f	50 mm dia.	Each	38.00
95	R3-HE-7-12-g	65 mm dia.	Each	58.00
96	R3-HE-7-12-h	80mm dia.	Each	80.00
	R3-HE-7-13	Providing and fixing GI elbows (heavy) with embossed ISI mark of following diameters etc complete in all respect etc complete as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
97	R3-HE-7-13-a	15 mm dia.	Each	62.00
98	R3-HE-7-13-b	20 mm dia.	Each	76.00
99	R3-HE-7-13-c	25 mm dia.	Each	101.00
100	R3-HE-7-13-d	32 mm dia.	Each	133.00
101	R3-HE-7-13-e	40 mm dia.	Each	167.00
102	R3-HE-7-13-f	50 mm dia.	Each	210.00
103	R3-HE-7-13-g	65 mm dia.	Each	294.00
104	R3-HE-7-13-h	80mm dia.	Each	452.00
	R3-HE-7-14	Supplying GI elbows (heavy) with embossed ISI mark of following diameters etc complete in all respect etc complete as directed by Engineer in Charge.Note: Only MCGM approved GI pipe brands shall be used.		
105	R3-HE-7-14-a	15 mm dia.	Each	14.00
106	R3-HE-7-14-b	20 mm dia.	Each	21.00
107	R3-HE-7-14-c	25 mm dia.	Each	34.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
108	R3-HE-7-14-d	32 mm dia.	Each	51.00
109	R3-HE-7-14-e	40 mm dia.	Each	65.00
110		50 mm dia.	Each	100.00
111	R3-HE-7-14-g	65 mm dia.	Each	145.00
112	R3-HE-7-14-h	80mm dia.	Each	276.00
	R3-HE-7-15	Providing and fixing GI bends (heavy) of following diameters etc complete in all respect etc complete in all respect etc complete as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
113	R3-HE-7-15-a	15 mm dia.	Each	69.00
114	R3-HE-7-15-b	20 mm dia.	Each	81.00
115	R3-HE-7-15-c	25 mm dia.	Each	105.00
116	R3-HE-7-15-d	32 mm dia.	Each	138.00
117	R3-HE-7-15-e	40 mm dia.	Each	174.00
118	R3-HE-7-15-f	50 mm dia.	Each	264.00
119	R3-HE-7-15-g	65 mm dia.	Each	330.00
120	R3-HE-7-15-h	80mm dia.	Each	581.00
	R3-HE-7-16	Supplying GI bends (heavy) of following diameters etc complete in all respect etc complete in all respect etc complete as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
121	R3-HE-7-16-a	15 mm dia.	Each	20.00
122	R3-HE-7-16-b	20 mm dia.	Each	25.00
123	R3-HE-7-16-c	25 mm dia.	Each	38.00
124		32 mm dia.	Each	55.00
125		40 mm dia.	Each	70.00
126		50 mm dia.	Each	145.00
127	R3-HE-7-16-g	65 mm dia.	Each	175.00
128	R3-HE-7-16-h	80mm dia.	Each	383.00
	R3-HE-7-17	Providing and fixing GI reducing Tees (heavy) with embossed ISI mark of following sizes etc complete in all respect etc complete in all respect as directed by Engineer in Charge. Note: Only MCGM approved GI pipe brands shall be used.		
129	R3-HE-7-17-a	50 mm x 15 mm	Each	114.00
130	R3-HE-7-17-b	50 mm x 20 mm	Each	130.00
131	R3-HE-7-17-c	50 mm x 25 mm	Each	143.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
132	R3-HE-7-17-d	50 mm x 32 mm	Each	165.00
133	R3-HE-7-17-e	50 mm x 40 mm	Each	158.00
	R3-HE-7-18	Supplying GI reducing Tees (heavy) with embossed ISI mark of following sizes etc complete in all respect etc complete in all respect as directed by Engineer in Charge.Note: Only MCGM approved GI pipe brands shall be used.		
134	R3-HE-7-18-a	50 mm x 15 mm	Each	21.00
135	R3-HE-7-18-b	50 mm x 20 mm	Each	34.00
136	R3-HE-7-18-c	50 mm x 25 mm	Each	45.00
137	R3-HE-7-18-d	50 mm x 32 mm	Each	63.00
138	R3-HE-7-18-e	50 mm x 40 mm	Each	57.00
	R3-HE-7-19	Providing and fixing gun metal ISI mark non-return valve Screwed End of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge		
139	R3-HE-7-19-a	15 mm dia.	Each	419.00
140	R3-HE-7-19-b	20 mm dia.	Each	600.00
141	R3-HE-7-19-c	25 mm dia.	Each	881.00
142		32 mm dia.	Each	1291.00
143	R3-HE-7-19-e	40 mm dia.	Each	1647.00
144	R3-HE-7-19-f	50 mm dia.	Each	2739.00
145	R3-HE-7-19-g	65 mm dia.	Each	3499.00
146	R3-HE-7-19-h	80mm dia.	Each	4162.00
	R3-HE-7-20	Supplying gun metal ISI mark non-return valve Screwed End of following diameters etc complete in all respect etc complete in all respect as directed by Engineer in Charge		
147	R3-HE-7-20-a	15 mm dia.	Each	310.00
148	R3-HE-7-20-b	20 mm dia.	Each	455.00
149	R3-HE-7-20-с	25 mm dia.	Each	680.00
150	R3-HE-7-20-d	32 mm dia.	Each	1010.00
151	R3-HE-7-20-e	40 mm dia.	Each	1290.00
152	R3-HE-7-20-f	50 mm dia.	Each	2170.00
153	R3-HE-7-20-g	65 mm dia.	Each	2800.00
154	R3-HE-7-20-h	80mm dia.	Each	3300.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-7-21	Removing and refixing of existing service connections include cutting the existing connections, plugging the holes, including the cost of barricading, excavation and backfilling etc complete in all respect as directed by Engineer in Charge . Note: (1) New GI fittings used if any will be paid extra and rebate for the old fitting will be deducted as per item HE-7-22, the old GI fittings to be removed from site will be property of contractor & shall be removed by the contractors as directed.(2) This item to be used specially while carrying out mortar lining works to water mains.(3) Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		
155	D2 HE 7.21 .	15	East	264.00
155	R3-HE-7-21-a	15mm.	Each	264.00
156 157	R3-HE-7-21-b R3-HE-7-21-c	20mm. 25mm.	Each Each	264.00 264.00
158	R3-HE-7-21-d	32mm.	Each	356.00
159	R3-HE-7-21-e	40mm.	Each	448.00
160	R3-HE-7-21-f	50mm.	Each	540.00
161	R3-HE-7-21-g	65mm	Each	632.00
162	R3-HE-7-21-h	80mm	Each	632.00
	R3-HE-7-22	Removing and Cutting of existing service connections lines include cutting of the existing GI pipe line removing the pipe pieces and plugging the pipe line, including any nominal pipe length required to be laid above ground level, the cost of barricading, excavation and backfilling etc complete in all respect as directed by Engineer in Charge . Note : (1) New GI fittings used if any will be paid extra .(2) Salvage value of 1M length of GI pipe has been considered, old GI pipe to be removed from site will be property of contractor & shall be removed by the contractors as directed. (3)Only GI pipe brands from the MCGM approved vendor list shall be used, all pipe and pipe fittings shall be C class (heavy grade) having ISI marking.		

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
163	R3-HE-7-22-a	15mm.	Each	497.00
164	R3-HE-7-22-b	20mm.	Each	482.00
165	R3-HE-7-22-c	25mm.	Each	478.00
166	R3-HE-7-22-d	32mm.	Each	598.00
167	R3-HE-7-22-e	40mm.	Each	600.00
168	R3-HE-7-22-f	50mm.	Each	597.00
169	R3-HE-7-22-g	65mm	Each	785.00
170	R3-HE-7-22-h	80mm	Each	786.00
	R3-HE-7-23	Supplying Brass / Gun Metal Ferrule Conforming to IS 2692 except for jumper valve, which will be of either brass / gun metal or Poly propylene coated light weight brass jumper valve etc complete in all respect and as directed by Engineer In-Charge.		
171	R3-HE-7-23-a	15 mm dia.	Each	385.00
172	R3-HE-7-23-b	20 mm dia.	Each	547.00
173	R3-HE-7-23-c	25 mm dia.	Each	880.00
174	R3-HE-7-23-d	32 mm dia.	Each	1219.00
175	R3-HE-7-23-e	40 mm dia.	Each	1817.00
176	R3-HE-7-23-f	50 mm dia.	Each	2910.00
	R3-HE-7-24	Removing and Replacing of existing old/damaged Brass / Gun Metal Ferrule Conforming to IS 2692 except for jumper valve, which will be of either brass / gun metal or Polypropylene coated light weight brass jumper valve, inclusive of required excavation and backfilling etc complete in all respect and as directed by Engineer In-Charge. Note: (1) Rebate for salvation cost of old ferrule has been considered and old ferrule to be removed from site will be property of contractor & shall be removed by the contractors as directed.		
177	R3-HE-7-24-a	15 mm dia.	Each	1496.00
178	R3-HE-7-24-b	20 mm dia.	Each	1628.00
179	R3-HE-7-24-c	25 mm dia.	Each	1895.00
180	R3-HE-7-24-d	32 mm dia.	Each	2163.00
181	R3-HE-7-24-e	40 mm dia.	Each	2670.00
182	R3-HE-7-24-f	50 mm dia.	Each	3624.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-7-25	Providing and fixing Brass / Gun Metal Ferrule Conforming to IS 2692 except for jumper valve, which will be of either Poly propylene or brass / gun metal jumper valve, inclusive of required excavation and backfilling etc complete in all respect and as directed by Engineer In-Charge.		
183	R3-HE-7-25-a	15 mm dia.	Each	1544.00
184	R3-HE-7-25-b	20 mm dia.	Each	1708.00
185	R3-HE-7-25-с	25 mm dia.	Each	2045.00
186	R3-HE-7-25-d	32 mm dia.	Each	2387.00
187	R3-HE-7-25-e	40 mm dia.	Each	2991.00
188	R3-HE-7-25-f	50 mm dia.	Each	4095.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	2	4	5
1	R3-HE-8-1	Providing and fixing CI / MS sluice valve road boxes confirming IS: 3950 for sluice valves for size of 80 mm dia. etc complete in all respect and as directed by Engineer In Charge. (Required excavation, brick masonry and concrete for fixing road boxes will be paid separately in relevant items.)	Each	3895.00
	R3-HE-8-2	Removing body water from water mains etc. by means of pumps and discharging the same in nearest drain lines etc. complete as directed & as specified by Engineer In Charge. (Each shift shall been of 8 hours prorata payment will be made for part-shift. Minimum payment shall be made for one shift.)		
2	R3-HE-8-2-a	5 H.P. Pump	Shift	4400.00
3	R3-HE-8-2-b	10 H.P. Pump	Shift	5507.00
4	R3-HE-8-2-c	15 H.P. Pump	Shift	4702.00
5	R3-HE-8-2-d	30 H.P. Pump	Shift	5134.00
	R3-HE-8-3	Construction of Bunds and cofferdam using selected earth filling the same in gunny bags, placing in position and making the cofferdam/ bunds water tight, including pumping out water and maintaining dry condition during all operations of pipe laying including removing the cofferdam / bunds after completion of the work as directed. Note: Hauling and disposal charges for extra murum/earth if applicable will be paid separately as per relevant item.		
6	R3-HE-8-3-a	Earth filling material supplied by Contractor	Cum	2644.00
7	R3-HE-8-3-b	do with Municipal earth.	Cum	1667.00
8	R3-HE-8-4	Providing and laying 200 mm thick hand sets dry rubble soling including filling the interstices with small chips, ramming etc. complete for foundations of pedestals, chairs, thrust blocks, etc. complete in all respect and as directed by Engineer In Charge.	Sqm	319.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
				-
9	R3-HE-8-5	Providing M-20 cement concrete encasement with ordinary portland cement to pipes, in thrust blocks etc., mixing, laying, consolidating by mechanical vibrator, curing etc. complete in all respect and as directed by Engineer In Charge. (M.S. reinforcement if provided will be paid separately.)	Cum	6732.00
10	R3-HE-8-6	Providing and constructing Brick masonry of any thickness (1st sort) in CM 1:4, including racking of joints and curing etc. complete in all respect and as directed by Engineer In Charge.	Cum	9467.00
	R3-HE-8-7	Constructing meter chambers for 80 mm. size meters as per Standard MCGM issue drawing etc. complete in all respect and as directed by Engineer In Charge. (Bedding of 1:2:4 c.c.)		
11	R3-HE-8-7-a	At Municipal Cost	Nos	35768.00
12	R3-HE-8-7-b	At party's Cost	Nos	41133.00
	R3-H-8-8	Constructing meter chambers for 100 mm and 150 mm size meters as per Standard MCGM issue drawing etc. complete in all respect and as directed by Engineer In Charge. (Bedding of 1:2:4 c.c.)		
13	R3-H-8-8-a	At Municipal Cost	Nos	45385.00
14	R3-H-8-8-b	At party's Cost	Nos	52193.00
	R3-H-8-9	Constructing meter chambers for 200 mm and 300 mm size meters as per Standard MCGM issue drawing etc. complete in all respect and as directed by Engineer In Charge. (Bedding of 1:2:4 c.c.)		
15	R3-H-8-9-a	At Municipal Cost	Nos	62180.00
16	R3-H-8-9-b	At party's Cost	Nos	71507.00
		<u> </u>		
17	R3-HE-8-10	Flushing, cleaning, chlorinating & providing pitometer cocks on C.I. & M.S. pipes including brick masonry chamber (For Departmental Works only) etc. complete in all respect and as directed by Engineer In Charge. Note: Chlorination shall be done for pipes above 100 mm. dia.	LS	5578.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
18	R3-HE-8-11	Hydraulic testing of C.I. or M.S. mains for 300 meters or part thereof (For Departmental use) etc. complete in all respect and as directed by Engineer In Charge.	LS	3549.00
19	R3-HE-8-12	Supplying & fixing on chambers, 90 cms. x 45 cms.C.I. rectangular, heavy frame and cover weighing between 223 kg.to 247 kg etc. complete in all respect and as directed by Engineer In Charge.	Nos	30789.00
20	R3-HE-8-13	Supplying & fixing on chambers, 90 cms. x 60 cms.C.I. rectangular, heavy frame and cover weighing between 259 kg.to 289 kg etc. complete in all respect and etc. complete in all respect and as directed by Engineer In Charge.	Nos	37222.00
21	R3-HE-8-14	Supplying clean, washed and gritty sand composed of hard coarse silicious grains, free from clay or any vegetable matter and animal matter and organic matter, having silt content not more than 5%, at any work site or any municipal stores, any where in Greater Mumbai etc. complete in all respect and as directed by Engineer In Charge.	Cum	2649.00
	R3-HE-8-15	Supplying coarse aggregates of required size (Metal No.1 and Metal No.2) made from good quality stone, free from stone chips, grit etc. at any work site or any municipal stores, any where in Greater Mumbai etc. complete in all respect and as directed by Engineer In Charge.		
22	R3-HE-8-15-a	Metal No.1	Cum	1236.00
23	R3-HE-8-15-b	Metal No.2	Cum	1236.00
24	R3-HE-8-16	Supplying the Bricks of uniform standard size, table molded, good, sound, hard, well burnt with straight sharp edges, having crushing strength not less than 35 Kg/sqcm. and water absorption less than 20% after 24 hours immersion in water, at any work site or any municipal stores, any where in Greater Mumbai etc. complete in all respect and as directed by Engineer In Charge.	Nos	7500.00
		Courie of the courie CLDI		
25	R3-HE-8-17	Cutting & removing CI, DI pipes with specials and joints of 150 mm to 300 mm dia. and transporting the same to any Municipal stores in Greater Mumbai limit etc. complete in all respect and as directed by Engineer In Charge.	Nos	892.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
26	R3-HE-8-18	Providing and laying M-15 ready mix concrete, compacting with vibrator, curing, adding plasticizers, etc. complete in all respect and as directed by Engineer In Charge. (Concrete mix shall be poured directly with the help of Shute.) Note: Sanction of Head of the Department shall be obtained for operating this item.		8378.00
27	R3-HE-8-19	Providing and laying M-15 ready mix concrete, compacting with vibrator, curing, adding plasticizers, etc. complete in all respect and as directed by Engineer In Charge. (Hand carts and labors will be used for transporting concrete mix.)Note: Sanction of Head of the Department shall be obtained for operating this item.	Cum	7435.00
28	R3-HE-8-20	Providing & applying 3 layer fusion bonded polyethylene (3LPE) coating to mild steel pipes externally of 3000 microns and internally 2000 microns. The polyethylene used shall be food grade material and the coating shall confirm to DIN-30670 standard. 100 mm space shall be left uncoated (cutback) on both ends of the mild steel pipe for welding purpose & the same shall be coated after completion of welding at site with 100% solid, cold applied, polymeric coating. The item is inclusive of PE material, process of coating, cleaning of pipe internally by sand blasting and preparing surface dust free for application of PE coating and also inclusive of welding joint at site and 10cm of each pipe shall coated with Co-Polymer paint PE-80 used for cold application paint for polyethylene coating 500 microns inside and 500 microns outside, etc. complete in all respect and as directed by Engineer In Charge. NOTE: In any case the PE coated pipes shall not be used for laying above ground and for making bends or specials.	Sqm	4136.00
29	R3-HE-8-21	Providing & applying Internal Fusion Bonded Epoxy coating 400 microns as per IS 3589 Annex C. for above ground application.		1931.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
30	R3-HE-8-22	Removing the existing paint, providing & applying protective coating of Rust converter consisting of TANNIC ACID and two coats of thickness of 1 mm each of Cementations acrylic coating to the exposed steel surface as directed by the Engineer in charge and as per manufacturer's specification including staging, etc.complete.	Sqm	685.00
31	R3-HE-8-23	Removing existing paint, cleaning & preparing the surface & Providing and applying protective coating consisting of 100 % SOLID SOLVENTLESS ELESTOMERIC POLYURETHANE/POLYUREA of thickness 0.7to 1.00 mm to the exposed steel surface as directed by the Engineer in charge and as per manufacturer's specification including staging, etc. complete.	Sqm	2532.00
32	R3-HE-8-24	Removing and refixing of existing S.P. fire hydrants for replacing of mouth piece, duck foot bend, Sluice valve, as required as per specifications & drawing but including painting the hydrant, fixing the saddle piece, supplying and jointing the same with spun yarn, molten lead, including caulking etc. complete as directed & as specified by Engineer In Charge. (as per IS: 908) Note: 1) The new material required, will be paid separately on the basis of weight per kg of material. 2) The cost of constructing valve chamber will be ely. 3) Rebate for salvation cost of existing material replaced will be taken at the rate of Rs 25/Kg Basic rate for new material a) CI Rs 55/kg b) DI Rs 161/kg c) MS Rs 84/kg	Nos	1881.00
33	R3-HE-8-25	Removing of existing S.P. fire hydrants and replacing them with new SP fire hydrants with its complete assembly including supplying and jointing the same with spun yarn, molten lead, including caulking etc. complete as directed & as specified by Engineer In Charge. (as per IS: 908). Note: The salvage value for old fire hydrant has been considered on per Kg basis.	Nos	13362.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
34	R3-HE-8-26	Supplying, transporting and fixing S.P. fire hydrants including mouth piece, duck foot bend, S.V. as per specifications & drawing, fixing flanged socket, supplying and laying C.I./ M.S. pipe up to 2 mtrs. length and jointing the same with spun yarn, molten lead, including caulking etc. complete as directed & as specified by Engineer In Charge. (as per IS: 908) Note: Construction of valve chamber will be paid separately	Each	27348.00
	R3-HE-8-27	Cutting of exsisting cement concrete road upto specified depth by using Diamond Saw machine etc. complete in all respects and as directed by Engineer In Charge. Note: The charges for supplying water and electricity are exclusive of the rate worked out.		
35	R3-HE-8-27-a	Upto 350 mm depth of cutting	Rmt	1308.00
36	R3-HE-8-27-b	Above 350 upto 500 mm depth of cutting	Rmt	2972.00

				1
				Rate in Rs.
Sr.No.	Material Code	Material Description	Unit	(Excl. GST
51.110.	Material Code	Waterial Description	Oiiit	and other
				Taxes)
1	2	3	4	5
	R3-HE-9-1	Supplying HDPE Pipe Conforming to ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all		
		respect and as directed by Engineer In-Charge. Note :Only		
4	D2 115 0 1	MCGM approved brands shall be used.	ъ.	27.00
1	R3-HE-9-1-a	20 mm dia. OD pipe PN 16	Rmt	35.00
2	R3-HE-9-1-b	25 mm dia. OD pipe PN 12.5	Rmt	45.00
3	R3-HE-9-1-c	32 mm dia. OD pipe PN 12.5	Rmt	75.00
4	R3-HE-9-1-d	40 mm dia. OD pipe PN 12.5	Rmt	115.00
5	R3-HE-9-1-e	50 mm dia. OD pipe PN 12.5	Rmt	178.00
6	R3-HE-9-1-f	63 mm dia. OD pipe PN 10	Rmt	238.00
7	R3-HE-9-1-g	90 mm dia. OD pipe PN 10	Rmt	633.00
8	R3-HE-9-1-h	110 mm dia. OD pipe PN 10	Rmt	1048.00
9	R3-HE-9-1-i	160 mm dia. OD pipe PN 10	Rmt	1438.00
10	R3-HE-9-1-j	250 mm dia. OD pipe PN 10	Rmt	3197.00
11	R3-HE-9-1-k	315 mm dia. OD pipe PN 10	Rmt	4428.00
	R3-HE-9-2	Supplying HDPE Pipe confirming to IS 4984, manufactured from virgin resin of PE-100 food grade raw material having black colour with blue strips only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking , labor, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, etc complete in all respect and as directed by Engineer In-Charge. Note: Only MCGM approved brands shall be used.		
12	R3-HE-9-2-a	160 mm dia. OD pipe PN 10	Rmt	1357.00
13	R3-HE-9-2-b	250 mm dia. OD pipe PN 10	Rmt	3094.00
14	R3-HE-9-2-c	315 mm dia. OD pipe PN 10	Rmt	4399.00

Sr.No. Material Code Material Description Unit Carcal Excl. GST and other Taxes			·		
R3-HE-9-3 R3-HE-9-4 R3-HE-9-1- R3-HE-9-1	Sr.No.	Material Code	Material Description	Unit	(Excl. GST and other
R3-HE-9-3 R3-HE-9-4 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-4-1 R3-HE-9-1-0 Rmt R3-HE-9-1-0 Rmt Rmt Rmt Rmt Rmt Rmt Rmt Rm	1	2	3	4	5
Providing and lowering in trenches HDPE Pipe Conforming to ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: :Only MCGM approved brands shall be used. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. 17 R3-HE-9-4-a 20 mm dia. OD pipe PN 16 Rmt 75.00 18 R3-HE-9-4-b 25 mm dia. OD pipe PN 12.5 Rmt 111.00 20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00			from virgin resin of PE-100 food grade raw material having black colour with blue strips only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking , labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, etc complete in all respect and as directed by Engineer In-Charge. Note: :Only MCGM approved brands		
Providing and lowering in trenches HDPE Pipe Conforming to ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: :Only MCGM approved brands shall be used. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. 17 R3-HE-9-4-a 20 mm dia. OD pipe PN 16 Rmt 75.00 18 R3-HE-9-4-b 25 mm dia. OD pipe PN 12.5 Rmt 111.00 20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00	15	R3-HE-9-3-a		Rmt	9975.00
Providing and lowering in trenches HDPE Pipe Conforming to ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: :Only MCGM approved brands shall be used. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed. 17 R3-HE-9-4-a 20 mm dia. OD pipe PN 16 Rmt 66.00 18 R3-HE-9-4-b 25 mm dia. OD pipe PN 12.5 Rmt 75.00 19 R3-HE-9-1-c 32 mm dia. OD pipe PN 12.5 Rmt 111.00 20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 799.00					
18 R3-HE-9-4-b 25 mm dia. OD pipe PN 12.5 Rmt 75.00 19 R3-HE-9-1-c 32 mm dia. OD pipe PN 12.5 Rmt 111.00 20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00	17		ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: Only MCGM approved brands shall be used. Note: (2) Rebate for salvation cost of old pipe has been considered and old pipes may be removed by the contractors as directed.	Rmt	66.00
19 R3-HE-9-1-c 32 mm dia. OD pipe PN 12.5 Rmt 111.00 20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00					
20 R3-HE-9-1-d 40 mm dia. OD pipe PN 12.5 Rmt 150.00 21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00			1 1		
21 R3-HE-9-4-e 50 mm dia. OD pipe PN 12.5 Rmt 211.00 22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00			1 1		+
22 R3-HE-9-4-f 63 mm dia. OD pipe PN 10 Rmt 272.00 23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00			^ ^		
23 R3-HE-9-4-g 90 mm dia. OD pipe PN 10 Rmt 799.00			1 1		+
24 R3-HE-9-4-h 110 mm dia. OD pipe PN 10 Rmt 1206.00		•			1
	24	R3-HE-9-4-h	110 mm dia. OD pipe PN 10	Rmt	1206.00

SECTION 9					
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
	R3-HE-9-5	Providing and lowering in trenches HDPE Pipe Conforming to ISO 4427 of 1996, manufactured from virgin resin of PE-80 food grade compounded raw material having blue colour only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note::Only MCGM approved brands shall be used.			
25	R3-HE-9-5-a	20 mm dia. OD pipe PN 16	Rmt	67.00	
26	R3-HE-9-5-b	25 mm dia. OD pipe PN 12.5	Rmt	77.00	
27	R3-HE-9-5-c	32 mm dia. OD pipe PN 12.5	Rmt	114.00	
28	R3-HE-9-5-d	40 mm dia. OD pipe PN 12.5	Rmt	154.00	
29	R3-HE-9-5-e	50 mm dia. OD pipe PN 12.5	Rmt	217.00	
30	R3-HE-9-5-f	63 mm dia. OD pipe PN 10	Rmt	280.00	
31	R3-HE-9-5-g	90 mm dia. OD pipe PN 10	Rmt	815.00	
32	R3-HE-9-5-h	110 mm dia. OD pipe PN 10	Rmt	1198.00	
	R3-HE-9-6	Providing Laying and lowering in trenches HDPE Pipe confirming to IS 4984, manufactured from virgin resin of PE-100 food grade raw material having black colour with blue strips only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking , labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, etc. complete as specified &directed. Note: Only MCGM approved brands shall be used.			
33	R3-HE-9-6-a	160 mm dia. OD pipe PN 10	Rmt	1540.00	
34	R3-HE-9-6-b	250 mm dia. OD pipe PN 10	Rmt	3322.00	
35	R3-HE-9-1-c	315 mm dia. OD pipe PN 10	Rmt	4627.00	
"					

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-7	Providing Lowering and Laying of HDPE Pipe confirming to IS 4984, manufactured from virgin resin of PE-100 food grade raw material having black colour with blue strips only with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, etc complete in all respect and as directed by Engineer In-Charge. Note ::Only MCGM approved brands shall be used.		
36	R3-HE-9-7-a	450 mm dia. OD pipe PN 10	Rmt	10203.00
37	R3-HE-9-7-b	630 mm dia. OD pipe PN 10	Rmt	19916.00
		1 1		
	R3-HE-9-8	Supplying Compression Coupling Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
38	R3-HE-9-8-a	Compression Coupling 20 mm dia. OD	Each	211.00
39	R3-HE-9-8-b	Compression Coupling 25 mm dia. OD	Each	279.00
40	R3-HE-9-8-c	Compression Coupling 32 mm dia. OD	Each	370.00
41	R3-HE-9-8-d	Compression Coupling 40 mm dia. OD	Each	476.00
42	R3-HE-9-8-e	Compression Coupling 50 mm dia. OD	Each	600.00
43	R3-HE-9-8-f	Compression Coupling 63 mm dia. OD	Each	876.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-9	Providing and fixing Compression Coupling Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc. complete as specified and directed. Note:Only MCGM approved brands shall be used.	·	
44	R3-HE-9-9-a	Compression Coupling 20 mm dia. OD	Each	253.00
		1 0		
45	R3-HE-9-9-b	Compression Coupling 25 mm dia. OD	Each	322.00
46	R3-HE-9-9-c	Compression Coupling 32 mm dia. OD	Each	412.00
47	R3-HE-9-9-d	Compression Coupling 40 mm dia. OD	Each	539.00
48	R3-HE-9-9-e	Compression Coupling 50 mm dia. OD	Each	664.00
49	R3-HE-9-9-f	Compression Coupling 63 mm dia. OD	Each	940.00
	R3-HE-9-10	Supplying Compression Female Threaded Adaptor Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
50	R3-HE-9-10-a	Compression Female Threaded Adaptor 20 mm x ½"	Each	187.00
51	R3-HE-9-10-b	Compression Female Threaded Adaptor 25 mm x 3/4"	Each	195.00
52	R3-HE-9-10-c	Compression Female Threaded Adaptor 32 mm x 1"	Each	247.00
53	R3-HE-9-10-d	Compression Female Threaded Adaptor 40 mm x 1 ¹ / ₄ "	Each	498.00
54	R3-HE-9-10-e	Compression Female Threaded Adaptor 50 mm x 1½"	Each	604.00
55	R3-HE-9-10-f	Compression Female Threaded Adaptor 63 mm x 2"	Each	786.00

				Rate in Rs. (Excl. GST
Sr.No.	Material Code	Material Description	Unit	and other
				Taxes)
1	2	3	4	5
	R3-HE-9-11	Providing and fixing Compression Female Threaded Adaptor Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and		
		Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
56	R3-HE-9-11-a	Compression Female Threaded Adaptor 20 mm x ½"	Each	229.00
57	R3-HE-9-11-b	Compression Female Threaded Adaptor 25 mm x ³ / ₄ "	Each	237.00
58	R3-HE-9-11-c	Compression Female Threaded Adaptor 32 mm x 1"	Each	289.00
59	R3-HE-9-11-d	Compression Female Threaded Adaptor 40 mm x 1 ¹ / ₄ "	Each	561.00
60	R3-HE-9-11-e	Compression Female Threaded Adaptor 50 mm x 1½"	Each	667.00
61	R3-HE-9-11-f	Compression Female Threaded Adaptor 63 mm x 2"	Each	849.00
	R3-HE-9-12	Supplying Compression Male threaded Adaptor Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
62	R3-HE-9-12-a	Compression Male threaded Adaptor 20 mm x ½"	Each	122.00
63	R3-HE-9-12-b	Compression Male threaded Adaptor 25 mm x ³ / ₄ "	Each	153.00
64	R3-HE-9-12-c	Compression Male threaded Adaptor 32 mm x 1"	Each	202.00
65	R3-HE-9-12-d	Compression Male threaded Adaptor 40 mm x 1 ¹ / ₄ "	Each	374.00
66	R3-HE-9-12-e	Compression Male threaded Adaptor 50 mm x 1½"	Each	467.00
67	R3-HE-9-12-f	Compression Male threaded Adaptor 63 mm x 2"	Each	633.00
3,	/ 12 1	1 7		

				Rate in Rs.
Sr.No.	Material Code	Material Description	Unit	(Excl. GST
		· I		and other
1	2	3	4	Taxes)
1		Providing and fixing Compression Male threaded Adaptor		3
		Conforming to ISO 14236, manufactured from black		
	R3-HE-9-13	Polypropylene with blue colour cap using food grade		
		compounded raw material with quality assurance certificate from		
		quality agencies like CIPET(India) / DVGM / KIWA / SPGN /		
		WRC etc. for usage in drinking water system and having		
		working pressure rating 10 Bar. The cost shall include testing of		
		all materials, labour, excluding all taxes (Central, State and		
		Municipal), inspection charges, transportation up to site, transit		
		insurance, loading, unloading, stacking, providing and fixing etc		
		complete in all respect and as directed by Engineer In-Charge.		
		Note :Only MCGM approved brands shall be used.		
68	R3-HE-9-13-a	Compression Male threaded Adaptor 20 mm x ½"	Each	164.00
69	R3-HE-9-13-b	Compression Male threaded Adaptor 25 mm x ³ / ₄ "	Each	195.00
70	R3-HE-9-13-c	Compression Male threaded Adaptor 32 mm x 1"	Each	244.00
71	R3-HE-9-13-d	Compression Male threaded Adaptor 40 mm x 1 ¹ / ₄ "	Each	437.00
72	R3-HE-9-13-e	Compression Male threaded Adaptor 50 mm x 1½"	Each	531.00
73	R3-HE-9-13-f	Compression Male threaded Adaptor 63 mm x 2"	Each	696.00
		Supplying 900 Compression elbow Conforming to ISO 14236,		
		manufactured from black Polypropylene with blue colour cap		
		using food grade compounded raw material with quality		
		assurance certificate from quality agencies like CIPET(India) /		
		DVGM / KIWA / SPGN / WRC etc. for usage in drinking water		
		system and having working pressure rating 10 Bar. The cost		
	R3-HE-9-14	shall include testing of all materials, labour, excluding all taxes		
		(Central, State and Municipal), inspection charges,		
		transportation to the directed municipal establishment, transit		
		insurance, loading, unloading, stacking etc complete in all		
		respect and as directed by Engineer In-Charge. Note:Only		
		MCGM approved brands shall be used.		
74	R3-HE-9-14-a	20 mm dia. OD 900 compression elbow	Each	191.00
75	R3-HE-9-14-b	25 mm dia. OD 900 compression elbow	Each	227.00
76	R3-HE-9-14-c	32 mm dia. OD 900 compression elbow	Each	304.00
77	R3-HE-9-14-d	40 mm dia. OD 900 compression elbow	Each	462.00
78	R3-HE-9-14-e	50 mm dia. OD 900 compression elbow	Each	674.00
79	R3-HE-9-14-f	63 mm dia. OD 900 compression elbow	Each	776.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other
				Taxes)
1	2	3	4	5
	R3-HE-9-15	Providing and fixing 900 Compression elbow Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
80	R3-HE-9-15-a	20 mm dia. OD 900 compression elbow	Each	233.00
81	R3-HE-9-15-b	25 mm dia. OD 900 compression elbow	Each	269.00
82	R3-HE-9-15-c	32 mm dia. OD 900 compression elbow	Each	346.00
83	R3-HE-9-15-d	40 mm dia. OD 900 compression elbow	Each	526.00
84	R3-HE-9-15-e	50 mm dia. OD 900 compression elbow	Each	737.00
85	R3-HE-9-15-f	63 mm dia. OD 900 compression elbow	Each	839.00
	R3-HE-9-16	Supplying 900 Compression elbow with male off take Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note::Only MCGM approved brands shall be used.		
86	R3-HE-9-16-a	Compression elbow with male off take 20 mm dia. x ½" dia.	Each	168.00
87	R3-HE-9-16-b	Compression elbow with male off take 25 mm dia. x ³ / ₄ " dia.	Each	196.00
88	R3-HE-9-16-c	Compression elbow with male off take 32 mm dia. x 1" dia.	Each	294.00
89	R3-HE-9-16-d	Compression elbow with male off take 40 mm dia. x 1 ¹ / ₄ " dia.	Each	328.00
90	R3-HE-9-16-e	Compression elbow with male off take 50 mm dia. x 1½" dia.	Each	449.00
91	R3-HE-9-16-f	Compression elbow with male off take 63 mm dia. x 2" dia.	Each	573.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other
1		2	4	Taxes)
1	2	3	4	5
	R3-HE-9-17	Providing and fixing 900 Compression elbow with male off take Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: Only MCGM approved brands shall be used.		
92	R3-HE-9-17-a	Compression elbow with male off take 20 mm dia. x ½" dia.	Each	210.00
93	R3-HE-9-17-b	Compression elbow with male off take 25 mm dia. x ¾" dia.	Each	238.00
94	R3-HE-9-17-с	Compression elbow with male off take 32 mm dia. x 1" dia.	Each	336.00
95	R3-HE-9-17-d	Compression elbow with male off take 40 mm dia. x 1 ¹ / ₄ " dia.	Each	392.00
96	R3-HE-9-17-e	Compression elbow with male off take 50 mm dia. x 1½" dia.	Each	512.00
97	R3-HE-9-17-f	Compression elbow with male off take 63 mm dia. x 2" dia.	Each	637.00
	R3-HE-9-18	Supplying 900 Compression elbow with Female off take Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
98	R3-HE-9-18-a	Compression elbow with Female off take 20 mm dia. x ½" dia.	Each	190.00
99	R3-HE-9-18-b	Compression elbow with Female off take 25 mm dia. x ³ / ₄ " dia.	Each	202.00
100	R3-HE-9-18-c	Compression elbow with Female off take 32 mm dia. x 1" dia.	Each	309.00
101	R3-HE-9-18-d	Compression elbow with Female off take 40 mm dia. x 11/4" dia.	Each	458.00
102	R3-HE-9-18-e	Compression elbow with Female off take 50 mm dia. x 1½" dia.	Each	483.00

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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
103	R3-HE-9-18-f	Compression elbow with Female off take 63 mm dia. x 2" dia.	Each	598.00
	R3-HE-9-19	Providing and fixing 900 Compression elbow with Female off take Conforming to ISO 14236, manufactured from black Polypropylene with blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure rating 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
104	R3-HE-9-19-a	Compression elbow with Female off take 20 mm dia. x ½" dia.	Each	232.00
105	R3-HE-9-19-b	Compression elbow with Female off take 25 mm dia. x ³ / ₄ " dia.	Each	244.00
106	R3-HE-9-19-c	Compression elbow with Female off take 32 mm dia. x 1" dia.	Each	351.00
107	R3-HE-9-19-d	Compression elbow with Female off take 40 mm dia. x 11/4" dia.	Each	522.00
108	R3-HE-9-19-e	Compression elbow with Female off take 50 mm dia. x 1½" dia.	Each	547.00
109	R3-HE-9-19-f	Compression elbow with Female off take 63 mm dia. x 2" dia.	Each	662.00
	R3-HE-9-20	Supplying Compression End caps Conforming to ISO 14236, manufactured from Polypropylene with Blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc. complete as specified and as directed Note:Only MCGM approved brands shall be used.		
110	R3-HE-9-20-a	Compression End caps 20 mm dia. OD	Each	126.00

		JECTION 9		
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other
				Taxes)
1	2	3	4	5
111	R3-HE-9-20-b	Compression End caps 25 mm dia. OD	Each	163.00
112	R3-HE-9-20-c	Compression End caps 32 mm dia. OD	Each	277.00
113	R3-HE-9-20-d	Compression End caps 40 mm dia. OD	Each	404.00
114	R3-HE-9-20-e	Compression End caps 50 mm dia. OD	Each	508.00
115	R3-HE-9-20-f	Compression End caps63 mm dia. OD	Each	656.00
	R3-HE-9-21	Providing and fixing Compression End caps Conforming to ISO 14236, manufactured from Polypropylene with Blue colour cap using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
116	R3-HE-9-21-a	Compression End caps 20 mm dia. OD	Each	169.00
117	R3-HE-9-21-b	Compression End caps 25 mm dia. OD	Each	205.00
118	R3-HE-9-21-c	Compression End caps 32 mm dia. OD	Each	319.00
119	R3-HE-9-21-d	Compression End caps 40 mm dia. OD	Each	468.00
120	R3-HE-9-21-e	Compression End caps 50 mm dia. OD	Each	571.00
121	R3-HE-9-21-f	Compression End caps63 mm dia. OD	Each	719.00
	R3-HE-9-22	Supplying Ball Valves with Quick Joint Conforming to ISO 4422 (Part IV) manufactured from U-PVC raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc. complete as specified and as directed Note:Only MCGM approved brands shall be used.		
122	R3-HE-9-22-a	Ball Valves with Quick Joint 20 mm dia. x ½" dia.	Each	259.00
123	R3-HE-9-22-b	Ball Valves with Quick Joint 25 mm dia. x ³ / ₄ " dia.	Each	335.00
124	R3-HE-9-22-c	Ball Valves with Quick Joint 32 mm dia. x 1" dia.	Each	410.00
125	R3-HE-9-22-d	Ball Valves with Quick Joint 40 mm dia. x 11/4" dia.	Each	1021.00
126	R3-HE-9-22-e	Ball Valves with Quick Joint 50 mm dia. x 1½" dia.	Each	1366.00
127	R3-HE-9-22-f	Ball Valves with Quick Joint 63 mm dia. x 2" dia.	Each	1957.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
1		3		3
	R3-HE-9-23	Providing and fixing Ball Valves with Quick Joint Conforming to ISO 4422 (Part IV) manufactured from U-PVC raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note: Only MCGM approved brands shall be used.		
128	R3-HE-9-23-a	Ball Valves with Quick Joint 20 mm dia. x ½" dia.	Each	301.00
129	R3-HE-9-23-b	Ball Valves with Quick Joint 25 mm dia. x ³ / ₄ " dia.	Each	377.00
130	R3-HE-9-23-c	Ball Valves with Quick Joint 32 mm dia. x 1" dia.	Each	452.00
131	R3-HE-9-23-d	Ball Valves with Quick Joint 40 mm dia. x 1 4 dia.	Each	1084.00
132	R3-HE-9-23-e	Ball Valves with Quick Joint 50 mm dia. x 1½" dia.	Each	1430.00
133	R3-HE-9-23-f	Ball Valves with Quick Joint 63 mm dia. x 2" dia.	Each	2021.00
133	K3-11L-9-23-1	Ban varves with Quick Joint 05 min dia. x 2 dia.	Lacii	2021.00
	R3-HE-9-24	Supplying Electro Fusion PE Coupler Conforming to prEN12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
134	R3-HE-9-24-a	90 mm dia. OD Electro fusion PE coupler	Each	992.00
135	R3-HE-9-24-b	110 mm dia. OD Electro fusion PE coupler	Each	1512.00
136	R3-HE-9-24-c	160 mm dia. OD Electro fusion PE coupler	Each	2969.00
137	R3-HE-9-24-d	250 mm dia. OD Electro fusion PE coupler	Each	9072.00
138	R3-HE-9-24-e	315 mm dia. OD Electro fusion PE coupler	Each	12938.00
150	10 111 / 210		Lucii	12,55.00
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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-25	Supplying Electro Fusion PE Coupler Conforming to prEN12201-3, manufactured from virgin resin of PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal),inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
139	R3-HE-9-25-a	450 mm dia. OD Electro fusion PE coupler	Each	14375.00
140	R3-HE-9-25-b	600 mm dia. OD Electro fusion PE coupler	Each	21275.00
1.0	16 112 7 20 0		2	2127000
	R3-HE-9-26	Providing and fixing Electro Fusion PE Coupler Conforming to prEN12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal),inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
141	R3-HE-9-26-a	90 mm dia. OD Electro fusion PE coupler	Each	2667.00
142	R3-HE-9-26-b	110 mm dia. OD Electro fusion PE coupler	Each	3187.00
143	R3-HE-9-26-c	160 mm dia. OD Electro fusion PE coupler	Each	5204.00
144	R3-HE-9-26-d	250 mm dia. OD Electro fusion PE coupler	Each	11753.00
145	R3-HE-9-26-e	315 mm dia. OD Electro fusion PE coupler	Each	15619.00
146	R3-HE-9-26-f	450 mm dia. OD Electro fusion PE coupler	Each	17727.00
147	R3-HE-9-26-g	600 mm dia. OD Electro fusion PE coupler	Each	25744.00

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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-27	Supplying Electro fusion Equal Tees Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
148	R3-HE-9-27-a	Equal Tees 90 mm dia.	Each	3046.00
149	R3-HE-9-27-b	Equal Tees 110 mm dia.	Each	6235.00
150	R3-HE-9-27-c	Equal Tees 160 mm dia.	Each	11328.00
151	R3-HE-9-27-d	Equal Tees 250 mm dia.	Each	30878.00
	R3-HE-9-28	Providing and fixing Electro fusion Equal Tees Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
152	R3-HE-9-28-a	Equal Tees 90 mm dia.	Each	4961.00
153	R3-HE-9-28-b	Equal Tees 110 mm dia.	Each	8150.00
154	R3-HE-9-28-c	Equal Tees 160 mm dia.	Each	13562.00
155	R3-HE-9-28-d	Equal Tees 250 mm dia.	Each	33112.00

		SECTION 9		
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-29	Supplying Electro fusion 900 Elbow Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
156	R3-HE-9-29-a	900 Elbow 90 mm dia.	Each	748.00
157	R3-HE-9-29-b	900 Elbow110 mm dia.	Each	1024.00
158	R3-HE-9-29-c	900 Elbow160 mm dia.	Each	2157.00
159	R3-HE-9-29-d	900 Elbow 250 mm dia.	Each	3082.00
	R3-HE-9-30	Providing and fixing Electro fusion 900 Elbow Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
160	R3-HE-9-30-a	900 Elbow 90 mm dia.	Each	2663.00
100		900 Elbow110 mm dia.	Each	2939.00
161	R3-HE-9-30-b	900 Elbow I 10 mm dia.	Lacii	2737.00
	R3-HE-9-30-b R3-HE-9-30-c	900 Elbow 160 mm dia. 900 Elbow 250 mm dia.	Each	4391.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-31	Supplying Electro fusion 450 Elbow Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
164	R3-HE-9-31-a	450 Elbow 90 mm dia.	Each	3650.00
165	R3-HE-9-31-b	450 Elbow 110 mm dia.	Each	5163.00
166	R3-HE-9-31-c	450 Elbow 160 mm dia.	Each	13961.00
167	R3-HE-9-31-d	450 Elbow 250 mm dia.	Each	38894.00
107	K3-11L-9-31-u	+30 E100W 250 Hilli dia.	Lacii	38894.00
	R3-HE-9-32	Providing and fixing Electro fusion 450 Elbow Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
168	R3-HE-9-32-a	450 Elbow 90 mm dia.	Each	5565.00
169	R3-HE-9-32-b	450 Elbow 110 mm dia.	Each	7078.00
170	R3-HE-9-32-c	450 Elbow 160 mm dia.	Each	16195.00
171	R3-HE-9-32-d	450 Elbow 250 mm dia.	Each	42245.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other	
				Taxes)	
1	2	3	4	5	
	R3-HE-9-33	Supplying Electro fusion End Cap Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.			
172	R3-HE-9-33-a	End Cap 90 mm dia.	Each	518.00	
173	R3-HE-9-33-b	End Cap 110 mm dia.	Each	748.00	
174	R3-HE-9-33-c	End Cap 160 mm dia.	Each	1484.00	
175	R3-HE-9-33-d	End Cap 250 mm dia.	Each	2174.00	
176	R3-HE-9-33-e	End Cap 315 mm dia.	Each	2864.00	
	R3-HE-9-34	Providing and fixing Electro fusion End Cap Conforming to prEN-12201-3, manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.			
177	R3-HE-9-34-a	End Cap 90 mm dia.	Each	2007.00	
178	R3-HE-9-34-b	End Cap 110 mm dia.	Each	2237.00	
179	R3-HE-9-34-c	End Cap 160 mm dia.	Each	3718.00	
180	R3-HE-9-34-d	End Cap 250 mm dia.	Each	4408.00	
181	R3-HE-9-34-e	End Cap 315 mm dia.	Each	5545.00	

				Rate in Rs.
Sr.No.	Material Code	Material Description	Unit	(Excl. GST
				and other
1			4	Taxes)
1	2	3	4	5
		Supplying Electro fusion Reducers Conforming to prEN-12201-		
		3, manufactured from virgin resin of PE-80/ PE-100 having		
		black / yellow / blue colour using food grade compounded raw		
		material with quality assurance certificate from quality agencies		
		like CIPET(India) / DVGM / KIWA / SPGN working pressure of		
	D2 HE 0.25	10 Bar. The cost shall include testing of working pressure of 10		
	R3-HE-9-35	Bar. The cost shall include testing of all materials, labour,		
		excluding all taxes (Central, State and Municipal), inspection		
		charges, transportation to the directed municipal establishment,		
		transit insurance, loading, unloading, stacking etc complete in all		
		respect and as directed by Engineer In-Charge. Note :Only		
		MCGM approved brands shall be used.		
182	R3-HE-9-35-a	Electro fusion Reducer 110 x 90 mm	Each	1130.00
183	R3-HE-9-35-b	Electro fusion Reducer 160 x 110 mm	Each	1478.00
184	R3-HE-9-35-c	Electro fusion Reducer 250 x 160 mm	Each	3203.00
		Providing and fixing Electro fusion Reducers Conforming to		
		prEN-12201-3, manufactured from virgin resin of PE-80/ PE-		
		100 having black/yellow/blue colour using food grade		
		compounded raw material with quality assurance certificate from		
		quality agencies like CIPET(India) / DVGM / KIWA / SPGN /		
	R3-HE-9-36	WRC etc. for usage in drinking water system and having		
		working pressure of 10 Bar. The cost shall include testing of all		
		materials, labour, excluding all taxes (Central, State and		
		Municipal), inspection charges, transportation upto site, transit		
		insurance, complete as specified and directed. Note :Only		
		MCGM approved brands shall be used.		
185	R3-HE-9-36-a	Electro fusion Reducer 110 x 90 mm	Each	2805.00
186	R3-HE-9-36-b	Electro fusion Reducer 160 x 110 mm	Each	3712.00
187	R3-HE-9-36-c	Electro fusion Reducer 250 x 160 mm	Each	5437.00
		Jointing the MDPE/ HDPE pipes or fittings by Butt Welding as		
	R3-HE-9-37	per IS 7634 (Part II) including cost of fabrication.		
100	D0 177 0 5 =	Jointing of 20 mm dia. to 110 mm dia. pipe or fittings by Butt	-	450400
188	R3-HE-9-37-a	Welding	Each	1784.00
100	D2 HE 0 27 1	Jointing of 125 mm dia. to 315 mm dia. pipe or fittings by Butt	E 2 2 1-	2141.00
189	R3-HE-9-37-b	Welding	Each	2141.00
190	R3-HE-9-37-c	Jointing of 450 mm dia. to 630 mm dia. pipe or fittings by Butt	Each	2853.00
170	KJ-11L-7-J/-C	Welding	Lacii	2023.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST
				and other
1	2	2	4	Taxes)
1	2	3	4	5
	R3-HE-9-38	Supplying Long Neck Pipe End with Metal Flange Conforming to IS 8008 (Part VI), manufactured from virgin resin of PE-80/PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
191	R3-HE-9-38-a	Long Neck Pipe End with Metal Flange 90 mm dia.	Each	1028.00
192	R3-HE-9-38-b	Long Neck Pipe End with Metal Flange 110 mm dia.	Each	1215.00
193	R3-HE-9-38-c	Long Neck Pipe End with Metal Flange 160 mm dia.	Each	2349.00
194	R3-HE-9-38-d	Long Neck Pipe End with Metal Flange 250 mm dia.	Each	4008.00
195	R3-HE-9-38-e	Long Neck Pipe End with Metal Flange 315 mm dia.	Each	4986.00
	R3-HE-9-39	Providing and fixing by BUTT WELDING Long Neck Pipe End with Metal Flange Conforming to IS 8008 (Part VI), manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like e CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note :Only MCGM approved brands shall be used.		
196	R3-HE-9-39-a	Long Neck Pipe End with Metal Flange 90 mm dia.	Each	2557.00
197	R3-HE-9-39-b	Long Neck Pipe End with Metal Flange 110 mm dia.	Each	2744.00
198	R3-HE-9-39-c	Long Neck Pipe End with Metal Flange 160 mm dia.	Each	4133.00
199	R3-HE-9-39-d	Long Neck Pipe End with Metal Flange 250 mm dia.	Each	5792.00
200	R3-HE-9-39-e	Long Neck Pipe End with Metal Flange 315 mm dia.	Each	7126.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
	R3-HE-9-40	Supplying Molded 900 Equal Tees Conforming to IS 8008, (Part III), manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.			
201	R3-HE-9-40-a	Equal Tees 90 mm dia.	Each	372.00	
202	R3-HE-9-40-b	Equal Tees 110 mm dia.	Each	557.00	
203	R3-HE-9-40-c	Equal Tees 160 mm dia.	Each	1720.00	
	R3-HE-9-41	Providing and fixing by BUTT WELDING Molded 900 Equal Tees Conforming to IS 8008, (Part III) of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note :Only MCGM approved brands shall be used.			
204	R3-HE-9-41-a	Equal Tees 90 mm dia.	Each	2513.00	
205	R3-HE-9-41-b	Equal Tees 110 mm dia.	Each	2586.00	
206	R3-HE-9-41-c	Equal Tees 160 mm dia.	Each	4395.00	
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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-42	Supplying Fabricated 900 Equal Tees Conforming to IS 8360, Part II of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note: Only MCGM approved brands shall be used.		
207	R3-HE-9-42-a	Equal Tees 250 mm dia.	Each	6911.00
208	R3-HE-9-42-b	Equal Tees 315 mm dia.	Each	9862.00
	R3-HE-9-43	Providing and fixing by BUTT WELDING Fabricated 900 Equal Tees Conforming to IS 8360, Part II, of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
209	R3-HE-9-43-a	Equal Tees 250 mm dia.	Each	9587.00
210	R3-HE-9-43-b	Equal Tees 315 mm dia.	Each	12537.00

	SECTION 9				
Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
	R3-HE-9-44	Supplying Molded 900 Bends Conforming to IS 8008 (Part II), manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.			
211	R3-HE-9-44-a	Bends 90 mm dia.	Each	234.00	
212	R3-HE-9-44-b	Bends 110 mm dia.	Each	361.00	
213	R3-HE-9-44-c	Bends 160 mm dia.	Each	1147.00	
	R3-HE-9-45	Providing and fixing by BUTT WELDING Molded 900 Bends Conforming to IS 8008 (Part II), manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.			
214	R3-HE-9-45-a	Bends 90 mm dia.	Each	2374.00	
215	R3-HE-9-45-b	Bends 110 mm dia.	Each	2502.00	
216	R3-HE-9-45-c	Bends 160 mm dia.	Each	3058.00	

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-46	Supplying Fabricated 900 Bends Conforming to IS 8360, Part III of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
217	R3-HE-9-46-a	Bends 250 mm dia.	Each	5525.00
218	R3-HE-9-46-b	Bends 315 mm dia.	Each	11038.00
210	R3-HE-9-47	Providing and fixing by BUTT WELDING Fabricated 900 Bends Conforming to IS 8360, Part III of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM /KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		2200.00
219	R3-HE-9-47-a	Bends 250 mm dia.	Each	8200.00
220	R3-HE-9-47-b	Bends 315 mm dia.	Each	13713.00

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				Rate in Rs. (Excl. GST	
Sr.No.	Material Code	Material Description	Unit	and other	
				Taxes)	
1	2	3	4	5	
		Supplying Fabricated 450 Bends Conforming to IS 8360 (Part		-	
		III) of following Dia. manufactured from virgin resin of PE-80/			
		PE-100 having black / yellow / blue colour using food grade			
		compounded raw material with quality assurance certificate from			
		quality agencies like CIPET(India) / DVGM / KIWA / SPGN /			
	R3-HE-9-48	WRC etc. for usage in drinking water system and having			
		working pressure of 10 Bar. The cost shall include testing of all			
		materials, labour, excluding all taxes (Central, State and			
		Municipal), inspection charges, transportation to the directed			
		municipal establishment, transit insurance, loading, unloading,			
		stacking etc complete in all respect and as directed by Engineer			
		In-Charge. Note: Only MCGM approved brands shall be used.			
		Note: (2) Prefabricated bends other than 900 and 450 will be			
		paid under this item.			
221	R3-HE-9-48-a	Bends 90 mm dia.	Each	234.00	
222	R3-HE-9-48-b	Bends 110 mm dia.	Each	361.00	
223	R3-HE-9-48-c	Bends 160 mm dia.	Each	1147.00	
224	R3-HE-9-48-d	Bends 250 mm dia.	Each	5525.00	
225	R3-HE-9-48-e	Bends 315 mm dia.	Each	11038.00	
		Providing and fixing by BUTT WELDING Fabricated 450			
		Bends Conforming to IS 8360 (Part III) of following Dia. and			
		manufactured from virgin resin of PE-80/ PE-100 having			
		black/yellow/blue colour using food grade compounded raw			
		material with quality assurance certificate from quality agencies			
		like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for			
		usage in drinking water system and having working pressure of			
	R3-HE-9-49	10 Bar. The cost shall include testing of all materials, labour,			
		excluding all taxes (Central, State and Municipal), inspection			
		charges, transportation upto site, transit insurance, loading,			
		unloading, stacking, providing and fixing etc complete in all			
		respect and as directed by Engineer In-Charge. Note :Only MCGM approved brands shall be used. Note : (2) Prefabricated			
		bends other than 900 and 450 will be paid under this item.			
		and the state of the second distribution.			
226	R3-HE-9-49-a	Bends 90 mm dia.	Each	2374.00	
227	R3-HE-9-49-b	Bends 110 mm dia.	Each	2502.00	
228	R3-HE-9-49-c	Bends 160 mm dia.	Each	3822.00	
229	R3-HE-9-49-d	Bends 250 mm dia.	Each	8200.00	
230	R3-HE-9-49-e	Bends 315 mm dia.	Each	13713.00	

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-50	Supplying Molded End Caps Conforming to IS 8008 (Part IX) of following Dia. and manufactured from virgin resin of PE-80/PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
231	R3-HE-9-50-a	Molded End caps 90 mm dia.	Each	149.00
232	R3-HE-9-50-b	Molded End caps 10 mm dia.	Each	255.00
233	R3-HE-9-50-c	Molded End caps 160 mm dia.	Each	424.00
234	R3-HE-9-50-d	Molded End caps 250 mm dia.	Each	1147.00
235	R3-HE-9-50-e	Molded End caps 315 mm dia.	Each	1973.00
	R3-HE-9-51	Providing and fixing by BUTT WELDING Molded End Caps Conforming to IS 8008 (Part IX) of following Dia. and manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM /KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note :Only MCGM approved brands shall be used.		
236	R3-HE-9-51-a	Molded End caps 90 mm dia.	Each	1678.00
237	R3-HE-9-51-b	Molded End caps 10 mm dia.	Each	1784.00
238	R3-HE-9-51-c	Molded End caps 160 mm dia.	Each	2208.00
239	R3-HE-9-51-d	Molded End caps 250 mm dia.	Each	3287.00
240	R3-HE-9-51-e	Molded End caps 315 mm dia.	Each	4113.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-52	Supplying Molded reducers Conforming to IS 8008 (Part IV) of following sizes and manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, stacking etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.	4	3
241	R3-HE-9-52-a	Molded Reducer 110 x 90 mm	Each	188.00
242	R3-HE-9-52-b	Molded Reducer 160 x 90 mm	Each	444.00
243	R3-HE-9-52-c	Molded Reducer 160 x 110 mm	Each	417.00
244	R3-HE-9-52-d	Molded Reducer 250 x 110 mm	Each	2751.00
245	R3-HE-9-52-e	Molded Reducer 250 x 160 mm	Each	2651.00
246	R3-HE-9-52-f	Molded Reducer 315 x 160 mm	Each	3543.00
247	R3-HE-9-52-g	Molded Reducer 315 x 250 mm	Each	4134.00
	R3-HE-9-53	Providing and fixing by BUTT WELDING Molded reducers Conforming to IS 8008 (Part IV), manufactured from virgin resin of PE-80/ PE-100 having black/yellow/blue colour using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET(India) / DVGM/KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, providing and fixing etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
248	R3-HE-9-53-a	Molded Reducer 110 x 90 mm	Each	1717.00
249	R3-HE-9-53-b	Molded Reducer 160 x 90 mm	Each	2227.00
250	R3-HE-9-53-с	Molded Reducer 160 x 110 mm	Each	2201.00
251	R3-HE-9-53-d	Molded Reducer 250 x 110 mm	Each	4892.00
252	R3-HE-9-53-e	Molded Reducer 250 x 160 mm	Each	4791.00
253	R3-HE-9-53-f	Molded Reducer 315 x 160 mm	Each	6218.00
254	R3-HE-9-53-g	Molded Reducer 315 x 250 mm	Each	6809.00

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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
255	R3-HE-9-54	Cost of making hole of any size to suit 15 mm dia. to 50 mm dia. ferrule for making service connections on CI water main, including making the hole with Raichid machine & making threads for providing ferrule etc. complete.	Each	986.00	
256	R3-HE-9-55	Supplying Electro Fusion Machine (Model MSA 200), 230 volt, including cables, specials etc. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.	Each	209675.00	
257	R3-HE-9-56	Supplying Top Loading Clamp for fixing tapping tees suitable for sizes from 90 mm dia. to 250 mm dia. as per the attached specifications. The cost shall include, inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, excluding all taxes & duties (Central, State and Municipal) etc complete in all respect and as directed by Engineer In-Charge.	Each	36112.00	
258	R3-HE-9-57	Supplying Top Loading Clamp for fixing tapping tees suitable for sizes from 280 mm dia. to 315 mm dia. as per the attached specifications. The cost shall include, inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, excluding all taxes & duties (Central, State and Municipal) etc complete in all respect and as directed by Engineer In-Charge.	Each	40742.00	
259	R3-HE-9-58	Supplying Light Weight Welding Jack Basic Machine suitable for 90 mm, 110 mm and 160 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.	Each	391394.00	

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
260	R3-HE-9-59	Supplying Pair of Clamps, to be Provided to Light Weight Welding Jack Basic Machine suitable for 90 mm, 110 mm and 160 mm outside dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.	Pair	9260.00
261	R3-HE-9-60	Supplying Heavy Weight Welding Jack Basic Machine suitable for 250 mm and 315 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.		629025.00
	R3-HE-9-61	Supplying Pair of Clamps, to be Provided to Heavy Weight Welding Jack Basic Machine suitable for 250 mm and 315 mm out side dia. as per the attached specifications. The cost shall include, inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal) etc complete in all respect and as directed by Engineer In-Charge.	Pair	
262	R3-HE-9-61-a	250 mm out side dia.	Pair	23149.00
263	R3-HE-9-61-b	315 mm out side dia.	Pair	28704.00
264	R3-HE-9-62	Supplying Electric Mirror with Digital Display suitable for all sizes upto 160 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading, excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.	Each	37359.00
265	R3-HE-9-63	Supplying Electric Mirror with Digital Display suitable for all sizes upto 315 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal), etc complete in all respect and as directed by Engineer In-Charge.		70982.00

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Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
266	R3-HE-9-64	Supplying Electric Mirror Simple i.e. without digital display suitable for all sizes upto 160 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal),etc complete in all respect and as directed by Engineer In-Charge.	Each	10185.00
267	R3-HE-9-65	Supplying Electric Mirror Simple i.e. without digital display suitable for all sizes upto 315 mm out side dia. as per the attached specifications. The cost shall include inspection charges, transportation to the directed municipal establishment, transit insurance, loading, unloading excluding all taxes & duties (Central, State and Municipal) etc complete in all respect and as directed by Engineer In-Charge.	Each	14815.00
	R3-HE-9-66	Supplying Electro Fusion Tapping Tees to be manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agency like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
268	R3-HE-9-66-a	160 x 20 mm, 160 x 25 mm, 160 x 32 mm	Each	1668.00
269	R3-HE-9-66-b	160 x 40 mm, 160 x 50mm, 160 x 63mm	Each	2387.00
270	R3-HE-9-66-c	250 x 20 mm, 250 x 25mm, 250 x 32mm	Each	2657.00
271	R3-HE-9-66-d	250 x 40 mm, 250 x 50 mm, 250 x 63mm	Each	3203.00
272	R3-HE-9-66-e	315 x 20mm, 315 x 25mm, 315 x 32mm	Each	2956.00
273	R3-HE-9-66-f	315 x 40mm, 315 x 50 mm, 315 x 63mm	Each	3640.00
274	R3-HE-9-66-g	160 x 90 mm, 250 x 90mm, 315 x 90mm	Each	7406.00
275	R3-HE-9-66-h	63 x 20 mm, 63 x 25mm, 63 x 32mm	Each	1668.00

Sr.No.	Material Code	Material Description	Unit	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-9-67	Providing and Fixing Electro Fusion Tapping Tees to be manufactured from virgin resin of PE-80/ PE-100 having black / yellow / blue colour using food grade compounded raw material with quality assurance certificate from quality agency like CIPET(India) / DVGM / KIWA / SPGN / WRC etc. for usage in drinking water system and having working pressure of 10 Bar. The cost shall include testing of all materials, labour, excluding all taxes (Central, State and Municipal), inspection charges, transportation upto site, transit insurance, loading, unloading, stacking, etc complete in all respect and as directed by Engineer In-Charge. Note:Only MCGM approved brands shall be used.		
276	R3-HE-9-67-a	160 x 20 mm, 160 x 25 mm, 160 x 32 mm	Each	3191.00
277	R3-HE-9-67-b	160 x 40 mm, 160 x 50mm, 160 x 63mm	Each	3605.00
278	R3-HE-9-67-c	250 x 20 mm, 250 x 25mm, 250 x 32mm	Each	3876.00
279	R3-HE-9-67-d	250 x 40 mm, 250 x 50 mm, 250 x 63mm	Each	4422.00
280	R3-HE-9-67-e	315 x 20mm, 315 x 25mm, 315 x 32mm	Each	4175.00
281	R3-HE-9-67-f	315 x 40mm, 315 x 50 mm, 315 x 63mm	Each	4859.00
282	R3-HE-9-67-g	160 x 90 mm, 250 x 90mm, 315 x 90mm	Each	8625.00
283	R3-HE-9-67-h	63 x 20 mm, 63 x 25mm, 63 x 32mm	Each	2887.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-10-1	Taking access opening on C.I./ D.I.Water main by machine cut (2m/3m length) and reinstating the same by using mechanical joint collar and SBR rings, including dewatering of body water and subsoil water, etc. complete in all respect and as directed by the Engineer In Charge for following diameters of CI/DI water mains: In case pipe is damaged, replacement pipe to be paid as per item rate		
1	R3-HE-10-1-a	150 mm	Each	10854.00
2	R3-HE-10-1-b	250 mm	Each	13223.00
3	R3-HE-10-1-c	300 mm	Each	15241.00
4	R3-HE-10-1-d	450 mm	Each	28819.00
5	R3-HE-10-1-e	600 mm	Each	74504.00
6	R3-HE-10-1-f	750 mm	Each	116874.00
7	R3-HE-10-1-g	900 mm	Each	145050.00
8	R3-HE-10-1-h	1200 mm	Each	273531.00
	R3-HE-10-2	Scrapping and cleaning the internal surface of water main by mechanical scrapper including support machinery, manpower, fuel and transport of equipment etc complete in all respect and as directed by the Engineer In Charge and removing the scrapped material by plugging and preparing the pipe for lining for following diameters of C.I./D.I. pipes, including dewatering of body water and subsoil water, including removing scrap and debris.		
9	R3-HE-10-2-a	150 mm	Rmt	544.00
10	R3-HE-10-2-b	250 mm	Rmt	502.00
11	R3-HE-10-2-c	300 mm	Rmt	466.00
12	R3-HE-10-2-d	450 mm	Rmt	607.00
13	R3-HE-10-2-e	600 mm	Rmt	607.00
14	R3-HE-10-2-f	750 mm	Rmt	688.00
15	R3-HE-10-2-g	900 mm	Rmt	757.00
16	R3-HE-10-2-h	1200mm	Rmt	946.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-10-3	Scrapping and cleaning by hand application using wire brushes, the cut pieces taken for access opening, including bends/ taper pieces, cross connections etc complete in all respect and as directed by the Engineer In Charge, where cleaning by machine is not possible, for C.I./D.I. Water mains of following diameters:		
17	R3-HE-10-3-a	150 mm	Rmt	259.00
18	R3-HE-10-3-b	250 mm	Rmt	324.00
19	R3-HE-10-3-c	300 mm	Rmt	431.00
20	R3-HE-10-3-d	450 mm	Rmt	952.00
21	R3-HE-10-3-e	600 mm	Rmt	952.00
22	R3-HE-10-3-f	750 mm	Rmt	1190.00
23	R3-HE-10-3-g	900 mm	Rmt	1380.00
24	R3-HE-10-3-h	1200mm	Rmt	1380.00
	R3-HE-10-4	Providing in situ internal cement mortar lining as per AWWA C 602- 76 standards to distributory CI/DI water mains, with cement sand ratio 1:1 (Cement 43 grade: Godhra special sand) with the use of mortar lining machine including support machinery, manpower, fuel and transport of equipment, dewatering of body water and subsoil water etc complete in all respect and as directed by the Engineer In Charge, for following diameters and thickness of mortar lining. Note: The thickness of lining considered is average		
		value of lining taking into account maximum and minimum thickness values.		
25	R3-HE-10-4-a	150 mm diameter with 4.65 mm lining thickness	Rmt	664.00
26	R3-HE-10-4-b	250 mm diameter with 4.65 mm lining thickness	Rmt	677.00
27	R3-HE-10-4-c	300 mm diameter with 4.65 mm lining thickness	Rmt	684.00
28	R3-HE-10-4-d	450 mm diameter with 7.0 mm lining thickness	Rmt	732.00
29	R3-HE-10-4-e	600 mm diameter with 7.0 mm lining thickness	Rmt	761.00
30	R3-HE-10-4-f	750 mm diameter with 7.0 mm lining thickness	Rmt	849.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
31	R3-HE-10-4-g	900 mm diameter with 7.0 mm lining thickness	Rmt	948.00
32	R3-HE-10-4-h	1200 mm diameter with 7.0 mm lining thickness	Rmt	1104.00
	R3-HE-10-5	Providing in situ internal cement mortar lining as per AWWA C 602- 76 standards in cement sand ratio (1:1) by hand application to cut pieces taken for access opening, bends tapers, cross connections where machine lining is not possible to C.I. /D.I.water mains etc complete in all respect and as directed by the Engineer In Charge for following diameters.		
33	R3-HE-10-5-a	150 mm diameter with 4.65 mm lining thickness	Rmt	619.00
34	R3-HE-10-5-b	250 mm diameter with 4.65 mm lining thickness	Rmt	632.00
35	R3-HE-10-5-c	300 mm diameter with 7.0 mm lining thickness	Rmt	788.00
36	R3-HE-10-5-d	450 mm diameter with 7.0 mm lining thickness	Rmt	944.00
37	R3-HE-10-5-e	600 mm diameter with 7.0 mm lining thickness	Rmt	1115.00
38	R3-HE-10-5-f	750 mm diameter with 7.0 mm lining thickness	Rmt	1344.00
39	R3-HE-10-5-g	900 mm diameter with 7.0 mm lining thickness	Rmt	1373.00
40	R3-HE-10-5-h	1200 mm diameter with 7.0 mm lining thickness	Rmt	1431.00
41	R3-HE-10-6	Hire charges for supplying & providing C.C.T.V. camera (including monitor, Video/CD recorder, battery backup, accessories all enclosed in a waterproof enclosure) for inspection of water mains of any diameter at any location of the site including all required machinery, accessories, operators, etc. with all necessary backup recorded on CD's (3sets), excluding all taxes, etc complete in all respect and as directed by the Engineer In Charge	Shift	8500.00

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
	R3-HE-10-7	Cleaning the internal surface of water main by plunger/squeeze, including support machinery, manpower, fuel and transport of equipment etc. complete in all respect and as directed by the Engineer in charge and removing the scrapped material by plugging and preparing pipe for passing camera for follwoing diameters of CI/ DI/ MS pipes, including dewatering of body water and subsoil water, including removing scrap and debris			
42	R3-HE-10-7-a	150 mm	Shift	6739.00	
43	R3-HE-10-7-b	250 mm	Shift	7012.00	
44	R3-HE-10-7-c	300 mm	Shift	7127.00	

		3_311311		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
1	R3-HE-11-1	Providing and Placing Brick bats in layers with staggered joints for required depth etc. complete in all respect and as directed by the engineer		3871.00
2	R3-HE-11-2	Providing and Laying 40 mm (average) size metal/ aggregates in 15 cm thick layer conforming to IS 383 for required depth including screening, washing, cleaning of metal/ aggregates etc. complete in all respect and as directed by engineer.		2489.00
3	R3-HE-11-3	Providing and Laying 20 mm (average) size metal/ aggregates conforming to IS 383 in 15 cm thick layer for required depth including screening, washing, cleaning of metal/ aggregates etc. complete in all respect and as directed by engineer.		2489.00
4	R3-HE-11-4	Providing and Laying 4.75 mm to 12 mm (average) size, well graded natural sand in 15 cm thick layer for required depth including screening, washing, cleaning of sand etc. complete in all respect and as directed by engineer.	C	4419.00
5	R3-HE-11-5	Providing and Laying, Placing Coconut coir layers of 6 mm to 12 mm thick in between graded layers at required depth including 10 cm wide overlapping etc. complete in all respect as directed by engineer.	C	775.00
6	R3-HE-11-6	Removing of filled up material from Rain water Harvesting tank (like brick bats, bricks, coconut coir, Aggregates, metal, sand etc.) up to 4.00 meter depth, stacking the material in suitable manner at site etc. complete as directed by engineer (removal of surplus material to be paid separately)	Cum	3811.00
7	R3-HE-11-7	Washing, Cleaning, Placing, Laying of 40 mm metal/aggregate etc. completed in all respect considering 25% loss of material and as directed by engineer	Cum	1728.00

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Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)	
1	2	3	4	5	
8	R3-HE-11-8	Washing, Cleaning, Placing, Laying of 20mm metal/aggregate etc. completed in all respect considering 25% loss of material and as directed by engineer.	Cum	1728.00	
9	R3-HE-11-9	Washing, Cleaning, Placing, Laying of coarse sand 4.75 to 12 mm thick etc. completed in all respect considering 25% loss of material and as directed by engineer.		1981.00	
10	R3-HE-11-10	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm reinforced with 8mm dia 4 nos longitudinal and 9 nos cross sectional T.M.T hoop bars including providing 50mm dia perforations @ 100 to 125 mm c/c including providing edge binding with M S flats of size 50mm x 1.6mm complete all as per direction of Engineer-incharge.	Nos	1622.00	

Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and
1	2	3	4	other Taxes)
1	R3-HE-12-1	Providing and applying 100 % solid, flexible, elastomeric, UV stable, 2-component, water proof, fast setting (within 45 seconds), specific grade Polyurea Coating at 1.2 mm nominal thickness on concrete surface on inner side of reservoir forming a seamless & monolithic membrane over compatible epoxy primer. The coating should have been tested and conform to various standards as mentioned in Data Sheet of the manufacturer. The coating shall be carried out in a single application with multiple passes using high pressure plural component reactor strictly as per manufacturers specifications including all necessary tools, tackles, high pressure spray machine, primer application, surface cleaning by sweep blasting/ grinding and filling up opened up bug holes etc using epoxy primer mixed with fine silica sand (FQ 75). Application to be carried out by trained applicator certified by the principal. Necessary safety gadgets for worker using high pressure equipment & spray painting such as Boiler suit, helmet, safety shoes, nose mask, goggles, hand gloves to be provided by the painting contractor. Testing of the coating for DFT, Adhesion, Hardness and finally by filling water in the tank (water filling not in the scope of painting applicator) and checking against any leakage. The coating to carry a warranty for 10 year against material and application fault. Surface to be coated with Poloyurea to be handed over to Painting Contractor by Civil Contractor should be bone dry (with surface moisture preferably below 5% and maximum limit at localized area up to 8%) and repaired of construction surface blemishes if any with suitable repairing compound (polymeric mortar / epoxy mortar) etc. complete as directed.	Sqm	3559.00

		SECTION 12		
Sr. NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-12-2	Providing & applying 100% solids, flexible, elastomeric, UV stable, 2 component, water proof, fast setting (Within 45 seconds), specific grade Nukote ST Standard Pure Polyurea or equivalent, on steel pipes forming a seamless & monolithic membrane over the compatible recommended primer. The coating should been tested & conform to 21 CFR 175 300. The coating shall be carried out in a single application with multiple passes using high pressure plural component reactor strictly as per manufactures specifications including all necessary tools, tackles, high pressure spray machine, primer application, surface preparation. application to be carried out by Qualified Applicator certified by the principal.		
2	R3-HE-12-2-a	1.2 mm DFT on the external surfaces	Sqm	3306.00
3	R3-HE-12-2-b	1.5 mm DFT on the internal surfaces	Sqm	3688.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-1	Providing and fixing Kwik Tee/ Saddle Tee manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher. The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in Nitrile or EPDM or as directed by Engineer and should be pressure- responsive inverted U-design. Housing should be protected with fusion bonded epoxy with min. thickness of 250 micron. Complete as directed		
1	R3-HE-13-1-a	150 x 80 mm	Each	15884.00
2	R3-HE-13-1-b	250 x 80 mm	Each	32595.00
3	R3-HE-13-1-c	300 x 80 mm	Each	42587.00
	R3-HE-13-2	Supplying Kwik Tee/ Saddle Tee manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher. The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in Nitrile or EPDM or as directed by Engineer and should be pressure- responsive inverted Udesign. Housing should be protected with fusion bonded epoxy with min. thickness of 250 micron. Complete as directed		
4	R3-HE-13-2-a	150 x 80 mm	Each	11610.00
5	R3-HE-13-2-b	250 x 80 mm	Each	26141.00
6	R3-HE-13-2-c	300 x 80 mm	Each	34830.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-3	Providing and fixing PE Couplings for HDPE pipes It should be of gasketed, sleeve type with dia. to properly fit the pipe. Each coupling should consists of one steel middle sleeve, two flanges, two rubber-compounded wedge section gaskets and nut bolts etc. The flanges should be manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher. The coupling bolts should be of elliptic- neck, or D-head design with rolled threads. All bolt holes should be non circular. Bolts should be single spanner with min. 6.6 property. Nut &Bolts should be olive passivated. The sleeve of coupling should be true circular sections. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in Nitrile or EPDM or as directed by Engineer and should be pressure- responsive inverted U-design. Flanges & sleeves should be protected with fusion bonded epoxy with min. thickness of 250 micron. The coupling up to 315 mm OD may be supplied in pre-assembled form, if directed.		
7	R3-HE-13-3-a	160 mm	Each	7960.00
8	R3-HE-13-3-b	250 mm	Each	9996.00
9	R3-HE-13-3-c	315 mm	Each	12710.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-4	Supplying PE Couplings for HDPE pipes It should be of gasketed, sleeve type with dia. to properly fit the pipe. Each coupling should consists of one steel middle sleeve, two flanges, two rubber-compounded wedge section gaskets and nut bolts etc. The flanges should be manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher. The coupling bolts should be of elliptic- neck, or D-head design with rolled threads. All bolt holes should be non circular. Bolts should be single spanner with min. 6.6 property. Nut &Bolts should be olive passivated. The sleeve of coupling should be true circular sections. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in Nitrile or EPDM or as directed by Engineer and should be pressure- responsive inverted U-design. Flanges & sleeves should be protected with fusion bonded epoxy with min. thickness of 250 micron. The coupling up to 315 mm OD may be supplied in pre-assembled form, if directed by Engineer.		
10	R3-HE-13-4-a	160 mm	Each	4720.00
11	R3-HE-13-4-b	250 mm	Each	6490.00
12	R3-HE-13-4-c	315 mm	Each	8850.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-5	Providing and fixing SS Handiband Repair Clamps. Its body should be manufactured from SS 304 duly pickled &passivated. The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with carbon steel of min. 6.6 property. Nut & Bolts should be olive passivated. Rubber should be of girded design. The seal may be supplied in EPDM to as directed by engineer. Lugs should be of ductile casting conforming to IS 1865:2000 grade 400:12 or from malleable casting IS 14329:2000 and it should be protected with fusion bonded epoxy to be applied in fluidized tank with min. thickness of 250 micron. Complete as directed		
13	R3-HE-13-5-a	1/2" x 3"	Each	746.00
14	R3-HE-13-5-b	3/4" x 3"	Each	805.00
15	R3-HE-13-5-c	1" x 3"	Each	871.00
16	R3-HE-13-5-d	1 1/4" x 3"	Each	1177.00
17	R3-HE-13-5-e	1 1/2" x 3"	Each	1274.00
18	R3-HE-13-5-f	2" x 3"	Each	1579.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-6	Supplying SS Handiband Repair Clamps Its body should be manufactured from SS 304 duly pickled &passivated. The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with carbon steel of min. 6.6 property. Nut & Bolts should be olive passivated. Rubber should be of girded design. The seal may be supplied in EPDM to as directed by engineer. Lugs should be of ductile casting conforming to IS 1865:2000 grade 400:12 or from malleable casting IS 14329:2000 and it should be protected with fusion bonded epoxy to be applied in fluidized tank with min. thickness of 250 micron. Complete as directed		
19	R3-HE-13-6-a	1/2" x 3"	Each	281.00
20	R3-HE-13-6-b	3/4" x 3"	Each	333.00
21	R3-HE-13-6-c	1" x 3"	Each	390.00
22	R3-HE-13-6-d	1 1/4" x 3"	Each	473.00
23	R3-HE-13-6-e	1 1/2" x 3"	Each	557.00
24	R3-HE-13-6-f	2" x 3"	Each	639.00
	R3-HE-13-7	Providing and fixing Dismantling Joints, Spigot Piece and Flange Adaptor of Ductile Casting conforming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed		
25	R3-HE-13-7-a	300 up to 400 mm	Each	50514.00
26	R3-HE-13-7-b	450 mm	Each	56912.00
27	R3-HE-13-7-c	600 mm	Each	85702.00

28 R3-HE-13-7-d 750 mm Each 111293.00 29 R3-HE-13-7-e 900 mm Each 143280.00 30 R3-HE-13-7-f 1200 mm Each 322412.00 Supplying Dismantling Joints, Spigot Piece and Flange Adaptor of Ductile Casting conforming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed 31 R3-HE-13-8-a 300 up to 400 mm Each 41723.00 32 R3-HE-13-8-b 450 mm Each 47287.00 33 R3-HE-13-8-c 600 mm Each 72321.00 34 R3-HE-13-8-d 750 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00	Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	
R3-HE-13-7-e 900 mm Each 143280.00	1	2	3	4	5
R3-HE-13-7-f 1200 mm	28	R3-HE-13-7-d	750 mm	Each	111293.00
Supplying Dismantling Joints, Spigot Piece and Flange Adaptor of Ductile Casting conforming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed 31 R3-HE-13-8-a 300 up to 400 mm Each 41723.00 32 R3-HE-13-8-b 450 mm Each 47287.00 33 R3-HE-13-8-c 600 mm Each 72321.00 34 R3-HE-13-8-c 900 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00	29	R3-HE-13-7-e	900 mm	Each	143280.00
Adaptor of Ductile Casting conforming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed 31 R3-HE-13-8-a 300 up to 400 mm Each 4723.00 32 R3-HE-13-8-b 450 mm Each 47287.00 33 R3-HE-13-8-c 600 mm Each 72321.00 34 R3-HE-13-8-d 750 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00	30	R3-HE-13-7-f	1200 mm	Each	322412.00
32 R3-HE-13-8-b 450 mm Each 47287.00 33 R3-HE-13-8-c 600 mm Each 72321.00 34 R3-HE-13-8-d 750 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00			Adaptor of Ductile Casting conforming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed		
33 R3-HE-13-8-c 600 mm Each 72321.00 34 R3-HE-13-8-d 750 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00	31	R3-HE-13-8-a	300 up to 400 mm	Each	41723.00
34 R3-HE-13-8-d 750 mm Each 94574.00 35 R3-HE-13-8-e 900 mm Each 122389.00	32	R3-HE-13-8-b	450 mm	Each	47287.00
35 R3-HE-13-8-e 900 mm Each 122389.00	33	R3-HE-13-8-c	600 mm	Each	72321.00
55 16 12 10 0 0	34	R3-HE-13-8-d	750 mm	Each	94574.00
36 R3-HE-13-8-f 1200 mm Each 278156.00	35	R3-HE-13-8-e	900 mm	Each	122389.00
	36	R3-HE-13-8-f	1200 mm	Each	278156.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-9	Providing and fixing Zut Put Coupling for mechanically joining HDPE pipes, housing should be manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher, The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed		
37	R3-HE-13-9-a	110 mm	Each	5815.00
38	R3-HE-13-9-b	160 mm	Each	6799.00
39	R3-HE-13-9-c	250 mm	Each	10132.00
40	R3-HE-13-9-d	315 mm	Each	12303.00
	R3-HE-13-10	Supplying Zut Put Coupling for mechanically joining HDPE pipes, housing should be manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher, The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated. The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, spigot piece and Flange adaptor to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed		
41	R3-HE-13-10-a	110 mm	Each	2854.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
42	R3-HE-13-10-b	160 mm	Each	3710.00
43	R3-HE-13-10-c	250 mm	Each	6608.00
44	R3-HE-13-10-d	315 mm	Each	8496.00
	R3-HE-13-11	Providing and fixing Flange Adaptors, body and Flanges should be manufactured from ductile casting confirming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, Flange adaptor body and flange to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed NOTE: The flange adaptors considered are locally fabricated and procured.		
45	R3-HE-13-11-a	150 mm	Each	2975.00
46	R3-HE-13-11-b	250 mm	Each	3613.00
47	R3-HE-13-11-c	300 mm	Each	4447.00
48	R3-HE-13-11-d	350 mm	Each	5752.00
49	R3-HE-13-11-e	600 mm	Each	12422.00
	R3-HE-13-12	Supplying Flange Adaptors, body and Flanges should be manufactured from ductile casting confirming to IS 1865:2000 grade 400:12 or higher, Tie bar of SS 304 with Teflon coated Thread The gaskets of the coupling should be composed of crude or synthetic rubber base. It may be supplied in EPDM or as directed by Engineer, Flange adaptor body and flange to be protected with 250 micron thk. Fusion Bonded Epoxy. Applied in Fluidized Tank. Complete as directed NOTE: The flange adaptors considered are locally fabricated and procured.		

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
50	R3-HE-13-12-a	150 mm	Each	385.00
51	R3-HE-13-12-b	250 mm	Each	940.00
52	R3-HE-13-12-c	300 mm	Each	1665.00
53	R3-HE-13-12-d	350 mm	Each	2800.00
54	R3-HE-13-12-e	600 mm	Each	8600.00
	R3-HE-13-13	Providing and fixing Split Section Finger Repair Clamps, finger clamps should be manufactured from ductile casting confirming IS 1865:2000 grade 400:12 or higher, body of SS 304 The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated finger clamps should be 250 mm thk fusion bonded epoxy coated applied in fluidized tank. Rubber to be of girded design and tapered at ends. Complete as directed		
55	R3-HE-13-13-a	80 mm	Each	10357.00
56	R3-HE-13-13-b	100 mm	Each	11545.00
57	R3-HE-13-13-c	150 mm	Each	18034.00
58	R3-HE-13-13-d	200 mm	Each	19222.00
59	R3-HE-13-13-e	250 mm	Each	20891.00
60	R3-HE-13-13-f	300 mm	Each	25897.00
61	R3-HE-13-13-g	450 mm	Each	42587.00
62	R3-HE-13-13-h	600 mm	Each	52600.00

Sr.No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
	R3-HE-13-14	Supplying Split Section Finger Repair Clamps, finger clamps should be manufactured from ductile casting The bolting thread should be rolled thread and nut should be high tensile. Bolts should be single spanner with of min. 6.6 property. Nut & Bolts should be olive passivated finger clamps should be 250 mm thk fusion bonded epoxy coated applied in fluidized tank. Rubber to be of girded design and tapered at ends. Complete as directed		
63	R3-HE-13-14-a	80 mm	Each	6804.00
64	R3-HE-13-14-b	100 mm	Each	7837.00
65	R3-HE-13-14-c	150 mm	Each	13480.00
66	R3-HE-13-14-d	200 mm	Each	14513.00
67	R3-HE-13-14-e	250 mm	Each	15964.00
68	R3-HE-13-14-f	300 mm	Each	20317.00
69	R3-HE-13-14-g	450 mm	Each	34830.00
70	R3-HE-13-14-h	600 mm	Each	43537.00

				D.A. in D.
				Rate in Rs.
Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	(Excl. GST
				and other
1	2	3	4	Taxes)
1	<u> </u>	Replacing and refixing Gland packing (Jute or Hemp IS: 5414 –	4	3
		1969) for the sluice valve including new gland material,		
	R3-HE-14-1	dismantling and assembling of sluice valve, replacement of		
		corroded nut bolts, salvage value for old nut bolts has been		
		considered etc. complete in all respects including cleaning of		
1	D2 HE 14.1	valve chamber and as directed by Engineer In Charge	г 1	2247.00
1	R3-HE-14-1-a	80 mm.	Each	3347.00
2	R3-HE-14-1-b		Each	3416.00
3	R3-HE-14-1-c		Each	3524.00
4	R3-HE-14-1-d		Each	4047.00
5	R3-HE-14-1-e		Each	4499.00
6	R3-HE-14-1-f		Each	4614.00
7	R3-HE-14-1-g	300 mm.	Each	4672.00
		Demle sing and refering Dukhan masking (IS, 629, 1070 Tyme D.)		
		Replacing and refixing Rubber packing (IS: 638 –1979 Type B (
		reinforced with 2 layer of fabric) for the sluice valve including		
	D2 HE 14.2	new rubber material, dismantling and assembling of sluice valve,		
	R3-HE-14-2	replacement of corroded nut bolts, salvage value for old nut bolts		
		has been considered etc complete in all respects including		
		cleaning of Valve chamber and as directed by Engineer In Charge		
8	R3-HE-14-2-a	80 mm.	Each	3542.00
9	R3-HE-14-2-b	100 mm.	Each	3612.00
10	R3-HE-14-2-c	125 mm.	Each	3748.00
11	R3-HE-14-2-d	150 mm	Each	4271.00
12	R3-HE-14-2-e	200 mm	Each	4778.00
13	R3-HE-14-2-f	250 mm.	Each	5033.00
14	R3-HE-14-2-g	300 mm.	Each	5232.00
		Replacing and refixing of existing check nut with new check nut		
		(Phosphorous bronze alloy) for the sluice valve including		
		dismantling and assembling of sluice valve, cutting machining,		
		threading, finishing, matching the diameter and thickness of		
	R3-HE-14-3	existing spindle collar and threads etc complete in all respects		
		including cleaning of Valve chamber and as directed by Engineer		
		In Charge. Salvage cost of existing check nut has been		
		considered. This item includes replacement of corroded nut bolts,		
		salvage value for old nut bolts has been considered.		
15	R3-HE-14-3-a	80 mm.	Each	4152.00
16	R3-HE-14-3-b	100 mm.	Each	4321.00
17	R3-HE-14-3-c		Each	4472.00
18	R3-HE-14-3-d	150 mm	Each	5015.00

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
19	R3-HE-14-3-e	200 mm	Each	5792.00
20	R3-HE-14-3-f	250 mm.	Each	6275.00
21	R3-HE-14-3-g	300 mm.	Each	8187.00
	R3-HE-14-4	Replacing and refixing of existing spindle with new spindle (SS 416) for the sluice valve including dismantling and assembling of sluice valve, cutting machining, threading, finishing, matching the diameter and thickness of existing spindle collar and threads etc complete in all respects including cleaning of Valve chamber and as directed by Engineer In Charge. Salvage cost of existing spindle has been considered. This item includes replacement of corroded nut bolts, salvage value for old nut bolts has been considered.		
22	R3-HE-14-4-a	80 mm.	Each	4932.00
23	R3-HE-14-4-b	100 mm.	Each	5943.00
24	R3-HE-14-4-c	125 mm.	Each	6193.00
25	R3-HE-14-4-d	150 mm	Each	6786.00
26	R3-HE-14-4-e	200 mm	Each	8578.00
27	R3-HE-14-4-f	250 mm.	Each	9741.00
28	R3-HE-14-4-g	300 mm.	Each	10830.00

				Rate in Rs.
Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	(Excl. GST and
1	2	3	4	other Taxes)
1	R3-HE-15-1	Cleaning of exterior surface of mild steel water trunk main, ring girders, stools & roller covers etc. manually by means of scrapper, wire brushes & mechanical srapper by use of D.G. wherever required. Cleaning including removing all the dust, dirt, loose rust, loose paint flakes, oil / grease etc completely from the surface and preparing the surface totally clean as directed by Engineer-in -Charge	SQM	88
2	R3-HE-15-2	Providing and applying two component Amine or polyamide cured surface Tolerant Epoxy Primer on external surface of water trunk main, ring girders, stools and roller cover etc. using best quality brush/ airless spray with best workmanship and in approved manner as per directions at site to get minimum Dry Film Thickness of 100 microns as per specifications and as directed by Engineer-in-Charge	SQM	113
3	R3-HE-15-3	Providing and applying two component high build epoxy barrier / intermediate coat after curing of previous epoxy primer coat on external surface of water trunk main, ring girders, stools and roller cover etc. using best quality brush / roller / spray with best workmanship in approved manner as per directions at site to get minimum Dry film thickness of 125 micron as per specifications and as directed by Engineer-in -Charge	SQM	123
4	R3-HE-15-4	Providing and applying two Component Polyurethane finish coat on previous epoxy primer & barrier coat on external surface of water trunk main, ring girders, stools and roller cover etc. using best quality brush / roller / spray with best workmanship and in approved manner as per directions at site to get minimum Dry Film Thickness of 50 micron as per specifications and as directed by Engineer-in -Charge	SQM	83
5	R3-HE-15-5	Identification of pipeline location & its depth measurement for installation of Cathodic Protection (CP) to prevent External Corrosion. Excavation for provision of cable to pipe connection, preparation of pipeline route drawing showing exact route of the pipeline including relevant dimensions & references. Minimum pipeline length required shall be 500 meter & pipe diameter shall be 450 mm to 3000 mm. The rate is inclusive of Surveyor, Technician, Labour charges, Transportation of man, machinery & material, Thermit welding for pipe to cable connection & Temporary arrangement of ground bed for earthing.	Mtr.	61

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Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and
51. 110.	TIEM CODE	TIEW DESCRIPTION	UNII	other Taxes)
1	2	3	4	5
6	R3-HE-15-6	Soil resistivity survey using Wenner's 4 pin method, for soil testing & route survey for installation of Cathodic Protection system. Soil Resistivity Survey shall be carried out at depth of 1 meter, 2 meter & 3 meter at 500 meter intervals. Minimum pipeline length required for survey shall be 500 meter having dia from 450mm to 3000mm. The Rate includes the wages / charges for Labour, Transportation, Equipments, CP Specialist Engineers, Supervision & technical support.	Mtr.	27
7	R3-HE-15-7	Design of Cathodic Protection System & Detailed Engineering & Constructional drawings along with Current Requirement calculation, Material Data Sheets, Inspection test plan & Quality assurance plan prepared by NACE CP Level – 4 certified Engineer & approved / Certified by NACE CP Specialist for length upto 10 KM. (Drawing MCGM-CC-01)	LS	219500
8	R3-HE-15-8	Supply & installation of Distributed Horizontal Anode bed of 50A rating using STRIP type 10 nos. of anodes (5A capacity each) for Cathodic Protection System. Horizontally grounded, canister anodes shall be installed in trenches of min. 1.5 to 2 meter deep & 52 meter long. Work shall be carried out as per following specifications & drawing MCGM-CC-03 using material described in SOR.	Nos.	808000
9	R3-HE-15-9	Supply & installation of Distributed Horizontal Anode bed of 75A rating using TUBULAR type of 10 nos of anodes (8A capacity each) for Cathodic Protection system. Horizontally grounded, canister anodes shall be installed in trenches of min 1.5 mtr to 2 mtr deep & 52 mtr long. Work shall be carried out specifications & drawing MCGM-CC-03 using material described in SOR.	Nos.	846000

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Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and
				other Taxes)
1	2	3	4	5
10	R3-HE-15-10	Supply & installation of Vertical or Deepwell Anode bed of 50 A rating using STRIP type 10 nos of Anodes (5A capacity each) for Cathodic Protection System. Drilling of borehole of 250mm dia. up to 24 mtr depth, further 200mm dia for 28 mtr i.e total 52 meter deep. 10 gauge 150 mm dia. ERW steel casing pipe shall be supplied & lowered into borehole through out the depth, top 24 meter depth shall be encased with 200 mm dia. PVC pipe. Total 10 nos of anodes shall be lowered into borehole & coke breeze shall be poured into borehole up to active column depth, remaining shall be filled with gravels. Rate includes supply, installation of Anode bed materials including Anodes, Vent pipe, centralizers, Coke breeze, MS casing pipe, PVC casing pipe, Drilling, Welding provision of welding machine and generator etc. The work shall be as per specifications & drawing MCGM-CC-02, using standard material described in SOR.	Nos.	823500
11	R3-HE-15-11	Supply & installation of Vertical or Deep well anode bed of 75 A rating using Tubular type of 10 nos. of Anodes (8A capacity each) for Cathodic Protection system. Drilling of borehole of 250mm dia. up to 24 mtr. depth, further 200mm dia. for 28 mtr. i.e. total 52 meter deep. 10 gauge 150 mm dia. ERW steel casing pipe shall be supplied & lowered in to this borehole throughout the depth. Top 24 mtr. shall be encased with 200 mm dia. PVC pipe. Total 10 anodes shall be lowered into borehole & coke breeze shall be poured into borehole up to active column depth. Remaining depth shall be filled with gravels. Rate includes supply, installation of anode bed materials including anodes, vent pipe, centralizers, coke breeze, MS casing pipe, PVC casing pipe, drilling, welding provision of welding machine & generator etc. The work shall be as per following specifications & drawing MCGM-CC-02 & MCGM-CC-04 (as per site condition), using standard material described in SOR.	Nos.	861500

				Rate in Rs.
Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	(Excl. GST and
				other Taxes)
1 12	2 R3-HE-15-12	Supply & installation of MS Anode Junction Box of 375mm X 375mm X 250 mm, as per specifications & drawing MCGM-CC-08, for Cathodic Protection system. The rate is inclusive of fabrication of Anode Junction box with sand blasting, powder coating with 30% spare terminals & Protection of IP 55 mounted on MS plate of 300mm X 300mm X 5mm thick, Raw material for Foundation (Sand, grit, Cement & MS bar), Shunt (10A / 75 mV), Resistor (10A / 50 V), Copper bus bar and charges for labour, transportation, supervision & technical support.	Nos.	5 47910
13	R3-HE-15-13	Supply and Installation of MS Cathode Junction Box of 375mm X 375mm X 250mm, as per specifications & drawing MCGM-CC-09, for Cathodic Protection system. The rates shall include Fabrication of Cathode Junction box with sand blasting, powder coating & Protection of IP 55 mounted on MS plate of 300mm X 300mm X 5mm thick, Raw material for Foundation (Sand, grit, cement & MS bar), Copper bus bar and charges for labour, transportation, supervision & technical support.	Nos.	39200
14	R3-HE-15-14	Supply 1C X 16 mm² Annealed Bare Copper Conductor, PVDF Insulated, Kynar / HMWPE Sheathed, Unarmoured Cable required for 1) insertion of anode tail cable, 2) reference electrode cables from underground reference electrode to Cathode Junction Box through Transformer Rectifier Unit 3) For measurement cables from pipeline negative connection to Cathode Junction Box through Transformer Rectifier Unit, required for Cathodic Protection system.	Mtr	258
15	R3-HE-15-15	Supply of 4C x 6 mm ² Annealed Bare Copper Conductor, XLPE Insulated, PVC Sheathed, 1.1 KV Grade, Armoured Cable for laying of AC power cable from energy meter to Transformer Rectifier unit of Cathodic Protection system	Mtr	295
16	R3-HE-15-16	Laying of Cables & Restoration of Cable trench, for 4C X 6 mm ² at 0.95 meter depth with Sand and Bricks and warning material, required for Cathodic Protection system.	Mtr	655
17	R3-HE-15-17	Supply of 4C x 10 mm² Annealed Bare Copper Conductor, XLPE Insulated, PVC Sheathed, 1.1 KV Grade, Armoured Cable required for 1) Anode & Cathode header cable. 2) Laying of Header cables from Anode Junction Box to Transformer Rectifier Unit 3) Cathode Junction Box to Transformer Rectifier Unit and 4) Pipeline to Cathode Junction Box.	mtr	446

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
18	R3-HE-15-18	Laying of Cables & Restoration of Cable trench, for 4C X 10 mm ² at min 1 meter depth with Sand and Bricks and warning material required for Cathodic Protection system.	Mtr	980
19	R3-HE-15-19	Supply & Laying of B Class Galvanized Iron (GI) Conduit of 100mm diameter at minimum 1 meter depth for Cathodic Protection system. (M&E Schedule R2-ME-2-21-i)	Mtr	2320
20	R3-HE-15-20	Cable termination for Anode Junction Box, Cathode Junction Box and Transformer Rectifier Unit including supply of lugs, cable tags & ferrule, Glands using the necessary equipment like crimping tool for Cathodic Protection system.	set	300
21	R3-HE-15-21	Supply & Installation of 50V / 50A output rating AC operated automatic CP Transformer Rectifier Unit (TR Unit) as per drawing MCGM-CC-07, with Auto controlled cards, facility of connection of three reference electrodes, current interrupter. TR unit shall be housed in IP 42 rated cubicle (as per drawing MCGM-CC-05) on PCC foundation base of size approx. 1500mm x 1500mm x 400mm and plinths of size approx. 1000mm x 1000mm x 300mm (or as appropriate to suit site conditions as advised by MCGM engineer-in-charge) with 4" dia. PVC / GI pipe is to be provided in the base of foundation at the level of cable trench as an access for taking cable either side, including fixing the rectifier unit with suitable foundation bolts of required sizes & length. The rate shall include Supply of 50 V / 50 A output rating AC operated automatic CP transformer rectifier unit (TR Unit), TR Unit Outer cubical, Loading & unloading of TR unit & Outer cubical, TR Unit & Outer cubical foundation raw material like Sand, Cement & grit, GI Pipe for Cable entry, and charges for labour, transportation, supervision & technical support.	Nos.	610400

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and
1	2	2	4	other Taxes)
22	2 R3-HE-15-22	Supply & Installation of 75V / 75A output rating AC operated automatic CP transformer rectifier unit (TR Unit) as per drawing MCGM-CC-07, with Auto controlled cards, facility of connection of three reference electrodes, current interrupter. TR unit shall be housed in IP 42 rated cubicle (as per drawing MCGM-CC-05) on PCC foundation base of size approx. 1500mm X 1500mm X 400mm and plinths of size approx. 1000mm X 1000mm X 300mm (or as appropriate to suit site conditions as advised by MCGM Engineer-in-charge) with 4" dia. PVC / GI pipe is to be provided in the 4" dia. PVC / GI pipe is to be provided in the base of foundation at the level of cable trench as a access for taking cable either side, including fixing the rectifier unit with suitable foundation bolts of required sizes & length. The rate shall include Supply of 75 V / 75 A output rating AC operated automatic CP transformer rectifier unit (TR Unit), TR Unit Outer cubical, Loading & unloading of TR unit & Outer cubical, TR Unit & Outer cubical foundation raw material like Sand, Cement & grit etc., GI Pipe for Cable entry, charges for labour, transportation, supervision & technical support.	4 Nos.	5 660400
23	R3-HE-15-23	Maintenance free chemical earthing, using 2 meter long hot deep GI coated electrode, 50 mm dia and 25 Kg back fill chemical. The rate shall include Supply & Installation of maintenance free chemical earthing, Provision of Earthing Chamber door or cover plate, Raw material for construction of Chamber foundation such as Sand, bricks and Cement, charges for labour, transportation, supervision & technical support. As per following specifications required for Cathodic Protection System.	Nos.	29800
24	R3-HE-15-24	Construction of foundation for Anode Junction Box, Cathode Junction Box and Transformer Rectifier Unit with provision for cable network / passing arrangement as per the drawing MCGM CC-08 & MCGM CC-09, for Cathodic Protection system.	CuM	485
25	R3-HE-15-25	Supply and Installation of MS Power supply Box having IP 66 protection required for Cathodic Protection system along with foundation as per drawing MCGM-CC- 10. The rates are inclusive of Supply of Power Supply Box along with MCB, Teak wood terminal plate, Raw material of foundation like sand, bricks and Cement, supervision & technical support and labour charges.	Nos.	68220

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and
2111101	TIEM COBE	TIEM BESCHI IIO.	OTVIT	other Taxes)
26	2 R3-HE-15-26	Pipe to cable connection by Thermit Welding / Pin Brazing with Weld consumables - total 6 nos of connections as per the basic CP System drawing MCGM-CC-01. The rates are inclusive of supply of Thermit powder with accessories, Fernal, Cable Lugs, Epoxy & Hardener, M-seal, and charges for	4 LS	5 43130
27	R3-HE-15-27	transportation, supervision & technical support. Supply and Installation of Permanent Reference Electrode for Transformer Rectifier Unit of Cathodic Protection System as per drawing MCGM-CC-01. Reference electrode shall be installed at depth of the pipeline approx. 300 mm away from the pipeline. The rates are inclusive of Supply of Permanent Reference electrode; supervision & technical support, Back fill Material along with cotton Bag, Labour charges and transportation.	Nos.	18170
28	R3-HE-15-28	Liasoning for successful installation & commissioning of Entire Corrosion Protection System which includes co- ordination with external agencies such as power supply company to get suitable AC power supply on the name of MCGM for TR unit, Local public, traffic handling and including supply and installation of energy meter, payment for deposit to power supply company etc.	Job	71400
29	R3-HE-15-29	Commissioning of overall Cathodic Protection System including anode current measurements, Transformer Rectifier unit fine tuning, pipe to soil potentials measure for instance, 24 Hrs. 48 Hrs and 72 Hrs. As built Documentation in the form hard & soft copy containing relevant drawings, circuits, inspection & test reports, IS manual copies, permissible values, maintenance schedules, various measurement sheets, etc. of Transformer Rectifier unit installed and commissioned shall be submitted. Post commissioning survey such as CIPL, DCVG/CAT, coating conductance and interference surveys alongwith submission of reports. One year Quarterly monitoring of permanent Cathodic Protection (CP) system after PCP Commissioning. The rates are inclusive of charges for transportation, supervision & technical support and review report from NACE CP Level - 4 specialist.	Nos.	171000
30	R3-HE-15-30	Security & Warehousing of Corrosion Protection materials, equipment's and machineries, Cables used at site, Security for Curing of foundations of TR unit, Buried Anodes, New electric connection till the completion of site work of the entire contract.	LS	103000

Sr. No.	ITEM CODE	ITEM DESCRIPTION	UNIT	Rate in Rs. (Excl. GST and other Taxes)
1	2	3	4	5
31	R3-HE-15-31	GSM based Remote Monitoring System to monitor Transformer Rectifier Unit (TR Unit). This system shall transfer data through GSM communication to the system installed at Central Monitoring System (CMS). This system shall communicate all TR parameters like TR Voltage, TR Current, Reference Potential, etc. Also communicate various alarms like Under protection, Over protection, Power supply failure, Door open, etc. to CMS. The rate includes Supply of GSM based monitoring system for TR unit with GSM Modem, Software supported computer to be installed at CMS including & it's Installation & Commissioning of total communication system with trials.	Nos.	188000
32	R3-HE-15-32	Supply, installation, testing and commissioning of Magnesium Sacrificial Anode. (Mg Anode – 5Kg/Each)	Nos.	28200
33	R3-HE-15-33	Supply, installation, testing and commissioning of Magnesium Sacrificial Anode. (Mg Anode – 10Kg/Each)	Nos.	35200
34	R3-HE-15-34	Supply, installation, testing and commissioning of Magnesium Sacrificial Anode. (Mg Anode – 15Kg/Each)	Nos.	42200
35	R3-HE-15-35	Supply, installation, testing and commissioning of Magnesium Sacrificial Anode. (Mg Anode – 20Kg/Each)	Nos.	49200