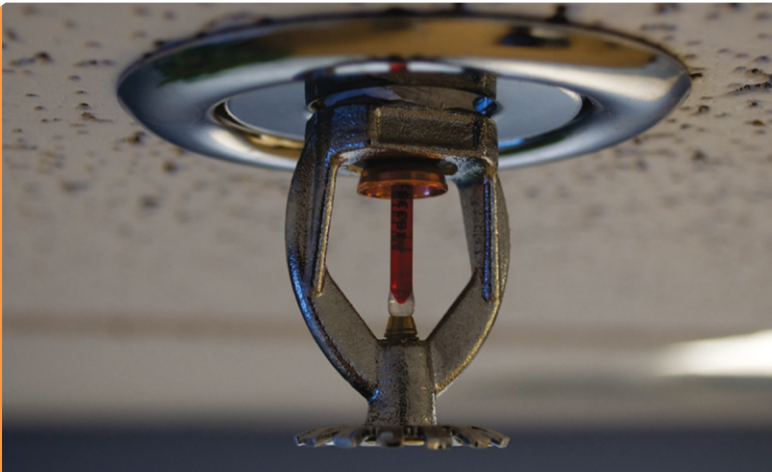
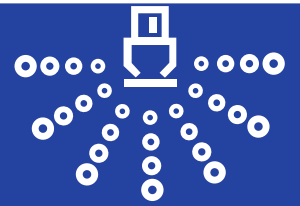


DSR & AOR

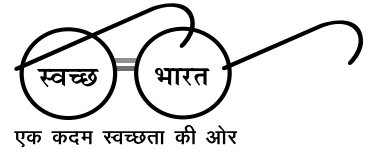
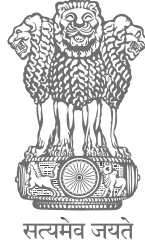
FOR WET RISER AND SPRINKLER SYSTEM



2019

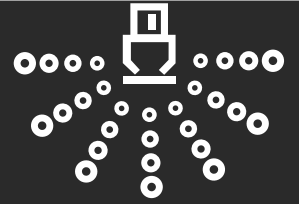


CENTRAL PUBLIC WORKS DEPARTMENT
Ministry of Housing and Urban Affairs



DSR & AOR

FOR WET RISER AND SPRINKLER SYSTEM



2019



CENTRAL PUBLIC WORKS DEPARTMENT
Ministry of Housing and Urban Affairs

© All rights reserved. No part of this publication, either in English or in Hindi, may be reproduced in any form or by any means, electronic or mechanical including photocopy, recording or any information storage and retrieval system, without permission, in writing, from the Director General, CPWD, New Delhi.

DISCLAIMER

The Rates taken in the Delhi Schedule of Rates and Delhi Analysis of Rates (Wet Riser & Sprinkler System)- 2019 are indicative as coefficients for labour are likely to vary due to technological innovations, skill of workmen and other local factors affecting the efficiency and output of labour. Actual rates shall be governed by the market forces. Further its use by Government Departments, PSUs, Private bodies & Individuals shall be at their own risk and discretion. CPWD shall not be responsible for any ambiguity, discrepancy, dispute or financial loss arising directly or indirectly by using or following items of Delhi Schedule of Rates and Delhi Analysis of Rates (Wet Riser & Sprinkler System)- 2019 by such Government Department/ PSUs/ Autonomous Bodies/ Private Bodies/Individuals.

A GOVERNMENT OF INDIA PUBLICATION

Published by
Director General
Central Public Works Department
Nirman Bhawan
New Delhi-110011



PRABHAKAR SINGH
Director General



भारत सरकार
Government of India



केन्द्रीय लोक निर्माण विभाग
निर्माण भवन, नई दिल्ली-110011
Central Public Works Department
Nirman Bhawan, New Delhi-110011
Tel : 23062556/1317, Fax : 23061884
E-mail : cpwd_dgw@nic.in

FOREWORD


CPWD is the benchmarking organisation in the building construction sector and therefore, its documents are used not only by CPWD but also by other Government Departments, Undertakings and Autonomous Bodies for their works. We also discharge the duty of Principal Technical Advisor to Govt. of India.

This document "DSR & AOR (Wet Riser and Sprinkler Systems)- 2019" is brought out for use in CPWD works and will form part of the Delhi Schedule of Rates (E&M) and Analysis of Rates (E&M).

I acknowledge the contribution of Sh. Vikas Gupta, CE(PEWZ), Sh. Vimal Kumar, CE(NDZ-II), Sh. Ramesh Garg, CPM, Sh. S. S. Garg, SE(E) Vigilance Cell, Sh. N. K. Bansal, SE(E), CCEC and Sh. Gaurav Yadav, EE(E) PHEWD who were members of the committee constituted by Sh. Prabhakar Singh, the then SDG(DR) for preparing the draft of this Chapter and Sh. D. Krishna Kumar, EE(E) HAL Project Electrical Division for sending his suggestions. I also thank Sh. J. K. Choudhury, Retired CE(E) who volunteered to give his inputs and extended his help for this work. I also acknowledge the hard work put in by Sh. D. K. Tulani, SE (E) TAS, Sh. V.K.Khetan, EE (E) TAS, Sh. Rajiv Gupta, EE(E) TLQA, Sh. Ram Karan under the guidance of Dr. K.M.Soni, ADG(TD) and Sh. C. K. Varma, CE(E) CSQ without which this would not have been possible.

These Schedule of Rates and Analysis of Rates (Wet Riser & Sprinkler System)-2019 will be useful to all concerned Engineers of CPWD and also to many other engineering organizations of Central & State Governments as well as practicing Architects and E&M Consultants.

New Delhi
March 2019


(PRABHAKAR SINGH)
DIRECTOR GENERAL



सत्यमेव जयते

डॉ. के. एम. सोनी
DR. KRISHNA MURARI SONI

भारत सरकार
Government of India
अपर महानिदेशक (प्रौ. वि.)
Additional Director General (TD)
केन्द्रीय लोक निर्माण विभाग
Central Public Works Department

प्रथम तल, कमरा संख्या 118, ए-विंग निर्माण भवन, नई दिल्ली-110011
First Floor, Room No. 118, A Wing, Nirman Bhawan
New Delhi-110011, Phone : 23063389, Fax : 23061608
E-mail : adgtd@nic.in



PREFACE

These DSR and AOR of Wet Riser & Sprinkler System-2019 are supplement to the Delhi Schedule of Rates (E&M) and Delhi Analysis of Rates (E&M) which were last revised in July 2018.

This Schedule of Rates is based on the current market rates of materials (without any taxes etc.) at Delhi and minimum wages rates issued by Govt. of India for Delhi w.e.f. 01-10-2018.

I acknowledge the contributions of the following Officers for drafting the DSR and AOR of Wet Riser & Sprinkler System-2019:

- i) Shri Vikas Gupta, CE (PEWZ)
- ii) Shri Vimal Kumar, CE (NDZ-II)
- iii) Shri Ramesh Kumar Garg, CPM
- iv) Shri S.S. Garg, SE (E), Vigilance Cell
- v) Shri N.K. Bansal, SE (E), CCEC
- vi) Shri Gaurav Yadav, EE(E), PHEWD
- vii) Shri J.K. Choudhury, Retired Chief Engineer (E)

These Schedule of Rates and Analysis of Rates will be read along with relevant CPWD Specifications of Electrical Works.

The Salient features of DSR and AOR (Wet Riser & Sprinkler System)- 2019 are:

1. The Items of Works contained herein are to be executed as per CPWD General Specifications for Electrical Works Part-I Internal, Part-II External, Part-IV Sub-Station and Wet Riser & Sprinkler Systems- 2006, with up to date amendments/correction slips.
2. The rates in this DSR (E&M) are for working height up to 5 m from floor level wherever height not specified. The rates of materials are for reputed brands, factory fabricated and tested wherever available from manufacturers as submitted by field units.
3. For Electrical Panels, CPWD General Specifications for Electrical Works Part-IV shall be applicable.
4. The effect of GST @ 12% (MF=0.1405) on Works Contract has been incorporated in all the items.

Errors, Omissions and /or suggestions for improvements, if any, may be brought to the notice of Superintending Engineer (E) TAS in the office of Chief Engineer, CSQ (E), CPWD, Nirman Bhawan, New Delhi-110011 (Telephone No. 011-23061418).

New Delhi
March, 2019

(DR. K.M.SONI)

REFERENCE TO AMENDMENTS

S. No.	Reference under which Issued	Para No.	Page No.	Remarks

CONTENTS

Part No.	Name of Part	Page Number
A.	Delhi Schedule of Rates (Wet Riser & Sprinkler System)- 2019	1-15
B.	Delhi Analysis of Rates (Wet Riser & Sprinkler System)- 2019	19-81
Appendix-I	Basic Rates Of Labour	83
Appendix-II	Basic Rates Of Material	85-95

PART-I
DELHI SCHEDULE OF RATES
(WET RISER & SPRINKLER SYSTEM)

Code No.	Description of Item	Unit	Rate ₹
----------	---------------------	------	--------

PUMPS

1	Supplying, installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required :		
	(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.		
	(b) Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.		
	(c) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.		
	(d) Suitable cement concrete foundation duly plastered with anti vibration pads.		
1.1	2850 lpm at 88 m Head	Set	450751.00
1.2	2850 lpm at 70 m Head	Set	403062.00
1.3	2850 lpm at 56 m Head	Set	401738.00
1.4	2280 lpm at 88 m Head	Set	401738.00
1.5	2280 lpm at 70 m Head	Set	367296.00
1.6	2280 lpm at 56 m Head	Set	330204.00
1.7	1620 lpm at 88 m Head	Set	367296.00
1.8	1620 lpm at 70 m Head	Set	330204.00
1.9	1620 lpm at 56 m Head	Set	282515.00

*Note: *The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm² pressure at the highest/farthest point.*

2	Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump) Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.		
---	--	--	--

Code No.	Description of Item	Unit	Rate ₹
	Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required.		
	M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required.		
	Suitable cement concrete foundation duly plastered and with anti vibration pads.		
2.1	2850 lpm at 88 m Head	Set	683155.00
2.2	2850 lpm at 70 m Head	Set	615198.00
2.3	2850 lpm at 56 m Head	Set	611622.00
2.4	2280 lpm at 88 m Head	Set	634141.00
2.5	2280 lpm at 70 m Head	Set	610297.00
2.6	2280 lpm at 56 m Head	Set	607647.00
2.7	1620 lpm at 88 m Head	Set	627650.00
2.8	1620 lpm at 70 m Head	Set	590426.00
2.9	1620 lpm at 56 m Head	Set	510945.00
	<i>Note: * The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm² pressure at the highest/farthest point.</i>		
3	Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump)		
	Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520.		
	Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325.		
	M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.		
	Suitable cement concrete foundation duly plastered and with anti vibration pads.		
3.1	180 lpm at 88 m Head	Set	126235.00
3.2	180 lpm at 70 m Head	Set	102391.00

Code No.	Description of Item	Unit	Rate ₹
3.3	180 lpm at 56 m Head	Set	81196.00
3.4	300 lpm at 88 m Head	Set	165976.00
3.5	300 lpm at 70 m Head	Set	126500.00
3.6	300 lpm at 56 m Head	Set	114313.00
4	Supplying, installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump)		
	(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS : 1520		
	b) Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.		
	(c) M.S.fabricated common base plate, coupling, coupling guard, foundation bolts etc.as required.		
	(d) Suitable cement concrete foundation duly plastered and with anti vibration pads.		
4.1	900 lpm at 35 m Head	Set	100946.00
4.2	450 lpm at 35 m Head	Set	85291.00

CONTROL PANELS

- 5 Fabrication, supply, Installation testing & commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required :

- 5.1 **INCOMING**
250A, 50kA 4 Pole MCCB, Ics=100% Icu rating
Digital Voltmeter 0-500V with selector switch
Digital Ammeter (0-250 A) with selector switch & CTs etc.

Code No.	Description of Item	Unit	Rate ₹
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 300A		
	OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump 125 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Jockey Pump 63 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.	Set	2,45,730.00
	DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification		
5.2	Incomings 400A, 50kA 4 Pole MCCB, Ics=100% Icu rating		

Code No.	Description of Item	Unit	Rate ₹
	Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc.		
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500A		
	Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump 200 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Jockey Pump 100 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.	Set	2,87,855.00
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specifications.		

Code No.	Description of Item	Unit	Rate ₹
5.3	<p>Incomings 630A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps</p> <p>Outgoings (<i>Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps</i>)</p> <p>Main Fire Pump 250 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p> <p>Jockey Pump 125 A, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.</p> <p>Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller</p>	Set	3,22,960.00

Code No.	Description of Item	Unit	Rate ₹
	Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification		
5.4	<p>Incomings 400A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500Amps</p> <p>Outgoings <i>(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</i></p> <p>Main Fire Pumps 125 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>Jockey Pump 63 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter</p>	Set	3,72,106.00

Code No.	Description of Item	Unit	Rate ₹
	All standard relays and accessories for automatic operation of diesel engine System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification		
5.5	Incomings 630A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector switch & CTs etc.		
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps		
	Outgoings <i>(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</i>		
	Main Fire Pump 200 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Jockey Pump 100 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets	Set	4,49,335.00
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication		

Code No.	Description of Item	Unit	Rate ₹
	<p>Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter</p> <p>All standard relays and accessories for automatic operation of diesel engine</p> <p>System Controller</p> <p>Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification</p>		
5.6	<p>Incomings</p> <p>800A, 50kA 4 Pole MCCB, Ics=100% Icu Rating</p> <p>Digital Voltmeter 0-500V with selector switch</p> <p>Ammeter (0-800 A) with selector switch & CTs etc.</p> <p>LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps</p> <p>Set of Copper Bus Bar 1000Amps</p> <p>Outgoings</p> <p>(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</p> <p>Main Fire Pump</p> <p>250 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>Jockey Pump</p> <p>125 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>DIESEL ENGINE CONTROL</p> <p>Control for diesel engine comprising -</p>	Set	5,75,711.00

Code No.	Description of Item	Unit	Rate ₹
	Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode		
	Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication		
	Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter		
	All standard relays and accessories for automatic operation of diesel engine		
	System Controller		
	Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification		
PIPES & ACCESSORIES			
6	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coal tar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required.		
6.1	200 mm. dia (wall thickness = 6.3 mm)	m	3169.00
6.2	150 mm. Dia	m	2376.00
7	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :		
7.1	25 mm dia	m	471.00
7.2	32 mm dia	m	527.00
7.3	40 mm dia	m	651.00
7.4	50 mm dia	m	787.00
7.5	65 mm dia	m	1004.00
7.6	80 mm dia	m	1122.00
7.7	100 mm dia	m	1499.00
7.8	150 mm dia	m	2064.00

Code No.	Description of Item	Unit	Rate ₹
7.9	200 mm dia (wall thickness 6.3 mm)	m	2926.00
7.10	250 mm dia (wall thickness 6.3 mm)	m	3521.00
7.11	300 mm dia (wall thickness 7.1 mm)	m	4133.00
8	Providing, laying, testing & commissioning of 'B' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :		
8.1	25 mm	m	555.00
8.2	32 mm	m	626.00
8.3	40 mm	m	763.00
8.4	50 mm	m	859.00
8.5	65 mm	m	1076.00
8.6	80 mm	m	1252.00
8.7	100 mm	m	1627.00
8.8	150 mm	m	2269.00
9	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :		
9.1	Single headed Gunmetal	Set	7494.00
9.2	Single headed Stainless steel	Set	5987.00
10	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required :		
10.1	Single headed Gunmetal	Set	7494.00
10.2	Single headed Stainless steel	Set	5987.00
11	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :		
11.1	40 mm dia	Set	3509.00
11.2	50mm dia	Set	3671.00
11.3	65 mm dia	Set	4149.00
11.4	80 mm dia	Set	4842.00
11.5	100 mm dia	Set	6454.00

Code No.	Description of Item	Unit	Rate ₹
11.6	150 mm dia	Set	8699.00
11.7	200 mm dia	Set	14958.00
11.8	250 mm dia	Set	20163.00
11.9	300 mm dia	Set	24393.00
12	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required :		
12.1	40mm dia	Set	5618.00
12.2	50 mm dia	Set	7094.00
12.3	65mm dia	Set	9084.00
12.4	80mm dia	Set	10549.00
12.5	100mm dia	Set	14428.00
12.6	150mm dia	Set	22550.00
12.7	200mm dia	Set	39133.00
12.8	250mm dia	Set	46318.00
12.9	300mm dia	Set	65521.00
13	Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm ² complete as required.	Each	1291.00
14	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :		
14.1	40mm dia	Set	5646.00
14.2	50mm dia	Set	5646.00
14.3	65mm dia	Set	6274.00
14.4	80mm dia	Set	7539.00
14.5	100mm dia	Set	10836.00
14.6	125mm dia	Set	15700.00
14.7	150mm dia	Set	17577.00
14.8	200mm dia	Set	29075.00
14.9	250mm dia	Set	45081.00
14.10	300mm dia	Set	60243.00
15.00	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.		
15.1	80 mm dia	Each	4573.00

Code No.	Description of Item	Unit	Rate ₹
15.2	100mm dia	Each	6450.00
15.3	150mm dia	Each	10659.00
15.4	200mm dia	Each	22052.00
15.5	250mm dia	Each	27233.00
15.6	300mm dia	Each	36394.00
16	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :		
16.1	Gun Metal	Set	5188.00
16.2	Stainless Steel (Grade 304)	Set	4434.00
17	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.		
17.1	30 m	Set	8413.00
17.2	40 m	Set	10092.00
18	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required :		
18.1	Gun metal	Nos.	2402.00
18.2	Stainless Steel (Grade 304)	Nos.	1648.00
19	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required :		
19.1	2 way-100 mm dia M.S. Pipe	Set	6590.00
19.2	4 way - 150 mm dia M.S. Pipe	Set	13822.00
19.3	3 way - 150 mm dia M.S. Pipe	Set	9302.00

Code No.	Description of Item	Unit	Rate ₹
20	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.	Set	18009.00
21	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories :		
21.1	Pendent Sprinkler	Each	484.00
21.2	Upright Sprinkler	Each	484.00
21.3	Horizontal side wall sprinkler	Each	579.00
21.4	Concealed sprinkler	Each	1397.00
22	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	Each	1508.00
23	Providing & fixing flow switch in following sizes M.S. pipe including connection etc as required.		
23.1	100mm dia	Each	7362.00
23.2	150mm dia	Each	8869.00
24	Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of following sizes as required :		
24.1	80mm dia	Set	42392.00
24.2	100mm dia	Set	44697.00
24.3	150mm dia	Set	47898.00

Code No.	Description of Item	Unit	Rate ₹
25	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.		
25.1	700mm	Set	1341.00
25.2	1000mm	Set	1540.00
25.3	1200mm	Set	1633.00
25.4	1500mm	Set	1795.00
26	Supplying, installation, testing & commissioning of deluge valve (to be used for water curtains) UL listed with wet pilot basic trim assembly for DVA with test and alarm, drip and drain valve with water motor gong complete as required.		
26.1	50 mm dia	Set	82365.00
26.2	80 mm dia	Set	82964.00
26.3	100mm dia	Set	92907.00
26.4	150mm dia	Set	114963.00
27	Providing, installation, testing & commissioning of water curtain nozzle 15mm dia nickel chrome plated brass, BSPT, K-factor as per design consideration complete as required.	Each	663.00
28	Providing, installation, testing & commissioning of electric release trim assembly for deluge wall with two way solenoid valve, weather proof operation on 24 volts DC supply complete as required.	Set	7331.00
29	Providing, installation, testing & commissioning of adjustable rosette plate for 15mm dia in white finish UL Listed or FM approved complete as required.	Each	207.00

Note: (a) For Cabling, earthing and cable trays please refer to DSR (E&M)
(b) For digging of hard & soft soil please refer to DSR (Civil)

- 1 Supplying, installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required :

Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.

Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.

M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.

Suitable cement concrete foundation duly plastered with anti vibration pads.

1.1 2850 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4291	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 88 m Head conforming to IS 1520				
	Cost of 100 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325 i/c				
	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	331000.00	331000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
				Total	333160.00
	Cartage @1% of A				3331.60
				Total	336491.60
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				343671.60
	Add 12% GST (MF= 0.1405)				48285.86
				Total	391957.46
C	Overhead & Profit @ 15%				58793.62
	Total				450751.08
	Rate of Each				450751.08
	Say				450751.00

1.2 2850 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
	(a) Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 70 m Head conforming to IS 1520.				

	(b) Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4292	(c) Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads.	Each	1.00	295000.00	295000.00
4320	(d) Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks.	Cum	0.48	4500.00	2160.00
				Total	297160.00
	Cartage @1% of A				2971.60
				Total	300131.60
B	Labour				
1004	Fitter, Grade-1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				307311.60
	Add 12% GST (MF= 0.1405)				43177.28
				Total	350488.88
C	Overhead & Profit @ 15%				52573.33
	Total				403062.21
	Rate of Each				403062.21
	Say				403062.00

1.3 2850 lpm at 56 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	(a) Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 56 m Head conforming to IS 1520				
	(b) Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4293	(c) Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	294000.00	294000.00
4320	(d) Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
				Total	296160.00
	Cartage @1% of A				2961.60
				Total	299121.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				306301.60
	Add 12% GST (MF= 0.1405)				43035.37
				Total	349336.97
C	Overhead & Profit @ 15%				52400.55
	Total				401737.52
	Rate of Each				401737.52
	Say				401738.00

1.4 2280 lpm at 88 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 88 m Head conforming to IS 1520				
	Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4294	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	294000.00	294000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
				Total	296160.00
	Cartage @1% of A				2961.60
				Total	299121.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				306301.60
	Add 12% GST (MF= 0.1405)				43035.37
				Total	349336.97
C	Overhead & Profit @ 15%				52400.55
	Total				401737.52
	Rate of Each				401737.52
	Say				401738.00

1.5 2280 lpm at 70 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 70 m Head conforming to IS 1520				
	Cost of 60 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4295	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	268000.00	268000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
				Total	270160.00
	Cartage @1% of A				2701.60
				Total	272861.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00

1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				280041.60
	Add 12% GST (MF= 0.1405)				39345.84
				Total	319387.44
C	Overhead & Profit @ 15%				47908.12
	Total				367295.56
	Rate of Each				367295.56
	Say				367296.00

1.6 2280 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 56 m Head conforming to IS 1520				
	Cost of 50 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4296	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	240000.00	240000.00
4320	Cost of cement concrete foundation with 35x35x5 mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
				Total	242160.00
	Cartage @1% of A				2421.60
				Total	244581.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				251761.60
	Add 12% GST (MF= 0.1405)				35372.50
				Total	287134.10
C	Overhead & Profit @ 15%				43070.12
	Total				330204.22
	Rate of Each				330204.22
	Say				330204.00

1.7 1620 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 88 m Head conforming to IS 1520				
	Cost of 60 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				

4297	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	268000.00	268000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
	Cartage @1% of A				2701.60
				Total	2701.60
				Total	272861.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				280041.60
	Add 12% GST (MF= 0.1405)				39345.84
				Total	319387.44
C	Overhead & Profit @ 15%				47908.12
	Total				367295.56
	Rate of Each				367295.56
	Say				367296.00

1.8 1620 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 70m Head conforming to IS 1520				
	Cost of 50 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4298	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	240000.00	240000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.48	4500.00	2160.00
	Cartage @1% of A				2421.60
				Total	2421.60
				Total	244581.60
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				251761.60
	Add 12% GST (MF= 0.1405)				35372.50
				Total	287134.10
C	Overhead & Profit @ 15%				43070.12
	Total				330204.22
	Rate of Each				330204.22
	Say				330204.00

1.9 1620 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
---------	-------------	------	------	------	----------

A Materials

Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 56 m Head conforming to IS 1520

Cost of 40 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.

4299 Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads

Each 1.00 204000.00 204000.00

4320 (d) Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks

Cum 0.48 4500.00 2160.00

Total 206160.00

Cartage @1% of A

2061.60

Total 208221.60

B Labour

1004 Fitter, Grade 1

day 2.00 679.00 1358.00

1087 Welder

day 2.00 679.00 1358.00

1025 Helper

day 8.00 558.00 4464.00

Total

7180.00

Total of A+B Rs.

215401.60

Add 12% GST (MF= 0.1405)

30263.92

Total 245665.52

C Overhead & Profit @ 15%

36849.83

Total

282515.35

Rate of Each

282515.35

Say

282515.00

2 Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump)

Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.

Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required.

M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required.

Suitable cement concrete foundation duly plastered and with anti vibration pads.

2.1 2850 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 88 m Head conforming to IS 1520				

	Cost of 100 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4300	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	505000.00	505000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	508600.00
	Cartage @1% of A				5086.00
				Total	513686.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				520866.00
	Add 12% GST (MF= 0.1405)				73181.67
				Total	594047.67
C	Overhead & Profit @ 15%				89107.15
	Total				683154.82
	Rate of Each				683154.82
	Say				683155.00

2.2 2850 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 70 m Head conforming to IS 1520				
	Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4301	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	453700.00	453700.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	457300.00
	Cartage @1% of A				4573.00
				Total	461873.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				469053.00
	Add 12% GST (MF= 0.1405)				65901.95
				Total	534954.95
C	Overhead & Profit @ 15%				80243.24
	Total				615198.19
	Rate of Each				615198.19
	Say				615198.00

2.3 2850 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2850 lpm at 56 m Head conforming to IS 1520				
	Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4302	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	451000.00	451000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	454600.00
	Cartage @1% of A				4546.00
				Total	459146.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				466326.00
	Add 12% GST (MF= 0.1405)				65518.80
				Total	531844.80
C	Overhead & Profit @ 15%				79776.72
	Total				611621.52
	Rate of Each Say				611621.52
					611622.00

2.4 2280 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 88 m Head conforming to IS 1520				
	Cost of 75 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4303	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	468000.00	468000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	471600.00
	Cartage @1% of A				4716.00
				Total	476316.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00

1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				483496.00
	Add 12% GST (MF= 0.1405)				67931.19
				Total	551427.19
C	Overhead & Profit @ 15%				82714.08
	Total				634141.27
	Rate of Each				634141.27
	Say				634141.00

2.5 2280 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 70 m Head conforming to IS 1520				
	Cost of 60 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4304	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	450000.00	450000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	453600.00
	Cartage @1% of A				4536.00
				Total	458136.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				465316.00
	Add 12% GST (MF= 0.1405)				65376.90
				Total	530692.90
C	Overhead & Profit @ 15%				79603.93
	Total				610296.83
	Rate of Each				610296.83
	Say				610297.00

2.6 2280 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 2280 lpm at 56 m Head conforming to IS 1520				
	Cost of 50 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				

4305	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	448000.00	448000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	451600.00
	Cartage @1% of A				4516.00
				Total	456116.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				463296.00
	Add 12% GST (MF= 0.1405)				65093.09
				Total	528389.09
C	Overhead & Profit @ 15%				79258.36
	Total				607647.45
	Rate of Each				607647.45
	Say				607647.00

2.7 1620 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 88 m Head conforming to IS 1520				
	Cost of 60 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4306	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	463100.00	463100.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	466700.00
	Cartage @1% of A				4667.00
				Total	471367.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				478547.00
	Add 12% GST (MF= 0.1405)				67235.85
				Total	545782.85
C	Overhead & Profit @ 15%				81867.43
	Total				627650.28
	Rate of Each				627650.28
	Say				627650.00

2.8 1620 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 70 m Head conforming to IS 1520				
	Cost of 50 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4307	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	435000.00	435000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	438600.00
	Add 12% GST (MF= 0.1405)				4386.00
				Total	442986.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00
	Total				7180.00
	Total of A+B Rs.				450166.00
	Add 12% GST (MF= 0.1405)				63248.32
				Total	513414.32
C	Overhead & Profit @ 15%				77012.15
	Total				590426.47
	Rate of Each				590426.47
	Say				590426.00

2.9 1620 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 1620 lpm at 56 m Head conforming to IS 1520				
	Cost of 40 HP SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4308	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	375000.00	375000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.80	4500.00	3600.00
				Total	378600.00
	Cartage @1% of A				3786.00
				Total	382386.00
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	2.00	679.00	1358.00
1025	Helper	day	8.00	558.00	4464.00

Total	7180.00
Total of A+B Rs.	389566.00
Add 12% GST (MF= 0.1405)	54734.02
Total	444300.02
C Overhead & Profit @ 15%	66645.00
Total	510945.03
Rate of Each	510945.03
Say	510945.00

- 3 Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump)**
- (a) **Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520.**
- (b) **Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325.**
- (c) **M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.**
- (d) **Suitable cement concrete foundation duly plastered and with anti vibration pads.**

3.1 180 lpm at 88 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 180 lpm at 88 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4309	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	90000.00	90000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	91620.00
	Cartage @1% of A				916.20
				Total	92536.20
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				96247.20
	Add 12% GST (MF= 0.1405)				13522.73
				Total	109769.93
C	Overhead & Profit @ 15%				16465.49
	Total				126235.42
	Rate of Each				126235.42
	Say				126235.00

3.2 180 lpm at 70 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
---------	-------------	------	------	------	----------

A Materials

Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 180 lpm at 70 m Head conforming to IS 1520

Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.

4310	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	72000.00	72000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	73620.00
	Cartage @1% of A				736.20
				Total	74356.20
B Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				78067.20
	Add 12% GST (MF= 0.1405)				10968.44
				Total	89035.64
C	Overhead & Profit @ 15%				13355.35
	Total				102390.99
	Rate of Each Say				102390.99
					102391.00

3.3 180 lpm at 56 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 180 lpm at 56 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4311	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	56000.00	56000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	57620.00
	Cartage @1% of A				576.20
				Total	58196.20
B Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				61907.20
	Add 12% GST (MF= 0.1405)				8697.96

				Total	70605.16
C	Overhead & Profit @ 15%				10590.77
	Total				81195.94
	Rate of Each				81195.94
	Say				81196.00

3.4 300 lpm at 88 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 300 lpm at 88 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4312	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	120000.00	120000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
	Total				121620.00
	Cartage @1% of A				1216.20
	Total				122836.20
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				126547.20
	Add 12% GST (MF= 0.1405)				17779.88
	Total				144327.08
C	Overhead & Profit @ 15%				21649.06
	Total				165976.14
	Rate of Each				165976.14
	Say				165976.00

3.5 300 lpm at 70 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 300 lpm at 70 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4313	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	90200.00	90200.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
	Total				91820.00
	Cartage @1% of A				918.20

				Total	92738.20
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				96449.20
	Add 12% GST (MF= 0.1405)				13551.11
				Total	110000.31
C	Overhead & Profit @ 15%				16500.05
	Total				126500.36
	Rate of Each				126500.36
	Say				126500.00

3.6 300 lpm at 56 m Head					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 300 lpm at 56 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4314	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	81000.00	81000.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	82620.00
	Cartage @1% of A				826.20
				Total	83446.20
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				87157.20
	Add 12% GST (MF= 0.1405)				12245.59
				Total	99402.79
C	Overhead & Profit @ 15%				14910.42
	Total				114313.20
	Rate of Each				114313.20
	Say				114313.00

- 4 Supplying, installation, testing and commissioning of electric driven terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump)**
- (a) **Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS : 1520**
- (b) **Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.**

- (c) M.S.fabricated common base plate, coupling, coupling guard, foundation bolts etc.as required.
(d) Suitable cement concrete foundation duly plastered and with anti vibration pads.

4.1 900 lpm at 35 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 900 lpm at 35 m Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4315	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	70909.00	70909.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	72529.00
	Cartage @1% of A				725.29
				Total	73254.29
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				76965.29
	Add 12% GST (MF= 0.1405)				10813.62
				Total	87778.91
C	Overhead & Profit @ 15%				13166.84
	Total				100945.75
	Rate of Each				100945.75
	Say				100946.00

4.2 450 lpm at 35 m Head

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
	Cost of Horizontal type, multistage, centrifugal, split casing pump with bronze impeller stainless steel shaft, mechanical seal at a flow of 450 lpm at 35 mtr. Head conforming to IS 1520				
	Cost of SQ cage induction motor, TEFC, synchronous speed of 1500 RPM having class-'F' insulation and protection class IP 55 as per IS-325.				
4316	Cost of MS base plate coupling, coupling guard, foundation bolts and anti vibration pads	Each	1.00	59091.00	59091.00
4320	Cost of cement concrete foundation with 35x35x5mm angle frame on edges duly plastered with inertia blocks	Cum	0.36	4500.00	1620.00
				Total	60711.00
	Cartage @1% of A				607.11
				Total	61318.11

B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.50	679.00	1018.50
1025	Helper	day	3.00	558.00	1674.00
	Total				3711.00
	Total of A+B Rs.				65029.11
	Add 12% GST (MF= 0.1405)				9136.59
				Total	74165.70
C	Overhead & Profit @ 15%				11124.85
	Total				85290.55
	Rate of Each				85290.55
	Say				85291.00

- 5 **Fabrication, supply, Insallation testing & commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required :**

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.1					
A	Materials				
	INCOMING				
4321	250A, 50kA 4 Pole MCCB, Ics=100% Icu rating				
	Digital Voltmeter 0-500V with selector switch				
	Digital Ammeter (0-250 A) with selector swtich & CTs etc.				
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps				
	Set of Copper Bus Bar 300A				
	OUTGOING				
	(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)				
	Main Fire Pump				
	125 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.				
	Jockey Pump				

63 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.

DIESEL ENGINE CONTROL

Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode

Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter

All standard relays and accessories for automatic operation of diesel engine

System Controller

Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification

	Each	1.00	175000.00	175000
				1750.00
			Total	176750.00
B	Installation, testing and commissioning @6% of A			10605.00
	Total of A+B Rs.			187355.00
	Add 12% GST (MF= 0.1405)			26323.38
			Total	213678.38
C	Overhead & Profit @ 15%			32051.76
	Total			245730.13
	Rate of Each			245730.13
	Say			245730.00

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.2					
A	Materials				
	Incomings				
4322	400A, 50kA 4 Pole MCCB, Ics=100% Icu rating				
	Digital Voltmeter 0-500V with selector switch				
	Ammeter (0-400 A) with selector switch & CTs etc.				
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps				
	Set of Copper Bus Bar 500A				
	Outgoings				

(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)

Main Fire Pump

200 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.

Jockey Pump

100 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.

Diesel Engine Control

Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode

Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter

All standard relays and accessories for automatic operation of diesel engine

System Controller

Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specifications.

Each	1.00	205000.00	205000.00
			2050.00
		Total	207050.00

B	Installation, testing and commissioning@6% of A		12423.00
	Total of A+B Rs.		219473.00

	Add 12% GST (MF= 0.1405)		30835.96
		Total	250308.96

C	Overhead & Profit @ 15%		37546.34
	Total		287855.30
	Rate of Each		287855.30
	Say		287855.00

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.3					

A **Materials**
Incomings

4323 630A, 50kA 4 Pole MCCB, Ics=100% Icu rating

Digital Voltmeter 0-500V with selector switch

Ammeter (0-630 A) with selector switch & CTs etc.

LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps

Set of Copper Bus Bar 800Amps

Outgoings

(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)

Main Fire Pump

250 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.

Jockey Pump

125 A, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.

Diesel Engine Control

Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode

Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter

All standard relays and accessories for automatic operation of diesel engine

System Controller

Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification

Add Cartage @ 1% of (a)

Each	1.00	230000.00	230000.00
			2300.00
		Total	232300.00

B	Installation, testing and commissioning@6% of A	13938.00
	Total of A+B Rs.	246238.00
	Add 12% GST (MF= 0.1405)	34596.44
		Total 280834.44
C	Overhead & Profit @ 15%	42125.17
	Total	322959.60
	Rate of Each	322959.60
	Say	322960.00

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.4					
A	<p>Materials</p> <p>Incomings</p> <p>400A, 50kA 4 Pole MCCB, Ics=100% Icu Rating</p> <p>Digital Voltmeter 0-500V with selector switch</p> <p>Ammeter (0-400 A) with selector switch & CTs etc.</p> <p>LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps</p> <p>Set of Copper Bus Bar 500Amps</p> <p>Outgoings</p> <p>(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)</p> <p>Main Fire Pumps</p> <p>125 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>Jockey Pump</p> <p>63 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets</p> <p>Diesel Engine Control</p> <p>Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode</p>				

Indicating lamp for high/ Low Lub. Oil pressure,
High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with
boost and trickle selector switch, 0-30 V DC volt
meter, and 0-20 A DC Ammeter

All standard relays and accessories for
automatic operation of diesel engine

System Controller

4324 Designing, Supply, Installation, Testing and
commissioning of system controller to control
operation of main electric fire pump, diesel
pump, Pressurization pump, Terrace pump in
sequence as per specification consisting of
relays, timers. Sensors, annunciation window for
fault indication, complete as per specification

Each	1.00	265000.00	265000
			2650.00
		Total	267650.00

B **Installation, testing and commissioning@6%
of A**
Total of A+B Rs.

16059.00
283709.00

Add 12% GST (MF= 0.1405)

Total 39861.11
323570.11

C Overhead & Profit @ 15%

Total

48535.52

Rate of Each

372105.63

Say

372106.00

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.5					
A	Materials				
	Incomings				
	630A, 50kA 4 Pole MCCB, Ics=100% Icu Rating				
	Digital Voltmeter 0-500V with selector switch				
	Ammeter (0-630 A) with selector switch & CTs etc.				
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps				
	Set of Copper Bus Bar 800Amps				
	Outgoings				
	(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)				
	Main Fire Pump				
	200 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets				

Jockey Pump

100 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets

Diesel Engine Control

Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode

Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter

All standard relays and accessories for automatic operation of diesel engine System Controller

4325 Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification

Each	1.00	320000.00	320000
			3200.00
		Total	323200.00

B Installation, testing and commissioning@6% of A
Total of A+B Rs.

19392.00
342592.00

Add 12% GST (MF= 0.1405)

Total 48134.18
390726.18

C Overhead & Profit @ 15%

Total
Rate of Each
Say

58608.93
449335.10
449335.10
449335.00

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
5.6					
A	Materials Incomings				
4326	800A, 50kA 4 Pole MCCB, Ics=100% Icu Rating				
	Digital Voltmeter 0-500V with selector switch				
	Ammeter (0-800 A) with selector switch & CTs etc.				
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps				
	Set of Copper Bus Bar 1000Amps				

Outgoings

(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)

Main Fire Pump

250 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets

Jockey Pump

125 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets

DIESEL ENGINE CONTROL

Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode

Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication

Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter

All standard relays and accessories for automatic operation of diesel engine

System Controller

Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification

	Each	1.00	410000.00	410000
				4100.00
			Total	414100.00
B	Installation, testing and commissioning@6% of A			24846.00
	Total of A+B Rs.			438946.00
	Add 12% GST (MF= 0.1405)			61671.91
			Total	500617.91
C	Overhead & Profit @ 15%			75092.69
	Total			575710.60

Rate of Each Say					575710.60
					575711.00
6	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required.				
6.1	200 mm. dia (wall thickness = 6.3 mm)				
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4253	(a) Basic cost of 200 mm dia MS Pipe Add for necessary support, fitting such as bends, tees, welding material etc. @10%	m	10.00	1426.00	14260.00
4327	Basic cost of 4 mm thick Anti Corrosive Pipe Protection Bituminous Tape	sq m	7.33	210.00	1539.09
4328	Basic cost of anticorrosive Black paint Add wastage @5% of A1 + A3 + A4	Litre	0.63	110.00	69.30
					793.42
					Total
					18087.81
Cartage @1% of A					180.88
					Total
					18268.69
B Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	3.00	558.00	1674.00
					Total
					3680.00
C	Excavation including refilling as required	cum	8	276.52	2212.16
Total of A+B+C Rs.					24160.85
Add 12% GST (MF= 0.1405)					3394.60
					Total
					27555.45
D	Overhead & Profit @ 15%				4133.32
Total					31688.76
Rate of Each					31688.76
Cost of Per Meter					3168.88
Say					3169.00

6.2	150 mm. Dia				
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4252	(a) Basic cost of 150 mm dia MS Pipe Add for necessary support, fitting such as bends, tees, welding material etc. @10%	m	10.00	938.00	9380.00
4327	Basic cost of 4 mm thick Anti Corrosive Pipe Protection Bituminous Tape	sq m	5.71	210.00	1199.31
4328	Basic cost of anticorrosive Black paint Add wastage @5% of A1 + A3 + A4	Litre	0.47	110.00	51.70
					531.55
					Total
					12100.56
Cartage @1% of A					121.01
					Total
					12221.57
B Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	3.00	558.00	1674.00
					Total
					3680.00
C	Excavation including refilling as required	cum	8	276.52	2212.16

Total of A+B+C Rs. **18113.73**
 Add 12% GST (MF= 0.1405) 2544.98

Total **20658.70**

D Overhead & Profit @ 15% 3098.81
Total **23757.51**
Rate of Each **23757.51**
Cost of Per Meter 2375.75
Say **2376.00**

7 **Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :**

7.1 25 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4244	(a) Cost of 25 mm dia MS Pipe	m	10.00	118.00	1180.00
	Add wastage @5%				59.00
				Total	1239.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				185.85
				Total	1424.85
	Cartage @1% of A				14.25
				Total	1439.10
B Labour					
1004	Fitter, Grade 1	day	1.25	679.00	848.75
1087	Welder	day	0.25	679.00	169.75
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	1.75	558.00	976.50
	Total				2149.25
	Total of A+B				3588.35
	Add 12% GST (MF= 0.1405)				504.16
				Total	4092.51
C	Overhead & Profit @ 15%				613.88
	Total				4706.39
	Rate of Each				4706.39
	Cost of Per Meter				470.64
	Say				471.00

7.2 32 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4245	(a) Cost of 32 mm dia MS Pipe	m	10.00	155.00	1550.00
	Add wastage @5%				77.50
				Total	1627.50
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				244.13
				Total	1871.63
B Labour					
1004	Fitter, Grade 1	day	1.25	679.00	848.75
1087	Welder	day	0.25	679.00	169.75
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	1.75	558.00	976.50
	Total				2149.25
	Total of A+B				4020.88
	Add 12% GST (MF= 0.1405)				564.93

C	Overhead & Profit @ 15%				Total	4585.81
	Total					687.87
	Rate of Each					5273.68
	Cost of Per Meter					5273.68
	Say					527.37
						527.00
<hr/>						
7.3	40 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹	
A	Materials					
4246	(a) Cost of 40 mm dia MS Pipe	m	10.00	180.00	1800.00	
	Add wastage @5%				90.00	
						Total
						1890.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%					
						Total
						283.50
						Total
						2173.50
	Cartage @1% of A					Total
						21.74
						Total
						2195.00
B	Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50	
1087	Welder	day	0.50	679.00	339.50	
1006	Painter	day	0.25	617.00	154.25	
1025	Helper	day	2.25	558.00	1255.50	
	Total					2767.75
	Total of A+B					4962.75
	Add 12% GST (MF= 0.1405)				697.27	
						Total
						5660.02
C	Overhead & Profit @ 15%					849.00
	Total					6509.02
	Rate of Each					6509.02
	Cost of Per Meter					650.90
	Say					651.00
<hr/>						
7.4	50 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹	
A	Materials					
4247	(a) Cost of 50 mm dia MS Pipe	m	10.00	265.00	2650.00	
	Add wastage @5%				132.50	
						Total
						2782.50
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%					
						Total
						417.38
						Total
						3199.88
	Cartage @1% of A					Total
						32.00
						Total
						3231.87
B	Labour					
1004	Fitter, Grade 1	day	1.50	679.00	1018.50	
1087	Welder	day	0.50	679.00	339.50	
1006	Painter	day	0.25	617.00	154.25	
1025	Helper	day	2.25	558.00	1255.50	
	Total					2767.75
	Total of A+B					5999.62
	Add 12% GST (MF= 0.1405)				842.95	
						Total
						6842.57
C	Overhead & Profit @ 15%					1026.39
	Total					7868.96
	Rate of Each					7868.96

**Cost of Per Meter
Say**

786.90
787.00

7.5 65 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4248	(a) Cost of 65 mm dia MS Pipe	m	10.00	350.00	3500.00
	Add wastage @5%				175.00
				Total	3675.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				551.25
				Total	4226.25
	Cartage @1% of A				42.26
				Total	4268.51
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.75	558.00	1534.50
	Total				3386.25
	Total of A+B				7654.76
	Add 12% GST (MF= 0.1405)				1075.49
				Total	8730.26
C Overhead & Profit @ 15%					
	Total				1309.54
					10039.80
	Rate of Each				10039.80
	Cost of Per Meter				1003.98
	Say				1004.00

7.6 80 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4249	(a) Cost of 80 mm dia MS Pipe	m	10.00	424.00	4240.00
	Add wastage @5%				212.00
				Total	4452.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				667.80
				Total	5119.80
	Cartage @1% of A				51.20
				Total	5171.00
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.75	558.00	1534.50
	Total				3386.25
	Total of A+B				8557.25
	Add 12% GST (MF= 0.1405)				1202.29
				Total	9759.54
C Overhead & Profit @ 15%					
	Total				1463.93
					11223.47
	Rate of Each				11223.47
	Cost of Per Meter				1122.35
	Say				1122.00

7.7 100 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4250	(a) Cost of 100 mm dia MS Pipe Add wastage @5%	m	10.00	634.00	6340.00 317.00
				Total	6657.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				998.55
				Total	7655.55
	Cartage @1% of A				76.56
				Total	7732.11
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.75	679.00	509.25
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	3.00	558.00	1674.00
	Total				3695.50
	Total of A+B				11427.61
	Add 12% GST (MF= 0.1405)				1605.58
				Total	13033.18
C Overhead & Profit @ 15%					
	Total				1954.98
	Rate of Each				14988.16
	Cost of Per Meter				1498.82
	Say				1499.00

7.8 150 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4252	(a) Cost of 150 mm dia MS Pipe Add wastage @5%	m	10.00	938.00	9380.00 469.00
				Total	9849.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				1477.35
				Total	11326.35
	Cartage @1% of A				113.26
				Total	11439.61
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	3.50	558.00	1953.00
	Total				4298.50
	Total of A+B				15738.11
	Add 12% GST (MF= 0.1405)				2211.20
				Total	17949.32
C Overhead & Profit @ 15%					
	Total				2692.40
	Rate of Each				20641.72
	Cost of Per Meter				2064.17
	Say				2064.00

7.9 200 mm dia (wall thickness 6.3 mm)					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					

4253	(a) Cost of 200 mm dia MS Pipe Add wastage @5%	m	10.00	1426.00	14260.00
					713.00
				Total	14973.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				
					2245.95
				Total	17218.95
	Cartage @1% of A				172.19
				Total	17391.14
B	Labour				
1004	Fitter, Grade 1	day	2.50	679.00	1697.50
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	4.00	558.00	2232.00
	Total				4917.00
	Total of A+B				22308.14
	Add 12% GST (MF= 0.1405)				3134.29
				Total	25442.43
C	Overhead & Profit @ 15%				3816.36
	Total				29258.80
	Rate of Each				29258.80
	Cost of Per Meter				2925.88
	Say				2926.00

7.10 250 mm dia (wall thickness 6.3 mm)

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4254	(a) Cost of 250 mm dia MS Pipe Add wastage @5%	m	10.00	1798.00	17980.00
					899.00
				Total	18879.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				
					2831.85
				Total	21710.85
	Cartage @1% of A				217.11
				Total	21927.96
B	Labour				
1004	Fitter, Grade 1	day	2.50	679.00	1697.50
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	4.00	558.00	2232.00
	Total				4917.00
	Total of A+B				26844.96
	Add 12% GST (MF= 0.1405)				3771.72
				Total	30616.68
C	Overhead & Profit @ 15%				4592.50
	Total				35209.18
	Rate of Each				35209.18
	Cost of Per Meter				3520.92
	Say				3521.00

7.11 300 mm dia (wall thickness 7.1 mm)

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4255	(a) Cost of 300 mm dia MS Pipe Add wastage @5%	m	10.00	2106.00	21060.00
					1053.00
				Total	22113.00

Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%

Total 3316.95
25429.95
254.30

Cartage @1% of A

Total 25684.25

B	Labour				
1004	Fitter, Grade 1	day	3.00	679.00	2037.00
1087	Welder	day	1.00	679.00	679.00
1006	Painter	day	0.75	617.00	462.75
1025	Helper	day	4.75	558.00	2650.50
	Total				5829.25
	Total of A+B				31513.50
	Add 12% GST (MF= 0.1405)				4427.65
				Total	35941.15
C	Overhead & Profit @ 15%				5391.17
	Total				41332.32
	Rate of Each				41332.32
	Cost of Per Meter				4133.23
	Say				4133.00

8 Providing, laying, testing & commissioning of 'B' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :

8.1 25 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4256	(a) Cost of 25 mm dia G.I. Pipe	m	10.00	171.00	1710.00
	Add wastage @5%				85.50
	Total				1795.50
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				269.33
	Total				2064.83
	Cartage @1% of A				20.65
	Total				2085.47
B	Labour				
1004	Fitter, Grade 1	day	1.25	679.00	848.75
1087	Welder	day	0.25	679.00	169.75
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	1.75	558.00	976.50
	Total				2149.25
	Total of A+B				4234.72
	Add 12% GST (MF= 0.1405)				594.98
	Total				4829.70
C	Overhead & Profit @ 15%				724.46
	Total				5554.16
	Rate of Each				5554.16
	Cost of Per Meter				555.42
	Say				555.00

8.2 32 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4257	(a) Cost of 32 mm dia G.I. Pipe	m	10.00	215.00	2150.00
	Add wastage @5%				107.50

Total 2257.50

Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%

338.63

Total 2596.13

Cartage @1% of A

25.96

Total 2622.00

B	Labour				
1004	Fitter, Grade 1	day	1.25	679.00	848.75
1087	Welder	day	0.25	679.00	169.75
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	1.75	558.00	976.50
	Total				2149.25
	Total of A+B				4771.25
	Add 12% GST (MF= 0.1405)				670.36
				Total	5441.61
C	Overhead & Profit @ 15%				816.24
	Total				6257.85
	Rate of Each				6257.85
	Cost of Per Meter				625.79
	Say				626.00

8.3 40 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4258	(a) Cost of 40 mm dia G.I. Pipe	m	10.00	250.00	2500.00
	Add wastage @5%				125.00
				Total	2625.00

Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%

393.75

Total 3018.75

Cartage @1% of A

30.19

Total 3049.00

B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.25	558.00	1255.50
	Total				2767.75
	Total of A+B				5816.75
	Add 12% GST (MF= 0.1405)				817.25
				Total	6634.00
C	Overhead & Profit @ 15%				995.10
	Total				7629.10
	Rate of Each				7629.10
	Cost of Per Meter				762.91
	Say				763.00

8.4 50 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4259	(a) Cost of 50 mm dia G.I. Pipe	m	10.00	310.00	3100.00
	Add wastage @5%				155.00
				Total	3255.00

Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%

488.25

Total 3743.25

	Cartage @1% of A				37.43
				Total	3780.68
B	Labour				
1004	Fitter, Grade 1	day	1.50	679.00	1018.50
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.25	558.00	1255.50
	Total				2767.75
	Total of A+B				6548.43
	Add 12% GST (MF= 0.1405)				920.05
				Total	7468.49
C	Overhead & Profit @ 15%				1120.27
	Total				8588.76
	Rate of Each				8588.76
	Cost of Per Meter				858.88
	Say				859.00

8.5	65 mm				
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4260	(a) Cost of 65 mm dia G.I. Pipe	m	10.00	395.00	3950.00
	Add wastage @5%				197.50
				Total	4147.50
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				622.13
				Total	4769.63
	Cartage @1% of A				47.70
				Total	4817.32
B	Labour				
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.75	558.00	1534.50
	Total				3386.25
	Total of A+B				8203.57
	Add 12% GST (MF= 0.1405)				1152.60
				Total	9356.17
C	Overhead & Profit @ 15%				1403.43
	Total				10759.60
	Rate of Each				10759.60
	Cost of Per Meter				1075.96
	Say				1076.00

8.6	80 mm				
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4261	(a) Cost of 80 mm dia G.I. Pipe	m	10.00	505.00	5050.00
	Add wastage @5%				252.50
				Total	5302.50
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				795.38
				Total	6097.88
	Cartage @1% of A				60.98
				Total	6158.85

B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.50	679.00	339.50
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	2.75	558.00	1534.50
	Total				3386.25
	Total of A+B				9545.10
	Add 12% GST (MF= 0.1405)				1341.09
				Total	10886.19
C Overhead & Profit @ 15%					1632.93
	Total				12519.12
	Rate of Each				12519.12
	Cost of Per Meter				1251.91
	Say				1252.00

8.7 100 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4262	(a) Cost of 100 mm dia G.I. Pipe	m	10.00	714.00	7140.00
	Add wastage @5%				357.00
				Total	7497.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				1124.55
				Total	8621.55
	Cartage @1% of A				86.22
				Total	8707.77
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	0.75	679.00	509.25
1006	Painter	day	0.25	617.00	154.25
1025	Helper	day	3.00	558.00	1674.00
	Total				3695.50
	Total of A+B				12403.27
	Add 12% GST (MF= 0.1405)				1742.66
				Total	14145.92
C Overhead & Profit @ 15%					2121.89
	Total				16267.81
	Rate of Each				16267.81
	Cost of Per Meter				1626.78
	Say				1627.00

8.8 150 mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4263	(a) Cost of 150 mm dia G.I. Pipe	m	10.00	1066.00	10660.00
	Add wastage @5%				533.00
				Total	11193.00
	Add for necessary brackets, support, saddles, clamps, hangers, vibration-isolator and fitting such as bends, tees, welding material etc. @15%				1678.95
				Total	12871.95
	Cartage @1% of A				128.72
				Total	13000.67
B Labour					
1004	Fitter, Grade 1	day	2.00	679.00	1358.00
1087	Welder	day	1.00	679.00	679.00

1006	Painter	day	0.50	617.00	308.50
1025	Helper	day	3.50	558.00	1953.00
	Total				4298.50
	Total of A+B				17299.17
	Add 12% GST (MF= 0.1405)				2430.53
				Total	19729.70
C	Overhead & Profit @ 15%				2959.46
	Total				22689.16
	Rate of Each				22689.16
	Cost of Per Meter				2268.92
	Say				2269.00

9 Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :

9.1 Single headed Gunmetal

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4201	(a) Cost of single head gunmetal hydrant valve	Each	1.00	4685.00	4685.00
4329	(b) Cost of 4 Nos. nuts bolts and washers	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3 mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16 mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
				Total	5045.00
	Cartage @1% of A				50.45
				Total	5095.45
B	Labour				
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
	Total				618.50
	Total of A+B Rs.				5713.95
	Add 12% GST (MF= 0.1405)				802.81
				Total	6516.76
C	Overhead & Profit @ 15%				977.51
	Total				7494.27
	Rate of Each				7494.27
	Say				7494.00

9.2 Single headed Stainless steel

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4202	(a) Cost of Single Head Stainless Steel Hydrant Valve	Each	1.00	3547.00	3547.00
4329	(b) Cost of 4 Nos. nuts bolts and washers LS	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3 mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
				Total	3907.00
	Cartage @1% of A				39.07
				Total	3946.07
B	Labour				

1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
	Total				618.50
	Total of A+B Rs.				4564.57
	Add 12% GST (MF= 0.1405)				641.32
				Total	5205.89
C	Overhead & Profit @ 15%				780.88
	Total				5986.78
	Rate of Each				5986.78
	Say				5987.00

10 Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required

10.1 Single headed Gunmetal

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4201	(a) Cost of single head gunmetal hydrant valve	Each	1.00	4685.00	4685.00
4329	(b) Cost of 4 Nos. nuts bolts and washers	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
				Total	5045.00
	Cartage @1% of A				50.45
				Total	5095.45
B	Labour				
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
	Total				618.50
	Total of A+B Rs.				5713.95
	Add 12% GST (MF= 0.1405)				802.81
				Total	6516.76
C	Overhead & Profit @ 15%				977.51
	Total				7494.27
	Rate of Each				7494.27
	Say				7494.00

10.2 Single headed Stainless steel

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4202	(a) Cost of Single Head Stainless Steel Hydrant Valve	Each	1.00	3547.00	3547.00
4329	(b) Cost of 4 Nos. nuts bolts and washers LS	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
				Total	3907.00
	Cartage @1% of A				39.07
				Total	3946.07
B	Labour				
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00

	Total				618.50
	Total of A+B Rs.				4564.57
	Add 12% GST (MF= 0.1405)				641.32
				Total	5205.89
C	Overhead & Profit @ 15%				780.88
	Total				5986.78
	Rate of Each				5986.78
	Say				5987.00

11 Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :

11.1 40 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4234	(a) Cost of 40mm dia butterfly valve	Each	1.00	1948.00	1948.00
4333	(b) Cost of 40mm dia Flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of weldign rod LS	Each		60.00	60.00
				Total	2318.00
	Cartage @1% of A				23.18
				Total	2341.18
B	Labour				
1004	Fitter, Grade 1	day	0.15	679.00	101.85
1087	Welder	day	0.12	679.00	81.48
1025	Helper	day	0.27	558.00	150.66
	Total				333.99
	Total of A+B Rs.				2675.17
	Add 12% GST (MF= 0.1405)				375.86
				Total	3051.03
C	Overhead & Profit @ 15%				457.65
	Total				3508.69
	Rate of Each				3508.69
	Say				3509.00

11.2 50mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4235	(a) Cost of 50mm dia butterfly valve	Each	1.00	1948.00	1948.00
4337	(b) Cost of 50mm dia Flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of weldign rod LS	Each		60.00	60.00
				Total	2318.00
	Cartage @1% of A				23.18
				Total	2341.18
B	Labour				
1004	Fitter, Grade 1	day	0.22	679.00	149.38
1087	Welder	day	0.15	679.00	101.85
1025	Helper	day	0.37	558.00	206.46
	Total				457.69
	Total of A+B Rs.				2798.87
	Add 12% GST (MF= 0.1405)				393.24
				Total	3192.11
C	Overhead & Profit @ 15%				478.82
	Total				3670.93
	Rate of Each				3670.93

Say					3671.00
11.3 65 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4236	(a) Cost of 65 mm dia butterfly valve	Each	1.00	2150.00	2150.00
4338	(b) Cost of 65 mm dia Flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	90.00	90.00
4335	(d) Cost of weldign rod LS	Each		60.00	60.00
				Total	2520.00
	Cartage @1% of A				25.20
				Total	2545.20
B Labour					
1004	Fitter, Grade 1	day	0.30	679.00	203.70
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.50	558.00	279.00
	Total				618.50
	Total of A+B Rs.				3163.70
	Add 12% GST (MF= 0.1405)				444.50
				Total	3608.20
C	Overhead & Profit @ 15%				541.23
	Total				4149.43
	Rate of Each				4149.43
	Say				4149.00

11.4 80 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4237	(a) Cost of 80 mm dia butterfly valve	Each	1.00	2382.00	2382.00
4340	(b) Cost of 80 mm dia Flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	180.00	180.00
4342	(d) Cost of weldign rod LS	Each		90.00	90.00
				Total	3092.00
	Cartage @1% of A				30.92
				Total	3122.92
B Labour					
1004	Fitter, Grade 1	day	0.30	679.00	203.70
1087	Welder	day	0.16	679.00	108.64
1025	Helper	day	0.46	558.00	256.68
	Total				569.02
	Total of A+B Rs.				3691.94
	Add 12% GST (MF= 0.1405)				518.72
				Total	4210.66
C	Overhead & Profit @ 15%				631.60
	Total				4842.26
	Rate of Each				4842.26
	Say				4842.00

11.5 100 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4238	(a) Cost of 100 mm dia butterfly valve	Each	1.00	3305.00	3305.00
4343	(b) Cost of 100 mm dia Flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	180.00	180.00

4342	(d) Cost of weldign rod LS	Each		90.00	90.00
				Total	4015.00
	Cartage @1% of A				40.15
				Total	4055.15
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.70	558.00	390.60
	Total				865.90
	Total of A+B Rs.				4921.05
	Add 12% GST (MF= 0.1405)				691.41
				Total	5612.46
C	Overhead & Profit @ 15%				841.87
	Total				6454.33
	Rate of Each				6454.33
	Say				6454.00

11.6 150 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4240	(a) Cost of 150 mm dia butterfly valve	Each	1.00	4803.00	4803.00
4344	(b) Cost of 150 mm dia Flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	180.00	180.00
4342	(d) Cost of weldign rod LS	Each		90.00	90.00
				Total	5513.00
	Cartage @1% of A				55.13
				Total	5568.13
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	0.69	558.00	385.02
	Total				1064.02
	Total of A+B Rs.				6632.15
	Add 12% GST (MF= 0.1405)				931.82
				Total	7563.97
C	Overhead & Profit @ 15%				1134.60
	Total				8698.56
	Rate of Each				8698.56
	Say				8699.00

11.7 200 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4241	(a) Cost of 200 mm dia butterfly valve	Each	1.00	9188.00	9188.00
4345	(b) Cost of 200 mm dia Flange	Each	2.00	340.00	680.00
4346	(c) Cost of 8 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	300.00	300.00
4347	(d) Cost of weldign rod LS	Each		120.00	120.00
				Total	10288.00
	Cartage @1% of A				102.88
				Total	10390.88
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	0.60	558.00	334.80
	Total				1013.80
	Total of A+B Rs.				11404.68

Add 12% GST (MF= 0.1405)

Total 1602.36
13007.04

C Overhead & Profit @ 15%
Total
Rate of Each
Say

1951.06
14958.09
14958.09
14958.00

11.8 250 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4242	(a) Cost of 250 mm dia butterfly valve	Each	1.00	12912.00	12912.00
4348	(b) Cost of 250 mm dia Flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	450.00	450.00
4347	(d) Cost of weldign rod LS	Each		120.00	120.00
				Total	14162.00
	Cartage @1% of A				141.62
				Total	14303.62
B Labour					
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	0.70	558.00	390.60
	Total				1069.60
	Total of A+B Rs.				15373.22
	Add 12% GST (MF= 0.1405)				2159.94
				Total	17533.16
C	Overhead & Profit @ 15%				2629.97
	Total				20163.13
	Rate of Each				20163.13
	Say				20163.00

11.9 300 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4243	(a) Cost of 300 mm dia butterfly valve	Each	1.00	16105.00	16105.00
4349	(b) Cost of 300 mm dia Flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut bolt fastner and packing gaskets				
		Each	1.00	450.00	450.00
4347	(d) Cost of weldign rod LS	Each	1.00	120.00	120.00
				Total	17355.00
	Cartage @1% of A				173.55
				Total	17528.55
B Labour					
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	0.70	558.00	390.60
	Total				1069.60
	Total of A+B Rs.				18598.15
	Add 12% GST (MF= 0.1405)				2613.04
				Total	21211.19
C	Overhead & Profit @ 15%				3181.68
	Total				24392.87
	Rate of Each				24392.87
	Say				24393.00

- 12 Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required :

12.1 40mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4274	(a) Cost of 40 mm DIA Sluice Valve	Each	1.00	3540.00	3540.00
4333	(b) Cost of 40 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	3910.00
Cartage @1% of A					39.10
				Total	3949.10
B Labour					
1004	Fitter, Grade 1	day	0.15	679.00	101.85
1087	Welder	day	0.12	679.00	81.48
1025	Helper	day	0.27	558.00	150.66
				Total	333.99
Total of A+B Rs.					4283.09
Add 12% GST (MF= 0.1405)					601.77
				Total	4884.86
C Overhead & Profit @ 15%					732.73
				Total	5617.59
Rate of Each Say					5618.00

12.2 50 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4275	(a) Cost of 50 mm DIA Sluice Valve	Each	1.00	4532.00	4532.00
4337	(b) Cost of 50 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	4902.00
Cartage @1% of A					49.02
				Total	4951.02
B Labour					
1004	Fitter, Grade 1	day	0.22	679.00	149.38
1087	Welder	day	0.15	679.00	101.85
1025	Helper	day	0.37	558.00	206.46
				Total	457.69
Total of A+B Rs.					5408.71
Add 12% GST (MF= 0.1405)					759.92
				Total	6168.63
C Overhead & Profit @ 15%					925.30
				Total	7093.93
Rate of Each Say					7094.00

12.3 65mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4276	(a) Cost of 65 mm DIA Sluice Valve	Each	1.00	5875.00	5875.00
4338	(b) Cost of 65 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00

4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	6245.00
	Cartage @1% of A				62.45
				Total	6307.45
	B Labour				
1004	Fitter, Grade 1	day	0.30	679.00	203.70
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.50	558.00	279.00
	Total				618.50
	Total of A+B Rs.				6925.95
	Add 12% GST (MF= 0.1405)				973.10
				Total	7899.05
C	Overhead & Profit @ 15%				1184.86
	Total				9083.90
	Rate of Each				9083.90
	Say				9084.00

12.4 80mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4277	(a) Cost of 80 mm DIA Sluice Valve	Each	1.00	6663.00	6663.00
4340	(b) Cost of 80mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Each	1.00	90.00	90.00
				Total	7373.00
	Cartage @1% of A				73.73
				Total	7446.73
	B Labour				
1004	Fitter, Grade 1	day	0.30	679.00	203.70
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.46	558.00	256.68
	Total				596.18
	Total of A+B Rs.				8042.91
	Add 12% GST (MF= 0.1405)				1130.03
				Total	9172.94
C	Overhead & Profit @ 15%				1375.94
	Total				10548.88
	Rate of Each				10548.88
	Say				10549.00

12.5 100mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4278	(a) Cost of 100 mm DIA Sluice Valve	Each	1.00	9324.00	9324.00
4343	(b) Cost of 100mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Each	1.00	90.00	90.00
				Total	10034.00
	Cartage @1% of A				100.34
				Total	10134.34
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.70	558.00	390.60
	Total				865.90
	Total of A+B Rs.				11000.24
	Add 12% GST (MF= 0.1405)				1545.53
				Total	12545.77

C	Overhead & Profit @ 15%				1881.87
	Total				14427.64
	Rate of Each				14427.64
	Say				14428.00

12.6 150mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4280	(a) Cost of 150mm DIA Sluice Valve	Each	1.00	15461.00	15461.00
4344	(b) Cost of 150mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Each	1.00	90.00	90.00
				Total	16171.00
	Cartage @1% of A				161.71
				Total	16332.71
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.69	558.00	385.02
	Total				860.32
	Total of A+B Rs.				17193.03
	Add 12% GST (MF= 0.1405)				2415.62
				Total	19608.65
C	Overhead & Profit @ 15%				2941.30
	Total				22549.95
	Rate of Each				22549.95
	Say				22550.00

12.7 200mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4281	(a) Cost of 200mm DIA Sluice Valve	Each	1.00	27639.00	27639.00
4345	(b) Cost of 200mm dia flange	Each	2.00	340.00	680.00
4346	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	300.00	300.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	28739.00
	Cartage @1% of A				287.39
				Total	29026.39
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.60	558.00	334.80
	Total				810.10
	Total of A+B Rs.				29836.49
	Add 12% GST (MF= 0.1405)				4192.03
				Total	34028.52
C	Overhead & Profit @ 15%				5104.28
	Total				39132.79
	Rate of Each				39132.79
	Say				39133.00

12.8 250mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4282	(a) Cost of 250 mm DIA Sluice Valve	Each	1.00	32913.00	32913.00
4348	(b) Cost of 250 mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00

4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	34163.00
	Cartage @1% of A				341.63
				Total	34504.63
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.60	558.00	334.80
	Total				810.10
	Total of A+B Rs.				35314.73
	Add 12% GST (MF= 0.1405)				4961.72
				Total	40276.45
C	Overhead & Profit @ 15%				6041.47
	Total				46317.92
	Rate of Each				46317.92
	Say				46318.00

12.9 300mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4283	(a) Cost of 300mm DIA Sluice Valve	Each	1.00	47409.00	47409.00
4349	(b) Cost of 300mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	48659.00
	Cartage @1% of A				486.59
				Total	49145.59
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.60	558.00	334.80
	Total				810.10
	Total of A+B Rs.				49955.69
	Add 12% GST (MF= 0.1405)				7018.77
				Total	56974.46
C	Overhead & Profit @ 15%				8546.17
	Total				65520.63
	Rate of Each				65520.63
	Say				65521.00

13 Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm2 complete as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
	A Materials				
4319	(a) Cost of orifice plate	Each	1.00	802.00	802.00
4363	(b) Cost of packing gaskets	LS	1.00	50.00	50.00
				Total	852.00
				Cartage @1% of A	8.52
				Total	860.52
	B Labour				
1004	Fitter, Grade 1	day	0.1	679.00	67.90
1025	Helper	day	0.1	558.00	55.80
	Total				123.70
	Total of A+B Rs.				984.22
	Add 12% GST (MF= 0.1405)				138.28
				Total	1122.50

C	Overhead & Profit @ 15%				168.38
				Total	1290.88
	Rate of Each				1290.88
	Say				1291.00

14 Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :

14.1 40mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4264	(a) Cost of 40 mm dia Non Return Valve	Each	1.00	3311.00	3311.00
4333	(b) Cost of 40 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	3681.00
	Cartage @1% of A				36.81
				Total	3717.81
B	Labour				
1004	Fitter, Grade 1	day	0.32	679.00	217.28
1087	Welder	day	0.15	679.00	101.85
1025	Helper	day	0.48	558.00	267.84
	Total				586.97
	Total of A+B Rs.				4304.78
	Add 12% GST (MF= 0.1405)				604.82
				Total	4909.60
C	Overhead & Profit @ 15%				736.44
	Total				5646.04
	Rate of Each				5646.04
	Say				5646.00

14.2 50mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4265	(a) Cost of 50 mm dia Non Return Valve	Each	1.00	3311.00	3311.00
4337	(b) Cost of 50 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	3681.00
	Cartage @1% of A				36.81
				Total	3717.81
B	Labour				
1004	Fitter, Grade 1	day	0.32	679.00	217.28
1087	Welder	day	0.15	679.00	101.85
1025	Helper	day	0.48	558.00	267.84
	Total				586.97
	Total of A+B Rs.				4304.78
	Add 12% GST (MF= 0.1405)				604.82
				Total	4909.60
C	Overhead & Profit @ 15%				736.44
	Total				5646.04
	Rate of Each				5646.04
	Say				5646.00

14.3 65mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				

4266	(a) Cost of 65 mm dia Non Return Valve	Each	1.00	3785.00	3785.00
4338	(b) Cost of 65 mm dia flange	Each	2.00	110.00	220.00
4334	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	4155.00
	Cartage @1% of A				41.55
				Total	4196.55
	B Labour				
1004	Fitter, Grade 1	day	0.32	679.00	217.28
1087	Welder	day	0.15	679.00	101.85
1025	Helper	day	0.48	558.00	267.84
	Total				586.97
	Total of A+B Rs.				4783.52
	Add 12% GST (MF= 0.1405)				672.08
				Total	5455.60
C	Overhead & Profit @ 15%				818.34
	Total				6273.95
	Rate of Each				6273.95
	Say				6274.00

14.4 80mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4267	(a) Cost of 80 mm dia Non Return Valve	Each	1.00	4366.00	4366.00
4340	(b) Cost of 80 mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Each	1.00	90.00	90.00
				Total	5076.00
	Cartage @1% of A				50.76
				Total	5126.76
B	Labour				
1004	Fitter, Grade 1	day	0.32	679.00	217.28
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.48	558.00	267.84
	Total				620.92
	Total of A+B Rs.				5747.68
	Add 12% GST (MF= 0.1405)				807.55
				Total	6555.23
C	Overhead & Profit @ 15%				983.28
	Total				7538.51
	Rate of Each				7538.51
	Say				7539.00

14.5 100mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4268	(a) Cost of 100 mm dia Non Return Valve	Each	1.00	6607.00	6607.00
4343	(b) Cost of 100 mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4332	(d) Cost of welding rod	Job	1.00	90.00	90.00
				Total	7317.00
	Cartage @1% of A				73.17
				Total	7390.17
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.71	558.00	396.18

	Total				871.48
	Total of A+B Rs.				8261.65
	Add 12% GST (MF= 0.1405)				1160.76
				Total	9422.41
C	Overhead & Profit @ 15%				1413.36
	Total				10835.77
	Rate of Each				10835.77
	Say				10836.00

14.6 125mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4269	(a) Cost of 125 mm dia Non Return Valve	Each	1.00	10290.00	10290.00
4351	(b) Cost of 125 mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Each	1.00	90.00	90.00
				Total	11000.00
	Cartage @1% of A				110.00
				Total	11110.00
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.69	558.00	385.02
	Total				860.32
	Total of A+B Rs.				11970.32
	Add 12% GST (MF= 0.1405)				1681.83
				Total	13652.15
C	Overhead & Profit @ 15%				2047.82
	Total				15699.97
	Rate of Each				15699.97
	Say				15700.00

14.7 150mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4270	(a) Cost of 150 mm dia Non Return Valve	Each	1.00	11718.00	11718.00
4344	(b) Cost of 150 mm dia flange	Each	2.00	220.00	440.00
4341	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	180.00	180.00
4342	(d) Cost of welding rod	Job	1.00	90.00	90.00
				Total	12428.00
	Cartage @1% of A				124.28
				Total	12552.28
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.67	558.00	373.86
	Total				849.16
	Total of A+B Rs.				13401.44
	Add 12% GST (MF= 0.1405)				1882.90
				Total	15284.34
C	Overhead & Profit @ 15%				2292.65
	Total				17576.99
	Rate of Each				17576.99
	Say				17577.00

14.8 200mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				

4271	(a) Cost of 200 mm dia Non Return Valve	Each	1.00	20013.00	20013.00
4345	(b) Cost of 200 mm dia flange	Each	2.00	340.00	680.00
4346	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	300.00	300.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	21113.00
	Cartage @1% of A				211.13
				Total	21324.13
	B Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.66	558.00	368.28
	Total				843.58
	Total of A+B Rs.				22167.71
	Add 12% GST (MF= 0.1405)				3114.56
				Total	25282.27
C	Overhead & Profit @ 15%				3792.34
	Total				29074.61
	Rate of Each				29074.61
	Say				29075.00

14.9 250mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4272	(a) Cost of 250 mm dia Non Return Valve	Each	1.00	31946.00	31946.00
4348	(b) Cost of 250 mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	33196.00
	Cartage @1% of A				331.96
				Total	33527.96
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.66	558.00	368.28
	Total				843.58
	Total of A+B Rs.				34371.54
	Add 12% GST (MF= 0.1405)				4829.20
				Total	39200.74
C	Overhead & Profit @ 15%				5880.11
	Total				45080.85
	Rate of Each				45080.85
	Say				45081.00

14.10 300mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4273	(a) Cost of 300 mm dia Non Return Valve	Each	1.00	43392.00	43392.00
4349	(b) Cost of 300 mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	44642.00
	Cartage @1% of A				446.42
				Total	45088.42
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.66	558.00	368.28

Total					843.58
Total of A+B Rs.					45932.00
Add 12% GST (MF= 0.1405)					6453.45
				Total	52385.45
C	Overhead & Profit @ 15%				7857.82
	Total				60243.26
	Rate of Each				60243.26
	Say				60243.00

15.00 Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.

15.1 80 mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4284	Cost of 80 mm dia CIDF SS Mesh Strainer	Each	1.00	2530.80	2530.80
4352	(b) Cost of 80 mm dia flange	Each	2.00	110.00	220.00
4364	(c) Cost of 4 Nos. Nut Bolt fastner & packing gaskets	LS	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	2900.80
	Cartage @1% of A				29.01
				Total	2929.81
B	Labour				
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.45	558.00	251.10
	Total				556.65
	Total of A+B Rs.				3486.46
	Add 12% GST (MF= 0.1405)				489.85
				Total	3976.31
C	Overhead & Profit @ 15%				596.45
	Total				4572.75
	Rate of Each				4572.75
	Say				4573.00

15.2 100mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4285	Cost of 100 mm dia CIDF SS Mesh Strainer	Each	1.00	3636.00	3636.00
4353	(b) Cost of 100 mm dia flange	Each	2.00	110.00	220.00
4364	(c) Cost of 4 Nos. Nut Bolt fastner & packing gaskets	LS	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	4006.00
	Cartage @1% of A				40.06
				Total	4046.06
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.71	558.00	396.18
	Total				871.48
	Total of A+B Rs.				4917.54
	Add 12% GST (MF= 0.1405)				690.91
				Total	5608.45
C	Overhead & Profit @ 15%				841.27
	Total				6449.72
	Rate of Each				6449.72
	Say				6450.00

15.3 150mm dia		Unit	Qty.	Rate	Amount ₹
ICD No.	Description				
A	Materials				
4286	Cost of 150 mm dia CIDF SS Mesh Strainer	Each	1.00	6791.40	6791.40
4354	(b) Cost of 150 mm dia flange	Each	2.00	110.00	220.00
4364	(c) Cost of 4 Nos. Nut Bolt fastner & packing gaskets	LS	1.00	90.00	90.00
4335	(d) Cost of welding rod	Each	1.00	60.00	60.00
				Total	7161.40
	Cartage @1% of A				71.61
				Total	7233.01
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.75	558.00	418.50
	Total				893.80
	Total of A+B Rs.				8126.81
	Add 12% GST (MF= 0.1405)				1141.82
				Total	9268.63
C	Overhead & Profit @ 15%				1390.29
	Total				10658.93
	Rate of Each				10658.93
	Say				10659.00

15.4 200mm dia		Unit	Qty.	Rate	Amount ₹
ICD No.	Description				
A	Materials				
4287	Cost of 200 mm dia CIDF SS Mesh Strainer	Each	1.00	14689.80	14689.80
4345	(b) Cost of 200 mm dia flange	Each	2.00	340.00	680.00
4346	(c) Cost of 8 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	300.00	300.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	15789.80
	Cartage @1% of A				157.90
				Total	15947.70
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.70	558.00	390.60
	Total				865.90
	Total of A+B Rs.				16813.60
	Add 12% GST (MF= 0.1405)				2362.31
				Total	19175.91
C	Overhead & Profit @ 15%				2876.39
	Total				22052.29
	Rate of Each				22052.29
	Say				22052.00

15.5 250mm dia		Unit	Qty.	Rate	Amount ₹
ICD No.	Description				
A	Materials				
4288	Cost of 250 mm dia CIDF SS Mesh Strainer	Each	1.00	18450.90	18450.90
4348	(b) Cost of 250 mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	19700.90
	Cartage @1% of A				197.01
				Total	19897.91

B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.70	558.00	390.60
	Total				865.90
	Total of A+B Rs.				20763.81
	Add 12% GST (MF= 0.1405)				2917.32
				Total	23681.12
C	Overhead & Profit @ 15%				3552.17
	Total				27233.29
	Rate of Each				27233.29
	Say				27233.00

15.6 300mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4289	Cost of 300 mm dia CIDF SS Mesh Strainer	Each	1.00	25366.50	25366.50
4349	(b) Cost of 300 mm dia flange	Each	2.00	340.00	680.00
4365	(c) Cost of 12 Nos. Nut Bolt fastner & packing gaskets	Each	1.00	450.00	450.00
4347	(d) Cost of welding rod	Each	1.00	120.00	120.00
				Total	26616.50
	Cartage @1% of A				266.17
				Total	26882.67
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.20	679.00	135.80
1025	Helper	day	0.70	558.00	390.60
	Total				865.90
	Total of A+B Rs.				27748.57
	Add 12% GST (MF= 0.1405)				3898.67
				Total	31647.24
C	Overhead & Profit @ 15%				4747.09
	Total				36394.32
	Rate of Each				36394.32
	Say				36394.00

16 Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :

16.1 Gun Metal

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4208	Cost of RRL Hose with male female gunmetal coupling	Each	1.00	3861.00	3861.00
				Total	3861.00
	Cartage @1% of A				38.61
				Total	3899.61
B	Labour				
1025	Helper	day	0.10	558.00	55.80
	Total				55.80
	Total of A+B Rs.				3955.41
	Add 12% GST (MF= 0.1405)				555.74
				Total	4511.15
C	Overhead & Profit @ 15%				676.67
	Total				5187.82
	Rate of Each				5187.82
	Say				5188.00

16.2 Stainless Steel (Grade 304)

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4209	Cost of RRL Hose with male female stainless steel coupling (Grade 304)	Each	1.00	3292.00	3292.00
				Total	3292.00
	Cartage @1% of A				32.92
				Total	3324.92
B Labour					
1025	Helper	day	0.10	558.00	55.80
	Total				55.80
	Total of A+B Rs.				3380.72
	Add 12% GST (MF= 0.1405)				474.99
				Total	3855.71
C	Overhead & Profit @ 15%				578.36
	Total				4434.07
	Rate of Each				4434.07
	Say				4434.00

17 Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required.

- (a) 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585
- (b) 20 mm nominal internal dia gun metal globe valve & nozzle.
- (c) Drum and brackets for fixing the equipments on wall.
- (d) Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.

17.1 30 m

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4210	(a) Cost of swinging type hose reel complete with 19mm x 30m Thermoplastic hose	Each	1.00	2043.00	2043.00
4212	(b)Hose reel drum	Each	1.00	2350.00	2350.00
4213	(c) Cost of 25mm dia gunmetal gate valve	Each	1.00	691.00	691.00
4355	(d) Cost of 25mm dia socket, union, nipples (Lumpsum)	Each		210.00	210.00
			Total		5294.00
	Cartage @1% of A				52.94
				Total	5346.94
B Labour					
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	1.00	558.00	558.00
	Total				1067.25
	Total of A+B Rs.				6414.19
	Add 12% GST (MF= 0.1405)				901.19
				Total	7315.38
C	Overhead & Profit @ 15%				1097.31
	Total				8412.69
	Rate of Each				8412.69
	Say				8413.00

17.2 40 m

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					

4211	(a) Cost of swinging type hose reel complete with 19mm x 40m Thermolplastic hose	Each	1.00	3232.00	3232.00
4212	(b)Hose reel drum	Each	1.00	2350.00	2350.00
4356	(b) Cost of 25mm dia gunmetel gate valve	Each	1.00	770.00	770.00
4355	(c) Cost of 25mm dia socket, union, nipples (Lumpsum)	Each		210.00	210.00
				Total	6562.00
	Cartage @1% of A				65.62
				Total	6627.62
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	1.00	558.00	558.00
	Total				1067.25
	Total of A+B Rs.				7694.87
	Add 12% GST (MF= 0.1405)				1081.13
				Total	8776.00
C	Overhead & Profit @ 15%				1316.40
	Total				10092.40
	Rate of Each				10092.40
	Say				10092.00

18 Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required :

18.1 Gun metal

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4203	Cost of gunmetel short branch pipe	Each	1.00	1758.00	1758.00
				Total	1758.00
	Cartage @1% of A				17.58
				Total	1775.58
B	Labour				
1025	Helper	day	0.10	558.00	55.80
	Total				55.80
	Total of A+B Rs.				1831.38
	Add 12% GST (MF= 0.1405)				257.31
				Total	2088.69
C	Overhead & Profit @ 15%				313.30
	Total				2401.99
	Rate of Each				2401.99
	Say				2402.00

18.2 Stainless Steel (Grade 304)

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4204	Cost of gunmetel short stainless steel pipe (Grade 304)	Each	1.00	1189.00	1189.00
				Total	1189.00
	Cartage @1% of A				11.89
				Total	1200.89
B	Labour				
1025	Helper	day	0.10	558.00	55.80
	Total				55.80
	Total of A+B Rs.				1256.69
	Add 12% GST (MF= 0.1405)				176.56
				Total	1433.25
C	Overhead & Profit @ 15%				214.99

Total	1648.24
Rate of Each	1648.24
Say	1648.00

19 Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required :

19.1 2 way-100 mm dia M.S. Pipe

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4205	(a) Cost of two way gunmetal FBC connection	Each	1.00	4002.00	4002.00
4329	(b) Cost of 4 Nos. nuts bolts and washers LS	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
Total					4362.00
Cartage @1% of A					43.62
					Total
					4405.62
B Labour					
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
Total					618.50
Total of A+B Rs.					5024.12
Add 12% GST (MF= 0.1405)					705.89
					Total
					5730.01
C Overhead & Profit @ 15%					
Total					859.50
Rate of Each					6589.51
Say					6590.00

19.2 4 way - 150 mm dia M.S. Pipe

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4207	(a) Cost of four way gunmetal FBC connection	Each	1.00	9462.00	9462.00
4329	(b) Cost of 4 Nos. nuts bolts and washers LS	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
Total					9822.00
Cartage @1% of A					98.22
					Total
					9920.22
B Labour					
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
Total					618.50
Total of A+B Rs.					10538.72
Add 12% GST (MF= 0.1405)					1480.69
					Total
					12019.41
C Overhead & Profit @ 15%					
Total					1802.91
Rate of Each					13822.32
Say					13822.32

Say

13822.00

19.3 3 way - 150 mm dia M.S. Pipe					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4206	(a) Cost of four way gunmetal FBC connection	Each	1.00	6050.00	6050.00
4329	(b) Cost of 4 Nos. nuts bolts and washers LS	Set	1.00	50.00	50.00
4330	(c) Cost of 1 No. 3mm thick rubber gasket	Each	1.00	70.00	70.00
4331	(d) Cost of 1 No. MS flange as per IS drilling 16mm thick LS	Set	1.00	200.00	200.00
4332	(e) Cost of welding rod	Job	1.00	40.00	40.00
Total					6410.00
Cartage @1% of A					64.10
Total					6474.10
B Labour					
1004	Fitter, Grade 1	day	0.25	679.00	169.75
1087	Welder	day	0.25	679.00	169.75
1025	Helper	day	0.50	558.00	279.00
Total					618.50
Total of A+B Rs.					7092.60
Add 12% GST (MF= 0.1405)					996.51
Total					8089.11
C	Overhead & Profit @ 15%				1213.37
Total					9302.48
Rate of Each					9302.48
Say					9302.00

20 Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4317	Cost of 250mm dia air vessel with air release valve and 25mm dia gunmetal wheel valve for drainage	Each	1.00	12646.00	12646.00
Total					12646.00
Cartage @1% of A					126.46
Total					12772.46
B Labour					
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	0.50	558.00	279.00
Total					958.00
Total of A+B Rs.					13730.46
Add 12% GST (MF= 0.1405)					1929.13
Total					15659.59
C	Overhead & Profit @ 15%				2348.94
Total					18008.53
Rate of Each					18008.53
Say					18009.00

21 Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories :

21.1 Pendent Sprinkler

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4214	(a) Cost of 68 ⁰ centigrade Pandent Sprinkler	Each	1.00	168.00	168.00
4358	(b) Cost of 15mm dia MS Socket & teflon tape (Lumpsum)	Each	1.00	45.00	45.00
				Total	213.00
Cartage @1% of A					2.13
				Total	215.13
B Labour					
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
				Total	153.95
Total of A+B Rs.					369.08
Add 12% GST (MF= 0.1405)					51.86
				Total	420.93
C	Overhead & Profit @ 15%				63.14
				Total	484.07
				Rate of Each	484.07
				Say	484.00

21.2 Upright Sprinkler					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4215	(a) Cost of 68 ⁰ centigrade Upright Sprinkler	Each	1.00	168.00	168.00
4358	(b) Cost of 15mm dia MS Socket & teflon tape (Lumpsum)	Each	1.00	45.00	45.00
				Total	213.00
Cartage @1% of A					2.13
				Total	215.13
B Labour					
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
				Total	153.95
Total of A+B Rs.					369.08
Add 12% GST (MF= 0.1405)					51.86
				Total	420.93
C	Overhead & Profit @ 15%				63.14
				Total	484.07
				Rate of Each	484.07
				Say	484.00

21.3 Horizontal side wall sprinkler					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4216	(a) Cost of 68 ⁰ centigrade Sprinkler	Each	1.00	240.00	240.00
4358	(b) Cost of 15mm dia MS Socket & teflon tape (Lumpsum)	Each	1.00	45.00	45.00
				Total	285.00
Cartage @1% of A					2.85
				Total	287.85
B Labour					
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10

1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				441.80
	Add 12% GST (MF= 0.1405)				62.07
				Total	503.87
C	Overhead & Profit @ 15%				75.58
	Total				579.45
	Rate of Each				579.45
	Say				579.00

21.4 Concealed sprinkler

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4217	(a) Cost of adjustable concealed sprinklar	Each	1.00	857.00	857.00
4358	(b) Cost of 15mm dia MS Socket & teflon tape (Lumpsum)	Each	1.00	45.00	45.00
				Total	902.00
	Cartage @1% of A				9.02
				Total	911.02
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				1064.97
	Add 12% GST (MF= 0.1405)				149.63
				Total	1214.59
C	Overhead & Profit @ 15%				182.19
	Total				1396.78
	Rate of Each				1396.78
	Say				1397.00

22 Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4318	Cost of water flow switch	Each	1.00	986.00	986.00
	Cartage @1% of A				9.86
				Total	995.86
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				1149.81
	Add 12% GST (MF= 0.1405)				161.55
				Total	1311.35
C	Overhead & Profit @ 15%				196.70
	Total				1508.06
	Rate of Each				1508.06
	Say				1508.00

23 Providing & fixing flow switch in following sizes M.S. pipe including connection etc as required.

23.1 100mm dia

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				

4222	Cost of water flow switch	Each	1.00	4945.00	4945.00
				Cartage @1% of A	49.45
				Total	4994.45
B	Labour				
1004	Fitter, Grade 1	day	0.250	679.00	169.75
1087	Welder	day	0.250	679.00	169.75
1025	Helper	day	0.500	558.00	279.00
				Total	618.50
	Total of A+B Rs.				5612.95
	Add 12% GST (MF= 0.1405)				788.62
				Total	6401.57
C	Overhead & Profit @ 15%				960.24
	Total				7361.80
	Rate of Each				7361.80
	Say				7362.00

23.2 150mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4223	Cost of water flow switch	Each	1.00	6083.00	6083.00
				Cartage @1% of A	60.83
				Total	6143.83
B	Labour				
1004	Fitter, Grade 1	day	0.250	679.00	169.75
1087	Welder	day	0.250	679.00	169.75
1025	Helper	day	0.500	558.00	279.00
				Total	618.50
	Total of A+B Rs.				6762.33
	Add 12% GST (MF= 0.1405)				950.11
				Total	7712.44
C	Overhead & Profit @ 15%				1156.87
	Total				8869.30
	Rate of Each				8869.30
	Say				8869.00

24 Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of following sizes as required :

24.1 80mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4226	Cost of 80mm dia hydrolic alarm valve with water motor gong	Each	1.00	30777.00	30777.00
	Cartage @1% of A				307.77
				Total	31084.77
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	1.00	558.00	558.00
	Total				1237.00
	Total of A+B Rs.				32321.77
	Add 12% GST (MF= 0.1405)				4541.21
				Total	36862.98
C	Overhead & Profit @ 15%				5529.45

Total	42392.43
Rate of Each	42392.43
Say	42392.00

24.2 100mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4225	Cost of 100mm dia hydrolic alarm valve with water motor gong Cartage @1% of A	Each	1.00	32517.00	32517.00
					325.17
				Total	32842.17
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	1.00	558.00	558.00
	Total				1237.00
	Total of A+B Rs.				34079.17
	Add 12% GST (MF= 0.1405)				4788.12
				Total	38867.29
C	Overhead & Profit @ 15%				5830.09
	Total				44697.39
	Rate of Each				44697.39
	Say				44697.00

24.3 150mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4224	Cost of 150mm dia hydraulic alarm wall with water motor gong Cartage @1% of A	Each	1.00	34933.00	34933.00
					349.33
				Total	35282.33
B	Labour				
1004	Fitter, Grade 1	day	0.50	679.00	339.50
1087	Welder	day	0.50	679.00	339.50
1025	Helper	day	1.00	558.00	558.00
	Total				1237.00
	Total of A+B Rs.				36519.33
	Add 12% GST (MF= 0.1405)				5130.97
				Total	41650.30
C	Overhead & Profit @ 15%				6247.54
	Total				47897.84
	Rate of Each				47897.84
	Say				47898.00

25 Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.

25.1 700mm					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4218	(a) Cost of 700mm flexible drop	Each	1.00	795.00	795.00
4359	(b) Cot of teflon tape	Each	1.00	20.00	20.00
4360	(c) 25mm dia MS Socket	Each	1.00	45.00	45.00
				Total	860.00
	Cartage @1% of A				8.60
				Total	868.60

B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				1022.55
	Add 12% GST (MF= 0.1405)				143.67
				Total	1166.21
C	Overhead & Profit @ 15%				174.93
	Total				1341.15
	Rate of Each				1341.15
	Say				1341.00

25.2 1000mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4219	(a) Cost of 1000mm flexible drop	Each	1.00	945.00	945.00
4359	(b) Cot of teflon tape	Each	1.00	20.00	20.00
4360	(c) 25mm dia MS Socket	Each	1.00	45.00	45.00
	Total				1010.00
	Cartage @1% of A				10.10
	Total				1020.10
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				1174.05
	Add 12% GST (MF= 0.1405)				164.95
				Total	1339.00
C	Overhead & Profit @ 15%				200.85
	Total				1539.85
	Rate of Each				1539.85
	Say				1540.00

25.3 1200mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4220	(a) Cost of 1200mm flexible drop	Each	1.00	1015.00	1015.00
4359	(b) Cot of teflon tape	Each	1.00	20.00	20.00
4360	(c) 25mm dia MS Socket	Each	1.00	45.00	45.00
	Total				1080.00
	Cartage @1% of A				10.80
	Total				1090.80
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
	Total				153.95
	Total of A+B Rs.				1244.75
	Add 12% GST (MF= 0.1405)				174.89
				Total	1419.63
C	Overhead & Profit @ 15%				212.94
	Total				1632.58
	Rate of Each				1632.58
	Say				1633.00

25.4 1500mm

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
---------	-------------	------	------	------	----------

A Materials					
4221	(a) Cost of 1500mm flexible drop	Each	1.00	1137.50	1137.50
4359	(b) Cot of teflon tape	Each	1.00	20.00	20.00
4360	(c) 25mm dia MS Socket	Each	1.00	45.00	45.00
				Total	1202.50
				Cartage @1% of A	12.03
				Total	1214.53
B Labour					
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
				Total	153.95
Total of A+B Rs.					1368.47
Add 12% GST (MF= 0.1405)					192.27
				Total	1560.74
C	Overhead & Profit @ 15%				234.11
Total					1794.85
Rate of Each					1794.85
Say					1795.00

26 Supplying, installation, testing & commissioning of deluge valve (to be used for water curtains) UL listed with wet pilot basic trim assembly for DVA with test and alarm, drip and drain valve with water motor gong complete as required.

26.1 50 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4230	Cost of 50mm dia deluge valve	Each	1.00	60280.00	60280.00
				Cartage @1% of A	602.80
				Total	60882.80
B Labour					
1004	Fitter, Grade 1	day	1.00	679.00	679.00
1087	Welder	day	1.00	679.00	679.00
1025	Helper	day	1.00	558.00	558.00
				Total	1916.00
Total of A+B Rs.					62798.80
Add 12% GST (MF= 0.1405)					8823.23
				Total	71622.03
C	Overhead & Profit @ 15%				10743.30
Total					82365.34
Rate of Each					82365.34
Say					82365.00

26.2 80 mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4229	Cost of 80mm dia deluge valve	Each	1.00	60732.00	60732.00
				Cartage @1% of A	607.32
				Total	61339.32
B Labour					
1004	Fitter, Grade 1	day	1.00	679.00	679.00
1087	Welder	day	1.00	679.00	679.00
1025	Helper	day	1.00	558.00	558.00
				Total	1916.00
Total of A+B Rs.					63255.32
Add 12% GST (MF= 0.1405)					8887.37
				Total	72142.69
C	Overhead & Profit @ 15%				10821.40
Total					82964.10
Rate of Each					82964.10

Say 82964.00

26.3 100mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4228	Cost of 100mm dia deluge valve Cartage @1% of A	Each	1.00	68238.00	68238.00 682.38
Total					68920.38
B Labour					
1004	Fitter, Grade 1	day	1.00	679.00	679.00
1087	Welder	day	1.00	679.00	679.00
1025	Helper	day	1.00	558.00	558.00
Total					1916.00
Total of A+B Rs.					70836.38
Add 12% GST (MF= 0.1405)					9952.51
Total					80788.89
C	Overhead & Profit @ 15%				12118.33
Total					92907.23
Rate of Each					92907.23
Say					92907.00

26.4 150mm dia					
ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4227	Cost of 150mm dia deluge valve Cartage @1% of A	Each	1.00	84888.00	84888.00 848.88
Total					85736.88
B Labour					
1004	Fitter, Grade 1	day	1.00	679.00	679.00
1087	Welder	day	1.00	679.00	679.00
1025	Helper	day	1.00	558.00	558.00
Total					1916.00
Total of A+B Rs.					87652.88
Add 12% GST (MF= 0.1405)					12315.23
Total					99968.11
C	Overhead & Profit @ 15%				14995.22
Total					114963.33
Rate of Each					114963.33
Say					114963.00

27 Providing, installation, testing & commissioning of water curtain nozzle 15mm dia nickel chrome plated brass, BSPT, K-factor as per design consideration complete as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A Materials					
4231	(a) Cost of water curtain nozzle, nickel chrome plated brass	Each	1.00	313.20	313.20
4361	(b) Cost of MS Socket 15mm dia	Each	1.00	35.00	35.00
Total					348.20
Cartage @1% of A					3.48
Total					351.68
B Labour					
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
Total					153.95
Total of A+B Rs.					505.63
Add 12% GST (MF= 0.1405)					71.04
Total					576.67

C	Overhead & Profit @ 15%	86.50
	Total	663.17
	Rate of Each	663.17
	Say	663.00

28 Providing, installation, testing & commissioning of electric release trim assembly for deluge wall with two way solenoid valve, weather proof operation on 24 volts DC supply complete as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4232	Cost of electric release solenoid valve	Each	1.00	5382.00	5382.00
				Cartage @1% of A	53.82
				Total	5435.82
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1087	Welder	day	0.062	679.00	42.10
1025	Helper	day	0.125	558.00	69.75
				Total	153.95
	Total of A+B Rs.				5589.77
	Add 12% GST (MF= 0.1405)				785.36
				Total	6375.13
C	Overhead & Profit @ 15%				956.27
	Total				7331.40
	Rate of Each				7331.40
	Say				7331.00

29 Providing, installation, testing & commissioning of adjustable rosette plate for 15mm dia in white finish UL Listed or FM approved complete as required.

ICD No.	Description	Unit	Qty.	Rate	Amount ₹
A	Materials				
4233	Cost of adjustable rosette plate	Each	1.00	80.00	80.00
				Cartage @1% of A	0.80
				Total	80.80
B	Labour				
1004	Fitter, Grade 1	day	0.062	679.00	42.10
1025	Helper	day	0.062	558.00	34.60
				Total	76.69
	Total of A+B Rs.				157.49
	Add 12% GST (MF= 0.1405)				22.13
				Total	179.62
C	Overhead & Profit @ 15%				26.94
	Total				206.57
	Rate of Each				206.57
	Say				207.00

BASIC RATE OF LABOUR

Code No.	DESCRIPTION	Unit	Rate ₹
1004	Fitter, Grade 1	day	679
1006	Painter	day	617
1019	Electrician	day	679
1025	Helper	day	558
1087	Welder	day	679

Note:- 1) Labour rates are exclusive of contractor's profit and overheads and are inclusive of days for weekly day of rest.

BASIC RATE OF MATERIALS

Note:- These rates are exclusive of Contractor's profit, Overheads and Carriage and any taxes etc.

Code No.	DESCRIPTION	Unit	Rate ₹
4201	Fire Hydrant single outlet gunmetal NB inlet brass spindle 63mm female instantaneous/outlet with PVC blank cap and GI chain as per IS:5290 (ISI Marked) Single head gunmetal hydrant valve	Each	4685.00
4202	Short stainless steel branch pipe 63mm male instantaneous inlet male threaded outlet fitted with 15mm bore nozzle as per IS:903 (ISI Marked) Single Head Stainless Steel Hydrant Valve	Each	3547.00
4203	Gunmetal short branch pipe	Each	1758.00
4204	Short stainless steel branch pipe	Each	1189.00
4205	FBC CI Body having two nos. gunmetal 63mm male instantaneous inlet coupling conforming to IS:903 fitted with non return valve flange outlet of 100mm dia complete with 25mm size gunmetal drain valve, two nos. rubber blank caps and chain Two way gunmetal FBC connection	Each	4002.00
4206	Three way gunmetal FBC connection	Each	6050.00
4207	Four way gunmetal FBC connection	Each	9462.00
4208	Sythetic fibre circular woven jacketed rubber lined fire hose delivery having 38Kg. Per Cm. Sq. burst pressure, 28Kg. Per Cm. proof pressure, 14Kg. Per Cm. working pressure as per IS:636 (ISI Marked) Type A in 15 Meters length, 63mm dia duly copper via bounded two coupling pair of male female parts any duly instantaneous type, 63mm size as per IS:903 (ISI Marked) RRL Hose with male female gunmetal coupling	Each	3861.00
4209	RRL Hose with male female stainless steel coupling	Each	3292.00
4210	19mm swinging hose reel complete reinforced braided thermoplastic red/black hose Swinging type hose reel complete with 19mm x 30 Mtrs. Thermoplastic hose Type-II	Each	2043.00
4211	Swinging type hose reel complete with 19mm x 40 Mtrs. Thermoplastic hose Type-II	Each	3232.00
4212	Hose reel drum	Each	2350.00
4213	25mm dia gun metal globe valve & nozzle.	Each	691.00
4214	Sprinkler operating at 68° centigrade standard response, standard coverage 15mm BPST, K56 UL listed and FM approved 68° centigrade Pendant Sprinkler	Each	168.00
4215	68° centigrade Upright Sprinkler	Each	168.00
4216	68° centigrade Sidewall Sprinkler	Each	240.00

Code No.	DESCRIPTION	Unit	Rate ₹
4217	68 ^o centigrade Concealed Sprinkler Sprinkler flexible drops stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread 1 No. reducer + 1 No. Nipple + 2 Side Brackets + 1 Center Bracket + 625 mm stockbar	Each	857.00
4218	700mm flexible drop	Each	795.00
4219	1000mm flexible drop	Each	945.00
4220	1200mm flexible drop	Each	1015.00
4221	1500mm flexible drop	Each	1137.50
4222	Water flow switch for 100mm dia pipe	Each	4945.00
4223	Water flow switch for 150mm dia pipe hydraulic alarm valve with water motor gong bell and constant pressure trim assembly complete as required	Each	6083.00
4224	150mm dia hydraulic alarm valve with water motor gong	Each	34933.00
4225	100mm dia hydraulic alarm valve with water motor gong	Each	32517.00
4226	80mm dia hydraulic alarm valve with water motor gong Deluge valve with wet pilot basic trim assembly with test and alarm, drip and drain valve with water motor gong	Each	30777.00
4227	150mm dia deluge valve	Each	84888.00
4228	100mm dia deluge valve	Each	68238.00
4229	80mm dia deluge valve	Each	60732.00
4230	50mm dia deluge valve Water curtain nozzle, 15mm dia BPST K-Factor as per design consideration	Each	60280.00
4231	Water curtain nozzle, nickel chrome plated brass	Each	313.20
4232	Electric release trim assembly for deluge valve with two way solenoid valve, weather proof operation on 24 volts DC	Each	5382.00
4233	Adjustable rosette plate for 15mm dia (Powder Coated) BUTTERFLY VALVE PN 1.6 rating	Each	80.00
4234	40mm dia butterfly valve	Each	1948.00
4235	50mm dia butterfly valve	Each	1948.00
4236	65mm dia butterfly valve	Each	2150.00
4237	80mm dia butterfly valve	Each	2382.00
4238	100mm dia butterfly valve	Each	3305.00
4239	125mm dia butterfly valve	Each	4175.00
4240	150mm dia butterfly valve	Each	4803.00
4241	200mm dia butterfly valve	Each	9188.00
4242	250mm dia butterfly valve	Each	12912.00
4243	300mm dia butterfly valve MS pipe as per IS/1239 ISI MARKED C Class (heavy)	Each	16105.00
4244	25mm dia MS Pipe	m	118.00
4245	32mm dia MS Pipe	m	155.00
4246	40mm dia MS Pipe	m	180.00
4247	50mm dia MS Pipe	m	265.00
4248	65mm dia MS Pipe	m	350.00
4249	80mm dia MS Pipe	m	424.00

Code No.	DESCRIPTION	Unit	Rate ₹
4250	100mm dia MS Pipe	m	634.00
4251	125mm dia MS Pipe	m	819.00
4252	150mm dia MS Pipe	m	938.00
4253	200mm dia MS Pipe (6.3 mm thick)	m	1426.00
4254	250mm dia MS Pipe (6.3 mm thick)	m	1798.00
4255	300mm dia MS Pipe (7.1 mm thick)	m	2106.00
	GI pipe as par IS/1239 ISI MARKED C Class (heavy)		
4256	25mm dia G.I. Pipe	m	171.00
4257	32mm dia G.I. Pipe	m	215.00
4258	40mm dia G.I. Pipe	m	250.00
4259	50mm dia G.I. Pipe	m	310.00
4260	65mm dia G.I. Pipe	m	395.00
4261	80mm dia G.I. Pipe	m	505.00
4262	100mm dia G.I. Pipe	m	714.00
4263	150mm dia G.I. Pipe	m	1066.00
	NON RETURN VALVE cast Iron double flange as per IS/5312 PN 1.6 rating complete with Bronze body & wedge Stainless Steel spindle, Gland packing, Rubber gasket		
4264	40mm dia Non Return Valve	Each	3311.00
4265	50mm dia Non Return Valve	Each	3311.00
4266	65mm dia Non Return Valve	Each	3785.00
4267	80mm dia Non Return Valve	Each	4366.00
4268	100mm dia Non Return Valve	Each	6607.00
4269	125mm dia Non Return Valve	Each	10290.00
4270	150mm dia Non Return Valve	Each	11718.00
4271	200mm dia Non Return Valve	Each	20013.00
4272	250mm dia Non Return Valve	Each	31946.00
4273	300mm dia Non Return Valve	Each	43392.00
	NON RISING cast Iron double flange SLUICE Valve as per ISI/14846 PN 1.6 rating complete with Bronze body & wedge Stainless Steel spindle, Gland packing, Rubber gasket		
4274	40mm DIA Sluice Valve	Each	3540.00
4275	50mm DIA Sluice Valve	Each	4532.00
4276	65mm DIA Sluice Valve	Each	5875.00
4277	80mm DIA Sluice Valve	Each	6663.00
4278	100mm DIA Sluice Valve	Each	9324.00
4279	125mm DIA Sluice Valve	Each	12511.00
4280	150mm DIA Sluice Valve	Each	15461.00
4281	200mm DIA Sluice Valve	Each	27639.00
4282	250mm DIA Sluice Valve	Each	32913.00
4283	300mm DIA Sluice Valve	Each	47409.00
	Cast iron double flange strainer with stainless steel mesh, PN 1.6 rating complete with accessories as required.		
4284	80mm dia CIDF SS mesh Strainer	Each	2530.80
4285	100mm dia CIDF SS mesh Strainer	Each	3636.00
4286	150mm dia CIDF SS mesh Strainer	Each	6791.40
4287	200mm dia CIDF SS mesh Strainer	Each	14689.80
4288	250mm dia CIDF SS mesh Strainer	Each	18450.90

Code No.	DESCRIPTION	Unit	Rate ₹
4289	300mm dia CIDF SS mesh Strainer	Each	25366.50
4290	25mm Air release valve as per IS:14845 ISI Marked	Each	1350.00
	electric driven main fire pump with motor, base plate coupling, coupling guard, foundation bolts and anti vibration pads		
4291	2850 lpm at 88 m Head	Each	331000.00
4292	2850 lpm at 70 m Head	Each	295000.00
4293	2850 lpm at 56 m Head	Each	294000.00
4294	2280 lpm at 88 m Head	Each	294000.00
4295	2280 lpm at 70 m Head	Each	268000.00
4296	2280 lpm at 56 m Head	Each	240000.00
4297	1620 lpm at 88 m Head	Each	268000.00
4298	1620 lpm at 70 m Head	Each	240000.00
4299	1620 lpm at 56 m Head	Each	204000.00
	diesel engine driven main fire pump, tank, exhaust, foundation bolts, anti vibration pads etc.		
4300	2850 lpm at 88 m Head	Each	505000.00
4301	2850 lpm at 70 m Head	Each	453700.00
4302	2850 lpm at 56 m Head	Each	451000.00
4303	2280 lpm at 88 m Head	Each	468000.00
4304	2280 lpm at 70 m Head	Each	450000.00
4305	2280 lpm at 56 m Head	Each	448000.00
4306	1620 lpm at 88 m Head	Each	463100.00
4307	1620 lpm at 70 m Head	Each	435000.00
4308	1620 lpm at 56 m Head	Each	375000.00
	electric driven pressurisation pump (Jockey pump)		
4309	180 lpm at 88 m Head	Each	90000.00
4310	180 lpm at 70 m Head	Each	72000.00
4311	180 lpm at 56 m Head	Each	56000.00
4312	300 lpm at 88 m Head	Each	120000.00
4313	300 lpm at 70 m Head	Each	90200.00
4314	300 lpm at 56 m Head	Each	81000.00
	electric driven pressurisation pump (Terrace pump)		
4315	900 lpm at 35 m Head	Each	70909.00
4316	450 lpm at 35 m Head	Each	59091.00
4317	Air Vessel 250 mm	Each	12646.00
4318	Pressure switch	Each	986.00
4319	Orifice plate made of 6 mm. thick stainless steel with orifice of required size in between flange & landing valve of external and internal hydrant to reduce pressure to working pressure of 3.5 kg/cm²	Each	802.00
4320	Cost of Cement concrete foundation with 35x35x5 mm angle frame on edges duly plastered Cum with inertia blocks.	Cum	4500.00
	Cost of Control Panel		
4321	INCOMING 250A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Digital Ammeter (0-250 A) with selector switch & CTs etc.		

Code No.	DESCRIPTION	Unit	Rate ₹
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 300A		
	OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump 125 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Jockey Pump 63 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine		
	System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Each	175000.00
	Incomings 400A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc.		

Code No.	DESCRIPTION	Unit	Rate ₹
	LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500A		
	Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump 200 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Jockey Pump 100 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine		
4322	System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specifications.	Each	205000.00
	Incomings 630A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps		
	Outgoings		

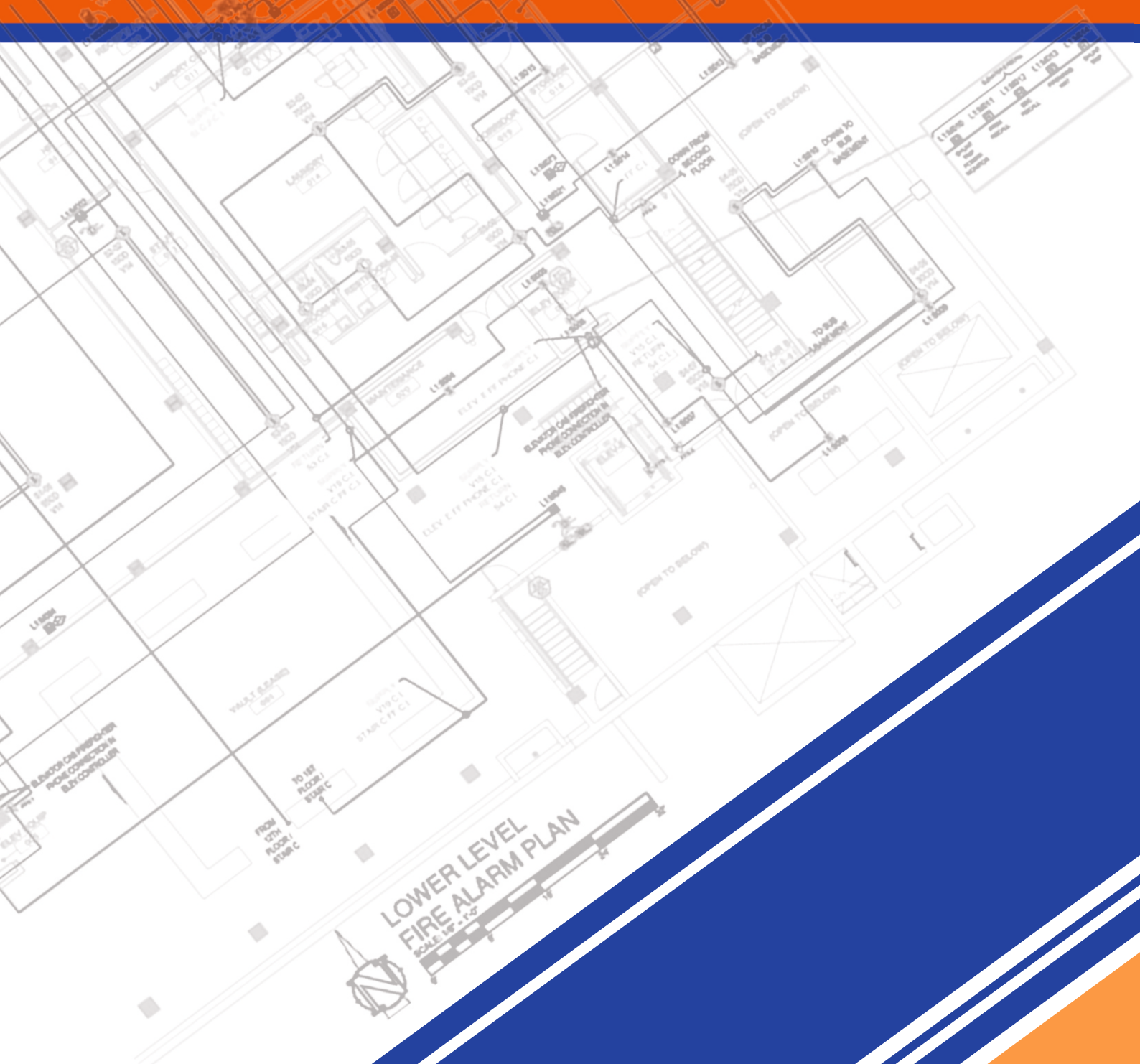
Code No.	DESCRIPTION	Unit	Rate ₹
	(Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump 250 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Jockey Pump 125 A, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation.		
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine		
4323	System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Each	230000.00
	Incomings 400A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-400 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 500Amps		
	Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) Main Fire Pumps		

Code No.	DESCRIPTION	Unit	Rate ₹
	125 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Jockey Pump 63 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine		
4324	System Controller Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Each	265000.00
	Incomings 630A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-630 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 800Amps		
	Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump		

Code No.	DESCRIPTION	Unit	Rate ₹
	200 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 75 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Jockey Pump 100 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine System Controller		
4325	Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Each	320000.00
	Incomings 800A, 50kA 4 Pole MCCB, Ics=100% Icu Rating Digital Voltmeter 0-500V with selector switch Ammeter (0-800 A) with selector switch & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 1000Amps		
	Outgoings (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps)		
	Main Fire Pump		

Code No.	DESCRIPTION	Unit	Rate ₹
	250 Amp, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 100 hp pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	Jockey Pump 125 Amp, 50kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 2 sets		
	DIESEL ENGINE CONTROL Control for diesel engine comprising - Automatic/Manual selector switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter All standard relays and accessories for automatic operation of diesel engine		
	System Controller		
4326	Designing, Supply, Installation, Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification	Each	410000.00
4327	Basic cost of 4 mm thick Anti Corrosive Pipe Protection Bituminous Tape,	sq m	210.00
4328	Basic cost of anticorrosive Black paint	Litre	110.00
4329	Cost of 4 Nos. Nuts bolts and washers	Set	50.00
4330	Cost of 1 No. 3 mm thick rubber gasket	Each	70.00
4331	Cost of 1 No. MS flange as per IS drilling 16 mm thick LS	Set	200.00
4332	Cost of Welding rod	Job	40.00
4333	Cost of 40 mm dia Flange	Each	110.00
4334	Cost of 8 Nos. Nut bolt fastner and packing gaskets	Each	90.00
4335	Cost of Welding rod LS	Each	60.00
4336	Cost of 50 mm dia butterfly valve	Each	110.00
4337	Cost of 50mm dia Flange	Each	110.00
4338	Cost of 65 mm dia Flange	Each	110.00
4339	Cost of 65 mm dia butterfly valve	Each	110.00
4340	Cost of 80 mm dia Flange	Each	220.00

Code No.	DESCRIPTION	Unit	Rate ₹
4341	Cost of 8 Nos. Nut bolt fastner and packing gaskets	Each	180.00
4342	Cost of Welding rod LS	Each	90.00
4343	Cost of 100 mm dia Flange	Each	220.00
4344	Cost of 150 mm dia Flange	Each	220.00
4345	Cost of 200 mm dia Flange	Each	340.00
4346	Cost of 8 Nos. Nut bolt fastner and packing gaskets	Each	300.00
4347	Cost of Welding rod LS	Each	120.00
4348	Cost of 250 mm dia Flange	Each	340.00
4349	Cost of 300 mm dia Flange	Each	340.00
4350	Cost of packing gaskets	LS	50.00
4351	Cost of 125 mm dia Flange	Each	220.00
4352	Cost of 80 mm dia Flange	Each	110.00
4353	Cost of 100 mm dia Flange	Each	110.00
4354	Cost of 150 mm dia Flange	Each	110.00
4355	Cost of 25mm dia socket, union, nipples (Lumpsum)	Each	210.00
4356	Cost of 25mm dia gunmetel gate valve	Each	770.00
4357	Cost of 250mm dia air vessel wit air release valve and 25mm dia gunmetel wheel valve for drainage	Each	14000.00
4358	Cost of 15mm dia MS Socket & teflon tape (Lumpsum)	Each	45.00
4359	Cot of teflon tape	Each	20.00
4360	25mm dia MS Socket	Each	45.00
4361	Cost of MS Socket 15mm dia	Each	35.00
4362	Cost of water flow switch	Each	6500.00
4363	Cost of Packing gaskets	LS	50.00
4364	Cost of 4 Nos. Nut Bolt fastner & packing gaskets	LS	90.00
4365	Cost of 12 Nos. Nut bolt fastner and packing gaskets	Each	450.00



**LOWER LEVEL
FIRE ALARM PLAN**



SCALE 1:120

