

MEMO NO. 341/ SOR-10/ B.P./2010/  
OFFICE OF THE ENGINEER-IN-CHIEF  
WATER RESOURCES DEPARTMENT  
CHHATTISGARH, RAIPUR

Raipur, Dated /08/2018

To, .

All Chief Engineer  
All Superintending Engineer  
All Executive Engineer (in Charge of Division)  
Water Resources Department, Chhattisgarh

Sub : Amendment No. 10 to the schedule of Rates for works of Water Resources Department in Chhattisgarh in force from 01.08.2010.

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The Schedule of Rate for Water Resources Department in Chhattisgarh is in force from 01.08.2010. In continuation to the amendment No. 9 to this SOR (issued vide letter no. 341/SOR-10/B.P./2010/9243/ Raipur, Dated 28.05.2018) the following new amendment are hereby issued in the above Stated Schedule of Rates.

**Amendment No. 10 – Item No. 4426,4427,4428,4429,4447,4448 and 4449 of chapter no 44 :  
Pressure Irrigation network and allied works.**

Encl : As above

*sq*  
(H.R. Kutare)  
Engineer-in-Chief  
Water Resources Department  
Chhattisgarh, Raipur

Endt. NO. 341/ SOR-10/ B.P./2010/ 13646  
Copy Forwarded to:

Raipur, Dated 10 / 08 / 2018

1. The Secretary, Govt. of Chhattisgarh, Water Resources Department, Mantralaya, Mahanadi Bhawan, Naya Raipur.
2. The Engineer-in-Chief , PWD Sirpur Bhavan, Naya Raipur.
3. The Engineer-in-Chief , PHED Indrawati Bhavan, Naya Raipur.
4. The Director, Rate & Cost, CWC, Sewa Bhavan R.K. Puram, New Delhi.
5. The Accountant General, Chhattisgarh , Near Vidhan Sabha, Raipur.
6. The Chief Technical Examiner, Indrawati Bhavan, Naya Raipur.
7. The Chief Engineer/Superintending Engineer/Executive Engineer -----
8. The Executive Engineer MIS, Data Center Sihawa Bhavan Campus, Civil line Raipur, for uploading amendment in departmental website.

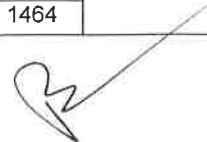
Encl : As above

*[Signature]*  
Engineer-in-Chief  
Water Resources Department  
Chhattisgarh, Raipur  
8.8.18

Chapter 44  
PRESSURE IRRIGATION NETWORK AND ALLIED WORKS  
(Amendment No. - 10)

Item no.	Description of item	Unit	Rate	Remark
4426	Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded mild steel (min Fe-410 grade) delivery pipes of specified diameter and plate thickness (As per relevant IS code) with welded ends wherever required and provided one coats of 400 micron thick food grade epoxy paint/ 500 micron polyurethane for inner surface and 3LPE/1000 micron polyurethane on outer surface. Including cost of all materials, machinery, labour, cutting, bending, welding, finishing, painting, conveying to spot, lowering, aligning, jointing, arranging water for testing, ultrasonic/ hydraulic testing at fabrication site and after laying and jointing at specified test pressure etc. complete as per specifications and approved drawings.			"These pipes can be used only for works relating to pressure irrigation network i.e. only for rising mains (from pump to distribution chamber or overhead tank and not beyond) and shall not be used for normal canal structure works e.g. for canal syphon, C.D. works, VRB etc."
1	300 mm Dia with 4mm Thickness	m	2661	
2	350 mm Dia with 4 mm Thickness	m	3102	
3	400 mm Dia with 4 mm Thickness	m	3543	
4	450 mm Dia with 4 mm Thickness	m	3985	
5	500 mm Dia with 5 mm Thickness	m	5216	
6	600mm Dia with 5 mm Thickness	m	6256	
7	700 mm Dia with 6 mm Thickness	m	8400	
8	750 mm Dia with 6 mm Thickness	m	8998	
9	800 mm Dia with 6 mm Thickness	m	9596	
10	900 mm Dia with 6 mm Thickness	m	10792	
11	1000 mm Dia with 6 mm Thickness	m	11988	
12	1100 mm Dia with 7 mm Thickness	m	13184	
13	1200 mm Dia with 8 mm Thickness	m	18162	
14	1300 mm Dia with 8 mm Thickness	m	19671	
15	1400 mm Dia with 8 mm Thickness	m	21181	
16	1500 mm Dia with 9 mm Thickness	m	25053	
17	1600 mm Dia with 10 mm Thickness	m	29240	
18	1700 mm Dia with 10 mm Thickness	m	31063	
19	1800 mm Dia with 10 mm Thickness	m	32886	
20	1900 mm Dia with 12 mm Thickness	m	40696	
21	2000 mm Dia with 12 mm Thickness	m	42832	
22	2100 mm Dia with 12 mm Thickness	m	44968	
23	2200 mm Dia with 12 mm Thickness	m	47104	
24	2300 mm Dia with 14 mm Thickness	m	56487	
25	2400 mm Dia with 14 mm Thickness	m	58936	
26	2500 mm Dia with 14 mm Thickness	m	61386	
27	2600 mm Dia with 14 mm Thickness	m	63835	
28	2700 mm Dia with 16 mm Thickness	m	74791	
29	2800 mm Dia with 16 mm Thickness	m	77554	
30	2900 mm Dia with 16 mm Thickness	m	80316	
31	3000 mm Dia with 16 mm Thickness	m	83079	
4427	A The rate of fabricated MS pipe of various diameter and thickness as per design and specifications without coating. (To be used for Diameter, thickness of MS pipes other than mentioned in item 4426)	Tonne	63517	


Item no.	Description of item	Unit	Rate	Remark
4427	B Fabricating, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded fabricated MS pipe of various diameter and thickness as per design and specifications (To be used for Diameter, thickness of MS pipes other than mentioned in item 4426 As per relevant IS code) with welded ends wherever required and provided one coats of 400 micron thick food grade epoxy paint/ 500 micron polyurethane for inner surface and 3LPE/1000 micron polyurethane on outer surface. Including cost of all materials, machinery, labour, cutting, bending, welding, finishing, painting, conveying to spot, lowering, aligning, jointing, arranging water for testing, ultrasonic/ hydraulic testing at fabrication site and after laying and jointing at specified test pressure etc. complete as per specifications and approved drawings.	Tonne	81004	
4428	Providing, laying, Jointing & field testing of High Density Polyethylene pipes,(HDPE) confirming to IS: 4984/ 14151/ 12786/ 13488 with necessary jointing material like mechanical connector or jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror or heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process it may be required to be done with Jacks/ hydraulic jacks/ by fusion machine (50mm and above fusion jointed and below 50mm mechanical jointed)			"These pipes can be used only for works relating to pressure irrigation network i.e. only for rising mains (from pump to distribution chamber or overhead tank and not beyond) and shall not be used for normal canal structure works e.g. for canal syphon, C.D. works, VRB etc."
	<b>A For PN 6 (6 kg/sq cm)</b>			
	(i) 63 mm dia pipes	m	125	
	(ii) 75 mm dia pipes	m	178	
	(iii) 90 mm dia pipes	m	245	
	(iv) 110 mm dia. pipes	m	351	
	(v) 125 mm dia. pipes	m	457	
	(vi) 140 mm dia. pipes	m	568	
	(vii) 160 mm dia. pipes	m	740	
	(viii) 180 mm dia. pipes	m	926	
	(ix) 200 mm dia. pipes	m	1145	
	(x) 225 mm dia. pipes	m	1448	
	(xi) 250 mm dia. pipes	m	1775	
	(xii) 280 mm dia. pipes	m	2217	
	(xiii) 315 mm dia. pipes	m	2798	
	(xiv) 355 mm dia. pipes	m	3570	
	(xv) 400 mm dia. pipes	m	4607	
	(xvi) 450 mm dia. pipes	m	5834	
	(xvii) 500 mm dia. pipes	m	7210	
	(xviii) 560 mm dia. pipes	m	9020	
	(xix) 630 mm dia. pipes	m	11399	
	(xx) 710 mm dia. pipes	m	13782	
	<b>B For PN 8 (8 kg/sq cm)</b>			
	(i) 63 mm dia pipes	m	156	
	(ii) 75 mm dia pipes	m	219	
	(iii) 90 mm dia pipes	m	307	
	(iv) 110 mm dia. pipes	m	452	
	(v) 125 mm dia. pipes	m	580	
	(vi) 140 mm dia. pipes	m	721	
	(vii) 160 mm dia. pipes	m	942	
	(viii) 180 mm dia. pipes	m	1182	
	(ix) 200 mm dia. pipes	m	1464	




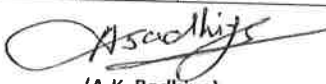
Item no.	Description of item	Unit	Rate	Remark
(x)	225 mm dia. pipes	m	1848	
(xi)	250 mm dia. pipes	m	2274	
(xii)	280 mm dia. pipes	m	2843	
(xiii)	315 mm dia. pipes	m	3585	
(xiv)	355 mm dia. pipes	m	4570	
(xv)	400 mm dia. pipes	m	5914	
(xvi)	450 mm dia. pipes	m	7497	
(xvii)	500 mm dia. pipes	m	9245	
(xviii)	560 mm dia. pipes	m	11600	
(xix)	630 mm dia. pipes	m	14656	
(xx)	710 mm dia. pipes	m	17715	
<b>4429</b>	Providing ,Laying and jointing <b>socket &amp; spigot centrifugally cast (spun) Ductile Iron pressure pipe</b> with inside cement mortar lining with epoxy based seal coat (class K-7) conforming to IS 8329/2000 with suitable rubber gasket (Push on) joint as per IS 5382/85 including cost of rubber gasket.			
1	80mm dia	RM	909	
2	100mm dia	RM	1017	
3	150mm dia	RM	1356	
4	200mm dia	RM	1829	
5	250mm dia	RM	2417	
6	300mm dia	RM	2993	
7	350mm dia	RM	3807	
8	400mm dia	RM	4870	
9	450mm dia	RM	5674	
10	500mm dia	RM	6618	
11	600mm dia	RM	8318	
12	700mm dia	RM	12096	
13	750mm dia	RM	14076	
14	800mm dia	RM	15776	
15	900mm dia	RM	19250	
16	1000mm dia	RM	23121	
17	1100mm dia	RM	26981	
18	1200mm dia	RM	30526	
19	1400mm dia	RM	37551	
<b>4447</b>	<del>-----Deleted-----</del>			
<b>4448</b>	Survey, planning, design and Construction of underground pressurized pipe distribution network for micro irrigation system excluding the cost of rising & gravity mains and sprinkler/drip system to facilitate pressurized irrigation with duty 0.35 lit/sec/ha and working/operating pressure of minimum 6 kg/cm2 with following provisions :- 1. HDPE pipe of category PE 100 PN 6 for diameter of pipe below 300 mm conforming to relevant IS codes. 2. DI for pipe for diameter 300 mm and above up to 600mm conforming to relevant IS codes. 3. DI for pipe for diameter above 600mm conforming to relevant IS codes 4. DI pipes with cement mortar lining with seal coat for inner surface and zinc coating on outer surface.			

Item no.	Description of item	Unit	Rate	Remark
	<p>The rates are inclusive of :-</p> <p>A- All works like excavation, preparation of bedding, laying, joining, backfilling testing and commissioning and testing of the system as per specifications and codal requirements., crossing of all natural drainage, nallas as per requirement of work complete.</p> <p>B- Providing and fixing all required valves, bends, manifolds, controls etc. conforming to related BIS/European standards and including Supply, Erection and Commissioning, testing of Outlet Management System control at minimum 20/30 ha which should be able to control the flow as per desired minimum pressure of 2 kg/cm2 at 1.0 hectare with uniform distribution of water to all the users irrespective of its location, elevation and distance from the water supply source including recording, measuring, monitoring and control with suitable power source and alternatively by solar power with three days back up capacity with no recurring cost for Communication with GSM/GPRS/RADIO etc. System should be kept in Protective Enclosure capable of giving vandalism alert and shall be SCADA compliant to the main control room operations including of all material, labour, lead, lift and all incidental charges.</p> <p>(This item shall be used for estimation purpose at DPR stage only. For estimation purpose the CCA in consideration has been suitably sub-divided in 5000/4800 ha boundaries beyond rising/gravity mains. In case the total CCA under consideration is less than 5000/4800 ha the cost of RM/GM (rising/gravity mains) shall deemed to be included in this item.)</p>			
<b>A</b>	<b>Up to 2.5 ha Chak</b>			
1	From 5000 to 500 Ha chak.	Rs./ha	20785	
2	500 Ha to 20 Ha chak.	Rs./ha	28011	
3	20 Ha to n outlet to 2.5 ha.	Rs./ha	23731	
	(including Cost of SCADA, valves, bends, manifolds, controls, Outlet Management System, outlet with manual valve at two and half hectare i/c communications, Protective Enclosure and solar power with three days backup)			
4	Add For 8 time Duty below 20 Ha. Chak	Rs./ha	3439	
<b>B</b>	<b>Up to 1.0 ha Chak</b>			
1	From 4800 to 300 Ha chak.	Rs./ha	29632	
2	300 Ha to 30 Ha chak.	Rs./ha	16316	
3	30 Ha to outlet to 1 ha.	Rs./ha	33777	
	(including Cost of SCADA, valves, bends, manifolds, controls, Outlet Management System, outlet with manual valve at one hectare i/c communications, Protective Enclosure and solar power with three days backup)			
4	Add For 10 time Duty below 30 Ha Chak	Rs./ha	2677	
<b>4449</b>	<p>Design and construction of underground pipe distribution network for hose irrigation system, excluding rising main but with pressurized irrigation with duty of 0.45lit/sec/ha and of working/ operation pressure not exceeding 4kg/cm2 with following provisions :-</p> <ol style="list-style-type: none"> <li>1. HDPE/DWC/SPIRAL DWC/ DI pipe conforming to BIS codes and relevant international specification for pipes 63mm to 900mm diameter.</li> <li>2. Pipes of DI conforming to relevant BIS codes for pipe dia greater than 900mm.</li> <li>3. DI pipes shall be with cement mortar lining with seal coat for inner surface and zinc coating on outer surface.</li> </ol> <p>The rates are inclusive of :-</p> <p>a. All works like excavation, preparation of bedding, laying, joining, backfilling testing and commissioning and testing of the system as per specifications and codal requirements, crossing of all natural drainage, nallas as per requirement of work complete.</p>			


Item no.	Description of item	Unit	Rate	Remark
	<p>b. Providing and fixing all required valves, bends, manifolds, controls etc conforming to related BIS/European standards and including Supply, Erection and Commissioning, testing of Outlet Management System with outlet duty of 0.45 lit/sec/ha up to minimum 30 ha which should be able to control the flow as per desired minimum pressure of 1.5 meter exit gradient at service outlet which shall consist of orifice type of nozzle able to deliver desired flow of 4.5 lit/sec/ha at highest point of field facilitating uniform distribution of water to all the users irrespective of its location, elevation and distance from the water supply source including recording, measuring, monitoring and control with suitable power source and alternatively by solar power with three days back up capacity with no recurring cost for Communication with GSM/GPRS/RADIO etc. System should be kept in Protective Enclosure capable of giving vandalism alert and shall be SCADA compliant to the main control room operations including of all material, labour, lead, lift and all incidental charges.</p> <p>(This item shall be used for estimation purpose at DPR stage only. For estimation purpose the CCA in consideration has been suitably sub-divided in 4800 ha boundaries beyond rising/gravity mains. In case the total CCA under consideration is less than 4800 ha the cost of gravity main (GM) shall deemed to be included in this item)</p>			
1	From 4800 to 300 Ha chak	Rs./ha	32351	
2	From 300 ha to 30 Ha chak	Rs./ha	10351	
3	300 Ha to outlet to 1 ha.			
	(including Cost of SCADA, valves, bends, manifolds, controls, Outlet Management System, Outlet with manual valve at one hectare with 10 times duty i/c communications)	Rs./ha	32366	
	<b>TOTAL</b>	Rs./ha	75068	

  
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**(Celestin Xaxa)**  
 Chief Engineer/(Monitoring)/President  
 O/o Engineer-in-Chief  
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