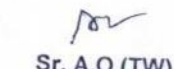


**CHAPTER-16**  
**MAINTENANCE OF 11/0.4KV SUB-STATION**

Chapter Code No	DESCRIPTION OF WORK	UNIT	Rate /Unit
1	2	3	4
16.1	General maintenance of distribution transformer as under:- C		
1	Cleaning of dust and oil scale deposits outside the body of transformer with detergent and water.		
2	Tightening all nut and bolts.		
3	Tightening of bushing rod from outside.		
4	Replacement of jumpers and fixing connectors.		
5	Checking and maintenance of breather and explosion.		
6	Making of oil level with tested transformer oil.		
16.1.1	Up to 40 KVA transformer		
16.1.2	Above 40 KVA and Up to 100 KVA transformer	Nos.	222.14
16.1.3	Above 100 KVA transformer up to 315 KVA	Nos.	334.52
16.1.4	Above 315 KVA transformer up to 630 KVA	Nos.	444.42
16.1.5	Above 630 KVA	Nos.	532.28
16.2	Providing and replacement of damaged L.T. side bushing rod made of brass on the various size of distribution transformer as under:		
(a)	25 to 160 KVA 12 mm		
(b)	200 to 315 KVA 20mm	Nos.	146.56
(c)	above 315 KVA 30mm	Nos.	324.87
16.3	Providing and replacement of damaged HT side bushing rod made of brass on the various size of distribution transformer as under:		
(a)	25 to 750 KVA	Nos.	324.87
16.4	Providing and replacement of damaged LT side porcelain bushing on the various size of distribution transformer as under:	Nos.	141.66
(a)	25 to 160 KVA 1.1 KV 250 Amp.		
(b)	200 to 315 KVA 1.1 KV 630 Amp.	Nos.	29.29
(c)	above 315 KVA 1.1 KV 1000 Amp.	Nos.	36.64
16.5	Providing and replacement of damaged HT side Porcelain bushing on the various size of distribution transformer as under:		
(a)	25 to 750 KVA 11 KV 250 Amp.	Nos.	36.64
16.6	Providing and replacement of damaged rubberized cork gasket washer on bushing on the various size of distribution transformer as under:	Nos.	158.83
(a)	LT side		
(b)	HT side	Set	36.64
16.7	Providing and fixing silica gel breather with coupling on the various size of distribution transformer ,if not available as under. .	Set	61.01
(a)	Up to 160 KVA		
(b)	More Then 160 KVA	Each	268.59
		Each	292.96


  
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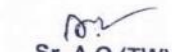
  
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Chapter Code No	DESCRIPTION OF WORK	UNIT	Rate /Unit
1	2	3	4
16.8	Providing and replacement of damaged top cover tank rubberized cork gasket on the various size of distribution transformer as under:		
(a)	25 KVA		
(b)	40 KVA	Set	73.28
(c)	63 KVA	Set	85.38
(d)	100 KVA	Set	97.65
(e)	160 KVA	Set	97.65
(f)	200 KVA	Set	146.56
(g)	250 KVA	Set	146.56
(h)	315 KVA	Set	183.05
(i)	500 KVA	Set	976.71
(j)	630KVA	Set	1098.91
(k)	750 KVA	Set	1098.91
16.9	Providing and replacement of defective drain valve made of gun metal on the various size of distribution transformer as under:		
(a)	1/4"		
(b)	1"	Each	244.22
16.10	Providing and fixing of 'L' type connectors made of copper flat (size 50x6) having a size 9" suitable bend to connect on the LT side of the transformer and should have at least 2 Nos.of hole to connect two no of LT Cable.	Each	366.24
		Each	219.85
16.11	Providing and filling of transformer oil top up in the transformer where the oil value are within permissible limits(Oil level should not be below the core of the transformer.	Per Litre	63.46
16.12	Providing and replacement of transformer oil in those transformer where the oil value are not within permissible limits.		
(a)	Fresh oil as per IS:335		
(b)	Buy back price of the oil taken out from the such transformer.	Per Litre	63.46
16.13	Rapairs and maintenance of 11 KV isolators including replacement of damaged post insulator G.O.jaws/blades, clamps and checking of operating mechanism with oiling /greasing for smooth operation.	Per Litre	24.37
		Set	334.52
16.14	Maintenace of 11 KV Horn gap fuse set including replacement of parts post insulator etc.	Set	139.20
16.15	Replacement / fixing of complete 11 KV isolator /G.O.switch with all accessories including jumpers.	Set	1001.24
16.16	Replacement /fixing of 11 KV horn gap fuse set(3limbs) in place of damaged H.G.fuse set /D.O.fuse set including modification of the structure etc..	Set	556.82
16.17	Replacement / fixing of 11 KV lightening arrestors including jumpers and earth connections.	Nos.	61.01

  
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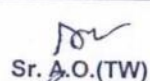
  
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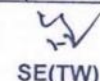
Chapter Code No	DESCRIPTION OF WORK	UNIT	Rate /Unit
1	2	3	4
16.18	Replacement of damaged distribution transformer by new / repaired transformer including making connections on HV and LV side body and neutral earthing & testing & commissioning of the transformer. The above work includes lifting of transformer from sub-divisional store and transportation upto site and also depositing damaged / removed transformer in sub-divisional store.		
16.18.1	Up to 40 KVA	Nos.	888.87
16.18.2	Above 40 KVA and up to 100 KVA	Nos.	1277.04
16.18.3	Above 100 KVA and up to 315 KVA	Nos.	1890.12
16.18.4	Above 315 KVA and up to 630 KVA	Nos.	3777.63
16.18.5	Above 630 KVA	Nos.	4532.20
16.19	Repair and maintenance of LT pillar box, Knife switch etc. including replacement of damaged bus bars, fuse units, U contact and insulators etc.	Nos	388.16
16.20	Replacement of L.T.fuse board / I.C.T.P/MCB.switch with clamp including Clamping & making cable connections complete in all respect.	Nos	34.19
16.21	Measurement of load during peak hours on each phase on L.V side of distribution transformer on outgoing feeders. by clip on Ammeter/Tong tester.	Nos	83.10

16.22	To supply & replace burnt/ damaged flexible PVC Wire, Lugs and Bakelite Sheet in M&P Box of different ratings of Three Phase & Single Phase transformers in Nigam store:- Note:- (Out going cables is also to be connected on the output terminals duly tightened and crimped properly for a outgoing connections for which required cables shall be provided by Nigam. MCCB shall be provided by Nigam.		
A	Three Phase Transformer:-		
i	25/40 KVA [PVC Wire : 25 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	1570.00
ii	10/16 KVA [PVC Wire : 16 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	1082.00
B	Single Phase Transformer:-		
i	25 KVA [PVC Wire : 70 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	656.00
ii	16 KVA [PVC Wire : 35 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	446.00
iii	10 KVA [PVC Wire : 25 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	370.00
iv	5 KVA [PVC Wire : 10 Sq. mm, Lugs: As per Drawing (Annexure-I) and Backlite Sheet].	Per Transformer	213.00
16.23	Spary painting on the surface with synthetic enamel paint (ICI Asian, Burger or equivalent make) to give an even shade (minimum two coats) with preparation of surface by rubbing applying primer coats of red oxide (minimum two coats) and putty etc. complete in all respect on M&P Boxes of Transformers (including cost of paint and red oxide).		
(i)	Three Phase Transformer:-		
(a)	10 KVA & 16 KVA		
	On new surface	Per Box	190.78
	On old surface	Per Box	180.02
(b)	25 KVA & 40 KVA		
	On new surface	Per Box	260.55
	On old surface	Per Box	245.86
(ii)	Single Phase Transformer:-		
(a)	5/10/16/25 KVA		
	On new surface	Per Box	73.44
	On old surface	Per Box	69.30

  
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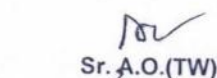
Chapter Code No	DESCRIPTION OF WORK	UNIT	Rate /Unit
1	2	3	4
	NOTE:-		
	Rates are inclusive of paints brush, sand paper spray gun and any scaffolding material, if required and also inclusive of cleaning, stains, smear splashing and dropping of every kind from such places and things/equipments. The quality of material supplied by the contractor be got checked and approved by the Circle S.E.		
16.24 (A)	To supply Iron Clits made of Flat size 90MMX90MMX3MM thick & weld it continuously, 2 Nos. on each side (Total Six Nos) in case of Three Phase Transformer except bottom side of M&P Box in Nigam store.	Per Transformer	467.50
16.24 (B)	To supply Iron Clits made of Flat size 90MMX90MMX3MM thick & weld it continuously, 2 Nos. on each side (Total Three Nos) in case of Three Phase Transformer except bottom side of M&P Box in Nigam store.	Per Transformer	233.77
16.25	To Supply and Install/Weld the Meter cover on Three Phase Transformer in Nigam store.		
A	Rating: 10 KVA & 16 KVA		
	The cover shall be supplied with accessories (Cover Size 650x550, Glass, Kabja, LED, Fabrication Chargers, Paint, Shocker, Lock) alongwith Iron Clits made of Flat size 90MMX90MMX3MM thick (Clits should welded continuously) 2 Nos. on each side (Total Six Nos) except bottom side of M&P Box of Three Phase Transformer.	Per Transformer	928.36
B	Rating: 25 KVA & 40 KVA		
	The cover shall be supplied with accessories (Cover Size 810x685, Glass, Kabja, LED, Fabrication Chargers, Paint, Shocker, Lock) alongwith Iron Clits made of Flat size 90MMX90MMX3MM thick (Clits should welded continuously) 2 Nos. on each side (Total Six Nos) except bottom side of M&P Box of Three Phase Transformer.	Per Transformer	1102.47
16.26	To Supply and Install/Weld the Meter cover on Single Phase Transformer in Nigam store.		
A	Rating: 5 KVA/10 KVA /16 KVA/25 KVA		
	The cover shall be supplied with accessories (Cover Size 220x370, Glass, Kabja, LED, Fabrication Chargers, Paint) alongwith Iron Clits made of Flat size 90MMX90MMX3MM thick (Clits should welded continuously) 1 Nos. on each side (Total Three Nos) except bottom side of M&P Box of Single Phase Transformer.	Per Transformer	415.61
16.27	Replacement of damaged distribution/ pillar boxes duly painted Painting with priming coats ready mixed red-oxide paint 2 coats of approved make on steel works after cleaning with wire brush/sand paper. (including cost of red oxide). Painting with aluminium paint of approved brand and manufacture to give an even surface (including cost aluminium paint). Spary painting on old surface with synthetic enamel paint (ICI Asian, Burger or equivalent make) to give an even shade (minimum two coats) with preparation of surface by rubbing applying primer coats and putty etc. complete in all respect of Steel works/ equipments (including cost of paint).		
16.27.1	Cost of 18 gauge doors with installation & paint/Sq.ft.	Sq.ft.	70.00
16.27.2	Cost of Hinges with installations/Piece	piece	16.00
16.27.3	Cost of Rivet (Kundah)with installation/piece	piece	14.00
16.28	Preparation of spikes made of M.S. Rod of 20 mm Dia and 3.0 Mtr Long length as per design and requirement to be driven in earth by mechanical means and providing and fastning of suitable clamps with the M.S. Rod, connection of earth wire/stay wire/ M.S. Flate in a clamp depending on soil (refer clause no. 8.3.4)		
16.28.1	Where drilling is not required	Nos.	166.07
16.28.2	Where drilling is required	Nos.	543.66

Note:

- 1 The quality of material supplied by the contractor shall be got checked & approved by the circle SE.
- 2 The Rates are inclusive of all applicable Taxes/ Duty except service tax which will be paid extra by Nigam if applicable.

  
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