CSIR-North East Institute of Science & Technology, Jorhat , Assam

Ministry of Science & Technlogy, Government of India

Name of work : Supplying, installation, testing and commissioning of 33/11 kV grade 3.15 MVA capacity oil cooled power transformer at CSIR-NEIST, Jorhat (Assam)

1	Rated MVA of Transformer (ONAN rating)			
2	No. of phases			
3	Type of installation			
4	Frequency			
5	Cooling medium			
6	Type of mounting			
7	Rated voltage			
	a. HV			
	b. LV			
8	Highest continuous system voltage			
	a. Max system voltage ratio (HV/LV)			
	b. Rated voltage ratio (HV/LV)			
9	No. of windings			
10	Winding materials			
11	Type of cooling			
12	MVA rating correspoding to ONAN cooling system			
13	Method of connection			
	a. HV			
	b. LV			
14	Connection symbol			
15	System earthing			
16	Percentage impedance voltage on Normal tap and MVA base at 75 degC corresponding to HV/LV rating and applicable tolerance			
17	Intended regular cyclic overloading of winding			
18	a. Anticipated unbalanced loading			
	b. Anticipated continuous loading of winding (HV/LV)			
19	Type of tap changer			
	Range of taping			
20	Neutral terminal			
21	Over voltage operating capability			
22	Max flux density at rated voltage 33/11kV 50Hz			
23	Insulation level	33 kV		11 kV
	a. 1.2/50 micosecond wave shape impluse withstand KVP			
	b. Power frequency voltage withstand			
24	Type of winding insulation			
	a. HV			
	b. LV			

25	Withstand time for 3 phase short circuit			
26	Noise level at rated voltage and frequency			
27	Permissible Max temp rise over ambient temp of 50			
	a. Of top oil measured by thermometer			
	b. Of winding measured by resistance			
	c. Hot spot temp rise			
28	Minimum clearance in Air in mm	Ph to Ph		Ph to ground
	a. HV			
	b. LV			
29	Insulating level of bushing			
	a. Lighting impluse			
	b. Power frequency voltage withstand KV-rms			
	c. Creepage distance (mm) minimum			
30	Terminals			
	a. HV			
	b. LV			
31	Materials of HV & LV conductor			
32	Max current density for HV and LV winding for rated current at normal tap			
33	Polarisation index i.e. ratio of megger values at 600sec to 60 sec for HV to earth, LV to earth and HVtoLV			
34	Core assembly			
35	Temp indicator			
	a. Oil			
	b. Winding			
36	Max permissible no load loss at rated voltage			
37	Max permissible load loss at rated current at normal tap at 75 deg C			
38	Paper covering thickness of HV winding			
39	Paper covering thickness of LV winding			
40	Conductor clearance			
	a. Gap between HV coil to the inside of the tank on the longer side			
	b. Gap between HV coil to the inside of the tank width side (LV)			
	c. Gap between HV coil to the inside of the tank width side (HV)			
	d. Gap between core yoke to tank bottom			
	e. Yoke insulation at top and bottom			
	f. Phase to Phase clearance between HV coil			
	g. Radial clearance betwwn LV & HV			
	h. Radial clearance between core to LV coil			
41	Tap changing gear			
	a. Type			
	b. Provided on			
	c. Tap step			
	d. Min rated current			

	e. Min rated short circuit current	
	f. Marshalling kisok required	
42	Oil conservator	
43	Total Oil capacity in Letre	
44	First filled transformer oil Yes/Not	
45	Buchholz relay	
46	PTR Make	
47	PTR Model (latest technology)	
48	Delivery period	
49	Payment terms	
50	After sales warranty	
51	Experiences if any	
52	Complete work completion period	

NB Please enclose separate sheets for any other specialised details and terms & conditions.

Firm Seal & Signature