



# SHIV ELECTRICAL & ENGINEERING WORKS

(AN ISO 9001: 2015 CERTIFIED)

## Works (Routine) Test Certificate

1.	EQUIPMENT TESTED	11 kV CT PT Combined Metering Unit	
2.	CUSTOMER NAME	dev4 ct pt	
3.	SPECIFICATIONS	The Following Routine Test conforming to IS:2705/1992 & 3156/1992	
4.	Sr. No.		
		CURRENT TRANSFORMER	VOLTAGE TRANSFORMER
5.	RATIO	250/5A	11 KV/ 110 V
6.	RATED VOLTAGE	415 V	415 V
7.	H S V		
8.	BURDEN	5VA	10VA
9.	ACCURACY CLASS:	0.5s	0.5
10.	I L	0.66 KV	0.66 KV
11.	FREQUENCY	50 Hz	50 Hz
12.	S. T .C	13.1 KV for 1 Sec.	-----
13.	VOLTAGE FACTOR	-----	1.2 TIMES CONT. & 1.5 FOR 30 SEC.
14.	The Following Test have been Conducted on above CT & PT		
I.	Verification of terminal marking and Polarity test		OK
II.	Ratio & Phase Error Test on CTPT		OK ( Result Attached )
III.	Power Frequency dry withstand test between primary winding & earth ( Secondary terminal shorted together and earthed)		28 KV (rms) Withstood
IV.	Power Frequency dry withstand test between Secondary winding & earth		3 KV (rms) Withstood
V	Over Voltage Inter-turn Test on secondary winding at rated current for 60 sec		Withstood
VI.	Partial Discharge Test as per IS 11322/1985		Withstood
VII.	Induced Over voltage Withstand Test 280 V ,150 Hz for 40 sec. On secondary winding		Withstood

### 15. RATIO & PHASE ANGLE ERROR TEST FOR CURRENT TRANSFORMER

PHASE	BURDEN VA P.F	TYPE OF ERROR	PRIMARY CURRENT %				
			120%	100%	20%	5%	1%
A	5 VA 0.8	RATIO ERROR IN %	-0.036	-0.039	-0.091	-0.114	-0.096
		PHASE ERROR IN Min.	0.44	1.14	2.08	6.11	9.31
B	5 VA 0.8	RATIO ERROR IN %	-0.063	-0.061	-0.116	-0.148	-0.124
		PHASE ERROR IN Min.	1.21	0.99	2.58	7.16	12.8
C	5 VA 0.8	RATIO ERROR IN %	-0.055	-0.061	-0.130	-0.221	-0.254
		PHASE ERROR IN Min.	0.24	0.06	1.32	5.64	16.4

### 16. ACCURACY TEST FOR VOLTAGE TRANSFORMER

BETWEEN PHASES	VA @0.8PF (lag)	PRIMARY CURRENT %	80%	100%	120%
A-B	10 VA	RATIO ERROR IN %	0.222	0.226	0.249
		PHASE ERROR IN Min.	1.44	2.21	4.01
A-C	10 VA	RATIO ERROR IN %	0.211	0.216	0.243
		PHASE ERROR IN Min.	2.09	2.79	5.46
B-C	10 VA	RATIO ERROR IN %	0.214	0.216	0.241
		PHASE ERROR IN Min.	1.45	1.91	3.81



Testing Engineer

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Panipat (HARYANA)

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