

Inspection checklists & formats



Uttarakhand Power Corporation Ltd.

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1. Final Inspection Tests for CT

Form No. - UPCL / Factory Inspection / CT 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each CT	Verification of terminal marking & polarity			
			Power frequency dry withstand test on primary windings			
			Power frequency dry withstand test on secondary windings			
			Overvoltage inter-turn test			
			Partial discharge test			
			Ratio & phase angle error			
			Measurement of capacitance			
			Oil leakage test			
			Tan delta test			
			2	Finishing	100% on each CT	Visual Check
Nuts & washer for earth bolts						
Earthing Symbol						

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Oil level in gauge			
			Primary terminal markings			
			Oil leaks			
			Name plate & connection diagram			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

2. Final Inspection Tests for PT

Form No. - UPCL / Factory Inspection / PT 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Tests	100% on each PT	Verification of terminal marking & polarity			
			Power frequency dry withstand test on primary windings			
			Power frequency dry withstand test on secondary windings			
			Partial discharge test			
			Determination of errors			
2	Optional Tests	As mutually agreed between UPCL and Vendor	Chopped lighting impulse test			
			Short circuit withstand capability test			
			Commissioning test on non-earthed voltage transformers of up to and including 36 kV			
2	Finishing	100% on each CT	Visual Check			
			Nuts & washer for earth bolts			
			Earthing Symbol			
			Oil level in gauge			
			Primary terminal markings			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Oil leaks			
			Name plate & connection diagram			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

3. Final Inspection Tests for Single phase meters

Form No. - UPCL / Factory Inspection / Meters 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each meter	AC High Voltage test			
			Insulation test			
			Test on limits of errors			
			Test on starting condition			
			Test on no-load condition			
			Test on Meter Constant			
2	Acceptance Test	Total quantity to be divided into sub-lots of 1000 meters & sampling plan as per IS: 13779	AC High Voltage test			
			Insulation test			
			Test on limits of errors			
			Test on starting condition			
			Test on no-load condition			
			Test on Meter Constant			
			Test of repeatability of errors			
			Test of power consumption			
			Shock test			
			Vibration test			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Anti-tamper tests			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

4. Final Inspection Tests for Three phase meters

Form No. - UPCL / Factory Inspection / Meters 0002

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each meter	AC High Voltage test			
			Insulation test			
			Test on limits of errors			
			Test on starting condition			
			Test on no-load condition			
			Test on Meter Constant			
2	Acceptance Test	Total quantity to be divided into sub-lots of 1000 meters & sampling plan as per IS: 14697	AC High Voltage test			
			Insulation test			
			Test on limits of errors			
			Test on starting condition			
			Test on no-load condition			
			Test on Meter Constant			
			Test of repeatability of errors			
			Test of power consumption			
			Anti-tamper tests			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

5. Final Inspection Tests for AB Switch

Form No. - UPCL / Factory Inspection / ABS 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Material	Power Frequency Voltage Dry Test			
			Measurement of Resistance of main circuit			
			Operating Test			
2	Acceptance Test	Sample as per IS: 2500	AC High Voltage test			
			Dimension			
			Verification of Component			
			Operational Check			
			Test on no-load condition			
			Measurement of Resistance on main circuits			
			Power Frequency withstand voltage test			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

6. Final Inspection Tests for Circuit Breakers

Form No. - UPCL / Factory Inspection / CB 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine testing of VCB	100%	Power Frequency Voltage (Dry) Test On Main Circuit			
			Voltage Test on Control & Auxiliary Circuits			
			Measurement of Resistance of Main circuit			
			Mechanical operation test			
2	Routine test for Voltage transformer	100%	Verification of terminal markings and polarity			
			Power Frequency (Dry) Withstand Tests on Primary winding			
			Power Frequency (Dry) Withstand Tests on Secondary Windings			
			Determination of Errors for Accuracy Class			
3	Routine test for Current transformer	100%	Verification of terminal markings and polarity			

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Power Frequency (Dry) Withstand Tests on Primary winding			
			Power Frequency (Dry) Withstand Tests on Secondary Windings			
			Over-voltage inter-turn test			
			Determination of Errors for Accuracy Class			
4	Packing & Despatch Check for Identification & Packing	100%	Proper Packing			
			Manufacturer name			
			Size & code			
			Gross weight			
			Bare weight			
			Net weight			
			Painting			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

7. Final Inspection Tests for 11kV Disc Insulators

Form No. - UPCL / Factory Inspection / Insulators 0002

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Insulator	Visual Examination			
			Electrical Tests			
			Mechanical tests			
2	Finishing	As per IS: 731	Dimension checking			
			Temperature cycle test			
			Mechanical strength test			
			Porosity test			
			Puncture Test			
			Galvanising Test			
			Galvanizing test			
			Electromechanical failing load test			
			Visual Examination			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

8. Final Inspection Tests for Pin Insulators up to 33kV

Form No. - UPCL / Factory Inspection / Insulators 0003

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Insulator	Visual Examination			
			Electrical Tests			
			Mechanical tests			
2	Finishing	As per IS: 731	Dimension checking			
			Temperature cycle test			
			Mechanical strength test			
			Porosity test			
			Puncture Test			
			Galvanising Test			
			Galvanizing test			
			Electromechanical failing load test			
			Visual Examination			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

9. Final Inspection Tests for Guy Strain Insulators (Type A & C)

Form No. - UPCL / Factory Inspection / Insulators 0003

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Insulator	Visual Examination			
			Electrical Tests			
			Mechanical tests			
2	Finishing	As per IS: 731	Dimension checking			
			Temperature cycle test			
			Mechanical strength test			
			Porosity test			
			Puncture Test			
			Galvanising Test			
			Galvanizing test			
			Electromechanical failing load test			
			Visual Examination			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Inspecting Officer -

Name - _____

Name - _____

Designation - _____

Designation - _____

10. Final Inspection Tests for Bus post insulators up to 33kV

Form No. - UPCL / Factory Inspection / Insulators 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Insulator	Visual Inspection			
			Electrical Tests			
			Mechanical tests			
2	Finishing	As per IS: 2544	Dimension checking			
			Temperature cycle test			
			Mechanical strength test			
			Porosity test			
			Puncture Test			
			Galvanising Test			
			Visual Examination			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

11. Final Inspection Tests for Shackle Insulators

Form No. - UPCL / Factory Inspection / Insulators 0004

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Test	100% on each Insulator	Visual Examination			
			Electrical Tests			
			Mechanical tests			
2	Finishing	As per IS: 731	Dimension checking			
			Temperature cycle test			
			Mechanical strength test			
			Porosity test			
			Puncture Test			
			Galvanising Test			
			Galvanizing test			
			Electromechanical failing load test			
			Visual Examination			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

12. Final Inspection test for ACSR Conductors

Form No. - UPCL / Factory Inspection / Conductors 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Acceptance Test on Finished Conductor	1 per 10 drums	Lay ratio			
2	Acceptance Test on Aluminium Wire of Finished Conductor	1 sample per 10 drums for each test	Measurement of Diameter			
			Breaking Load / Tensile Test			
			Resistance Test			
			Wrapping test			
			Surface finish			
			Ductility test			
3	Acceptance Test of Galvanised Steel Wire of Finished conductor	1 sample per 10 drums for each test	Measurement of Diameter			
			Breaking Load / Tensile Test			
			Elongation			
			Torsion test			
			Wrapping test			
			Preece Test			
			Weight of zinc coating			
			Adhesion test			
4	Length measurement of Finished conductor	1 sample per 10 drums	Check for Joints surface Finish and length			
5	Sealing at both ends by Inspecting Authority	NA	NA			
6	Wooden Drum	100%	Dimension measurement			

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
7	Packing & Despatch Check for Identification & Packing	100%	Proper Packing			
			Manufacturer name			
			Size & code			
			Gross weight			
			Bare weight			
			Net weight			
			Length of conductor			
			Painting			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

13. Final Inspection test for AAAC Conductors

Form No. - UPCL / Factory Inspection / Conductors 0002

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Acceptance Test on Finished Conductor	1 per 10 drums	Lay ratio			
2	Routine tests	1 sample per 10 drums for each test	Measurement of Diameter			
			Surface Condition of the strand and stranded conductor			
			Check for Joints			
			Breaking Load / Tensile Test			
			Resistance Test			
			Wrapping test			
			Surface finish			
			Ductility test			
3	Acceptance Test of Galvanised Steel Wire of Finished conductor	1 sample per 10 drums for each test	Measurement of Diameter			
			Breaking Load / Tensile Test			
			Elongation			
			Torsion test			
			Wrapping test			
			Preece Test			
			Weight of zinc coating			
Adhesion test						
4	Length measurement of Finished conductor	1 sample per 10 drums	Check for Joints surface			

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Finish and length			
5	Sealing at both ends by Inspecting Authority	NA	NA			
6	Wooden Drum	100%	Dimension measurement			
7	Packing & Despatch Check for Identification & Packing	100%	Proper Packing			
			Manufacturer name			
			Size & code			
			Gross weight			
			Bare weight			
			Net weight			
			Length of conductor			
			Painting			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

14. Final Inspection Tests for AB Cables

Form No. - UPCL / Factory Inspection / AB cables 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Tests	100%	Conductor resistance			
			High voltage Test			
			Partial discharge test			
2	Acceptance Tests	Sampling plan of IS 7098	Conductor resistance			
			Test for thickness & Dimension of insulation including eccentricity & ovality			
			Thickness and weight of the sheath of sheath			
			Hot set test for insulation			
			Partial discharge test			
			Tensile strength & elongation at break for insulation & sheath			
			High voltage test			
			Insulation resistance			
			Wrapping test			
			Tensile strength for			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Aluminium, weight of aluminium, overall weight of the cable per meter.			
3	Acceptance test on messenger wire	As per sampling plan of IS:7098	Breaking load test			
			Elongation			
			Resistance test			
4	Packing & Marking	Random	Visual inspection			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

15. Final Inspection Tests for XLPE Cables

Form No. - UPCL / Factory Inspection / XLPE cables 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Tests	100%	Conductor resistance			
			High voltage Test			
			Partial discharge test			
2	Acceptance Tests	Sampling plan of IS 7098	Conductor resistance			
			Tensile test			
			Wrapping test			
			Thickness of insulation and sheath			
			Hot set test for insulation			
			Partial discharge test			
			Tensile strength & elongation at break for insulation & outer sheath			
			High voltage test			
			Insulation resistance			
						Cable weight , conductor weight
3	Packing & Marking	Random	Visual inspection of pre-despatch packing			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

16. Final Inspection Tests for PVC cables

Form No. - UPCL / Factory Inspection / PVC Cables 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine Tests	100%	Conductor resistance			
			High voltage Test			
2	Acceptance Tests	Sampling plan of IS 1554	Conductor resistance			
			Thickness of insulation and sheath			
			Tensile strength & elongation at break for insulation & outer sheath			
			High voltage Test			
			Annealing (for copper)			
			Wrapping for aluminium			
			Tensile for aluminium			
			Insulation resistance			
3	Packing & Marking	Random	Visual inspection of pre-despatch packing			

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -
Name - _____
Designation - _____

Inspecting Officer -
Name - _____
Designation - _____

17. Final Inspection Tests for PCC Poles

Form No. - UPCL / Factory Inspection / Poles 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Final product testing	100%	Dimensional check for overall length, cross-sectional Dimensions & uprightness			
			Traverse strength test			
			Test for cover			
2	Marking above planting depth	100%	Project name			
			Month and year of manufacture			
			Traverse strength of pole			
			Maker's serial number and mark Coloured indelible depth marker at 1.5 meters from bottom to verify planting depth			
3	Pre-shipment	100%	Stacking			
			Handling / transportation			
			Physical inspection			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -
Name - _____
Designation - _____

Inspecting Officer -
Name - _____
Designation - _____

18. Final Inspection Tests for Steel Tubular Poles

Form No. - UPCL / Factory Inspection / Poles 0002

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Final product testing	100%	Dimensional check for overall length, thickness, outside diameter, cross- sectional Dimensions & uprightness			
			Traverse strength test, drop test			
			Physical check for earthing arrangement, paints and coatings adhering to specified standards			
			Check for Swaged poles: Swaged poles shall be made of seamless or welded tubes of suitable lengths swaged and joined together. No circumferential joints shall be permitted in the individual tube lengths of the poles. If welded tubes are used they shall have one longitudinal			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			weld seam only; and the longitudinal welds shall be staggered at each swaged joint			
2	Marking above planting depth	100%	Project name			
			Month and year of manufacture			
			Traverse strength of pole			
			Maker's serial number and mark Coloured indelible depth marker at 1.5 meters from bottom to verify planting depth			
3	Pre-shipment	100%	Stacking			
			Handling / transportation			
			Physical inspection			

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____

19. Final Inspection Tests for Distribution Transformers

Form No. - UPCL / Factory Inspection / DT 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed			
1	Routine tests	As per IS:2026	Ratio test						
			Vector Group test / Polarity						
			Winding Resistance test						
			Insulation Resistance / Meggar test						
			Impedance voltage / Load loss						
			Measurement of No load loss and exciting current						
			High Voltage test						
			Measurement of magnetizing current						
			Magnetic balance test						
			Repeat no-load loss measurement						
			Di-Electric test, as applicable (Induced over voltage test, separate source voltage test etc.)						
			Test on Transformer Oil						
			Dye Penetration test, Jacking test & Leakage test on complete transformer assembly						
			Visual, Dimensional checks, air clearance & Paint checks on						

Sl. No	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed		
			complete Transformer assembly (paint checks, shade, thickness & adhesion)					
			Test on Marshalling Box (if Applicable)					
			Visual Check & Paint Check- Shade Thickness & adhesion					
			Dimensions					
			H.V. Test, IR Test, Wiring & functional checks, interlock, make & type of components					
2	Packaging & Despatch	100%	Stacking					
			Pre-shipment check interchangeability of components of similar transformers & for mounting dimensions					
			Verification of completeness of accessories					
			Check for soundness of packing of accessories and fitting like radiators, bushings, explosion vent, dehydration breather, buchholz relay, conservator etc.					
			Verification of CIP/MICC reference on packing cases					

Type Tests performance certificates attached. – (Yes / No)

Record Seal Numbers with positions overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -
Name - _____
Designation - _____

Inspecting Officer -
Name - _____
Designation - _____

20. Final Inspection Tests for Power Transformers

Form No. - UPCL / Factory Inspection / PTR 0001

wef 1st August 2018

Date: / /	Manufacturer name:
PO Number:	Lot/ Batch Number:

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
1	Routine tests	As per IS:2026	Resistance of each winding			
			Turn ratio for all sets of windings on each tap, with percentage error / Voltage			
			Polarity and phase relationship (Vector group)			
			Impedance between each pair of winding / Impedance Voltage			
			Excitation losses at 90, 100 and 110 % rated voltage measured by the average voltmeter method			
			Positive phase sequences impedance measurement on 3 phase transformers			
			Regulation at rated load and unity, 0.9, 0.8 lagging PF			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Load losses, measured at rated frequency, by applying a primary voltage sufficient to produce rated current in the windings with secondary windings short circuited			
			Separate source voltage with stand test.			
			Induced over voltage with stand test			
			Auxiliary losses (fans. Pumps etc.)			
			SFRA test			
			Zero Sequence impedance test			
			Tests on OLTC			
			Tan delta & capacitance measurement test for bushings and windings			
			Tests on transformer oil			
			Tank leak test at 5 psi (35 kN/m ²) for 12 hrs with oil & 1 hr with air			
			Magnetic Balance & current test on all winding			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			HV withstand test on auxiliary equipment and wiring			
			Measurement of Insulation Resistance			
			Measurement of acoustic noise level			
			Measurement of harmonics of no-load current			
			Measurement of partial discharges of transformer			
			Measurement of no-load current with 415 volt AC supply on LV side			
			Test on air cell			
			Moisture content in active parts			
2	Special Tests	100%	Degree of protection (IP55) for control cabinets & RTCC panel, OLTC driving mechanism, terminal boxes of PRV, MOG, Buchholz Relay, pump motors, fans etc.			
			Measurement of transferred surge in LV due to Lightning impulse on HV & LV			

Sl. No.	Type of Test	Sampling Technique	Name of Test	Sample Size Taken	Samples Passed	Samples Failed
			Short Time Current withstand test on offered HV and LV terminal connectors for 40 kA for 3 Sec for 220 kV & 132 kV Class and 25 kA for 3 sec for 66 kV & below class			
3	Packaging & Despatch	100%	Pipes and headers			
			Radiators			
			Verification of completeness of accessories			
			Bushings			
			Conservator tank			
			Transformer oil			
			Check nitrogen / dry pressure after filling			
			Measurement of dew point of nitrogen or dry air before and after filling in tank before dispatch			
			Proper blanking of all openings and leakages			
			Provision of impact recorder/ tracking system			
Check for soundness of packing						

Type Tests performance certificates attached. –
(Yes / No)

Record Seal Numbers with positions
overleaf

Type Tests certified by _____ vide Certificate Number _____

Vendor Representative -

Name - _____

Designation - _____

Inspecting Officer -

Name - _____

Designation - _____