

Reasoned Document for Final Draft of the STR No. TI/STR/014 Revision 04

SN	Clause No. of STR	Description	Comments	Accepted / Not Accepted
1.	2.6.1.i.c	Surface Corrosion Treatment	M/s Toshiba Transmission & Distribution Systems (India) private Limited The requirement should be deleted, as shot blasting is already included in Sr. No. 2.6.1 (a) as Surface Corrosion treatment is done by shot blasting /Chemical Cleaning (if required)	Firm commented accepted as the Shot blasting is used for the removal of corrosion.
2.	2.6.1.ii.c	Curing Oven for resin glass (to be used for CORE building)	M/s Toshiba Transmission & Distribution Systems (India) private Limited Curing oven/Curing equipment Curing equipment should also be added	Firm comment is accepted as curing equipment can be used for the curing of the resin glass.
3.	2.6.1.iii.a	Vertical Winding Machine	M/s Toshiba Transmission & Distribution Systems (India) private Limited Vertical Winding Machine/ Horizontal Winding Machine Considering construction and weight of winding, horizontal winding machine should also be added.	Firm comment is not accepted to make optional between vertical/horizontal winding machines. (i) Vertical Winding machine was made as an essential part of the STR during the Revision 02 of the STR issued in May 2013. (ii) With vertical winding machine, Disc winding can be manufactured with tightness control.
4.	2.6.1.iii.d	High Frequency Brazing/Gas Brazing and crimping facilities	M/s Toshiba Transmission & Distribution Systems (India) private Limited High Frequency Brazing/Gas Brazing/ Resistance Brazing and crimping facilities Gas Brazing and Resistance Brazing should also be added along with High Frequency Brazing/crimping facilities	Comments of the firm are accepted as the purpose of heat generation for the brazing can be achieved by other commented methods also.
5.	2.6.1.iii.e	Hydraulic Press along with Jigs and Fixtures for Pressing	M/s Toshiba Transmission & Distribution Systems (India) private Limited Hydraulic Press along with Jigs and Fixtures for Pressing/ Hydraulic Jacks along with Jigs and Fixtures for Pressing	Comment of the firm is not accepted . Hydraulic press is used for the pressing but hydraulic jacks are used for the lifting. These two are different, cannot be optional of either.

6.	2.6.1.v.b	Spacer Cutting Machine	<p>M/s Toshiba Transmission & Distribution Systems (India) private Limited Spacer Cutting Machine/ Runners Cutting Machine Runners cutting machine should be added along with spacers cutting machine as it is an alternative machine to carry out the process</p>	The Para may be mentioned as Cutting machines for blocks, spacers etc. for more clarity.
7.	2.6.1.iv.c	Vapour Phase Drying (VPD) Facilities for CORE coil assembly	<p>M/s Tribhuvan Enterprises Vacuum Drying (VDP) facilities for core coil assembly using vacuum drying /Vapour phase drying (VPD) facilities for core coil assembly using vacuum drying oven (Fine tarque, imported vacuum plant) with oil filling under vacuum VDP (Vacuum Drying Plant)</p>	<p>Comment of the firm is not accepted. Vapour Phase Drying (VPD) Facilities Due to following reasons:</p> <p>(i) The Vapour Phase Drying (VPD) Facilities was made as an essential part of the STR during the Revision 02 of the STR issued in May 2013.</p> <p>(ii) The Vapour phase drying have certain advantages over the conventional drying such as:</p> <ul style="list-style-type: none"> • Prevents oxidation during drying, • Uniformity of Temperature (Heating), • Excellent Quality of Dryness, • Dirt and dust deposits (if any) formed on live components during factory assembly are carried away by condensate during the heating stage.
8.	2..6.1.v.c	Sheet Bending Machines	<p>M/s Toshiba Transmission & Distribution Systems (India) private Limited Sheet Bending Machines/Sheet Rolling Machines Sheet Rolling Machines should be added along with sheet bending machine as it is an alternative machine to carry out the process</p>	Comment of the firm is accepted as the bending can be carried with the rolling machines also.
9.	2.6.1.v.e	Lathe Machines	<p>M/s Toshiba Transmission & Distribution Systems (India) private Limited Lathe Machines/CNC Routing & CNC Milling Machines CNC Routing & CNC Milling Machines should be added along with Lathe machine as it is an</p>	Comment of the firm is accepted as CNC machines are latest in comparison to earlier lathe machines.

			alternative machine to carry out the process	
10.	2.6.1.v.h	Hacksaw Machines	M/s Toshiba Transmission & Distribution Systems (India) private Limited Hack saw Machines/Block cutting Machine/Band Saw Machine Block cutting Machine/Band Saw Machine should be added along with Hacksaw machine as it is an alternative machine to carry out the process	Block cutting machines is already mentioned in the STR in another clause. Comment of the firm is accepted to mention Hack saw Machines/Band Saw Machine as Band saw machine can be used instead on mentioned hacksaw machine.
11.	2.6.1.v.i	Shearing Machine	M/s Toshiba Transmission & Distribution Systems (India) private Limited Shearing Machines/Panel saw and beam saw should added along with shearing machine as it is an alternative machine to carry out the process	Comment of the firm is accepted as alternative machine suggested by firm can be used.
12.	2.7 (ii)	Impulse Test	M/s Tribhuvan Enterprises It should be conducted on the prototype as a type test from NABL lab outside /As per IEC 60076-3:2000, point 7.1, pg 7, for transformer with high voltage winding ($U_m > 72.5$ kV, Lightning impulse test are routine test for all winding of the Transformer as such since the $U_m < 72.5$ kV is to be conducted on the prototype as a type test from NABL lab outside.	As per RDSO specification of Transformer and Autotransformer, Impulse test is required only in type testing. Therefore, Firm comment is accepted and Impulse testing facility may be removed from the STR. The impulse testing may be conducted at the laboratories which are permitted as per the RDSO's ISO Documents.
13.	2.7 (xvi)	Sweep Frequency response analyzer	M/s Tribhuvan Enterprises Conducting NABL lab SFRA test is type test, it is to be conducted on the prototype as a type test from NABL lab outside.	As per RDSO's Specification of the Traction Power Transformer and Autotransformer, SFRA test is a routine test. Firm should have the required equipment at the works. Firm comment is not accepted .