



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
मानक नगर, लखनऊ- 226 011

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E-mail: psti.ti@rdso.railnet.gov.in



संख्या/No. RDSO-TIOLKO(PSI)/19/2020-O/o PED/TI/RDSO

दिनांक/Date: As signed.

1.	M/s Meiden T&D (India) Limited, SEZ, Menakuru, SPSR Nellore District, Naidupeta Andhra Pradesh – 524126	gagandeep.tandon@meiden.in
2.	M/s Toshiba Transmission & Distribution Systems (India) limited, 1104, Surya Kiran building, 19, K. G. Marg, Cannought Place, New Delhi-110001	rajib.chaudhary@toshiba-ttdi.com
3.	M/s Hitachi Energy India Limited Power Transformer Factory, Maneja Works Vadodara, Gujarat - 390013, India	sukhamnder.singh@hitachienergy.com, shailendra.p.singh@hitachienergy.com
4.	M/s CG Power and Industrial Solutions Ltd., Power Transformer Division T-3 29, 31-32 New Industrial Area, Mandideep Raisen, Madhya Pradesh - 462046, India,	akhilesh.gupta@cgglobal.com, nidhi.tiwayar@cgglobal.com,
5.	M/s Kanohar Electricals Limited, Rithani, Delhi Road, Meerut-250103	jagbir.singh@kanohar.com
6.	M/s Bharat Heavy Electricals Limited, P. O. BHEL, Jhansi (UP)-284129	rodbhellko@hotmail.com
7.	M/s Siemens Limited, Plot No.-78, JIL Jagatjit Industrial limited, Shaheed RIPON, Katyal marg sector, Gurugram Haryana -122015	debraj.choudhary@siemens.com
8.	M/s Vishvas Power Engg. Services Pvt. Ltd., Plot No. K-5, Five Star Industrial Area MIDC, Butibori, Nagpur Nagpur, Maharashtra - 441122, India	vishvaspowercmc@gmail.com
9.	M/s High – Volt Electricals Pvt. Limited, J-46 /J-47, MIDC Tarapur Industrial Area, Boisar, Distt. Palghar, Maharashtra – 401506	viralidesai@highvolt.in
10.	M /s TMC Transformers India Private Limited, Sur.No.26 1/2, Part B, Village Khandiwada (ASOJ), Vadodara-Halol Highway VADODARA,Gujarat - 391510	tkmohan@tmc-india.com
11.	M/s Shree Abirami Engineering Works Private Limited, SAEW Unit-2, Survey No 22/1 & 22/2, Sriperumbudur Kodambakkam High Road, Kanchipuram, Tamil Nadu -602105,	md@abiramiengg.com
12.	M/s Technical Associates Limited, B-7 Eldeco Sidcul Industrial Park Sitarganj U.S. Nagar Uttarakhand Sitarganj, Uttarakhand - 262405, India	eproc@techasso.com
13.	M/s Transformers & Rectifiers India Limited, Survey No. 427 P/3-4 and 431 P/1-2, Sarkhej- Bavla Highway, Village Moraiya, Taluka Sanand, Dist. Ahmedabad Gujarat - 382213, India	Siddharth.dixit@transformerindia.com

विषय/Sub: Standard of Transformer Oil to be used in Traction Transformers of Indian Railways.

संदर्भ/Ref: (i) This office letters of even no. dated 02.12.2024 & 13.12.2024.

(ii) Core letter no. CORE-HQOELEC(MP)/4/2022-O/o CAO/CORE/PRYJJ dated 14.11.2024.

Vide letters referred above, it was advised to refer the Standard of Transformer Oil to be used in Traction Transformers as 'Type A of IEC: 60296', appearing in the **CLW vendor directory** with **item ID: 2100653**. Accordingly, the vendors appearing in the CLW Vendor Directory against this item, are to be referred for the sources of Transformer Oil.

2. Further, following A&C slips of the respective specifications of the Transformers w.r.t. change in standard of Inhibited Mineral Insulating Oil, are also enclosed herewith, for reference.

SN	Specification No.	Description of Specification	A&C Slip No.
i.	TI/SPC/PSI/AUTOTR/1200	Specification for 8 MVA, 12.5MVA & 16.5MVA 55kV/27.5kV Autotransformer	A&C slip No. 01
ii.	TI/SPC/PSI/TRNPWR/4200	Specification for 21.6MVA & 38/53/63MVA Single Phase Dual LV Winding Traction Power Transformer	A&C slip No. 01
iii.	TI/SPC/PSI/TRNPWR/ 5200	Specification for 54MVA & 60/84/100MVA Scott	A&C slip No. 02

3447121/2025/O/o

CAO/CORE/PRJ

		Connected Traction Power Transformer	
iv.	TI/SPC/PSI/TRNPWR/3201	Specification for 13.5/18.9 MVA, 21.6/30.24 MVA, 30/42MVA & 40/56 MVA Single Phase Traction Power Transformer	A&C slip No. 01
v.	TI/SPC/PSI/AUTOTR/0091	Specification for 50/75/150 MVA, ONAN/ONAF/OFAF, 220/ 132 kV, 3-Phase Oil Immersed Type Auto Transformer.	A&C slip No. 01
vi.	TI/SPC/PSI/CT/0210	Specification for Current Transformers for Railway AC Traction Substation	A&C slip No. 01
vii.	TI/SPC/PSI/PT/0210	Specification For 220kV or 132kV or 110kV or 66kV or 25kV Potential Transformer	A&C slip No. 01
viii.	ETI/PSI/15	Specification For 5kVA, 10kVA, 25kVA & 50kVA Auxiliary Transformer.	A&C slip No. 01
ix.	ETI/PSI/15A with A&C slip No. 01	Specification For 100kVA Auxiliary Transformer.	A&C slip No. 02

2. This is for your information and further necessary action at your end, please.

This is issued with the approval of the Competent Authority (PED/TI).

Digitally Signed by

Jitendra Kumar

Date: 30-12-2024 17:42:21

Reason: Approved

(Jitendra Kumar)

Director/TI-3

For Director General (TI)

संलग्नक: As stated above.

Copy to:

The Principal Chief Electrical Engineer,

- Central Railway, Statin Building, Mumbai CST – 400 001.
- Eastern Railway, Fairlie Place, Kolkata-700 001.
- East Central Railway, Hajipur-844 101.
- East Coast Railway, hubaneshwar-751 023.
- Northern Railway, Baroda House, New Delhi - 110 001.
- North Central Railway, Prayagraj-211 015.
- North Eastern Railway, Gorakhpur-273 012.
- North Frontier Railway, Mailgaon - 781 011.
- North Western Railway, Jaipur – 302 017.
- Southern Railway, Park Town, Chennai- 600 003.
- South Central Railway, Railnilayam, Secunderabad-500 371.
- South Eastern Railway, Garden Reach, Kolkata-700 043.
- South East Central, Railway, ilaspur-495 004.
- South West Railway, DRM's Office, Hubli-580 028.
- Western Railway, Churchgate, Mumbai-400 020.
- West Central Railway, Jabalpur- 482 001.
- Konkan Railway, Belapur Bhavan, Sectir-11, CBD Belapur, Navi Mumbai 400614.

2. Chief Administrative Officer, CORE, Prayagraj-211001, e-mail: ceehq.core@gmail.com

Addendum & Corrigendum Slip No. 01 to the RDSO's Technical Specification No. TI/SPC/PSI/AUTOTR/1200 (02/2021) for 8MVA, 12.3MVA & 16.5MVA, ONAN, 55kV/27.5kV Autotransformer.

1. Standard of Insulating Oil mentioned as "IS 335:2018 (Type-II)" at Para No. 4.1-2 and 6.2.1.1 is replaced with "IEC: 60296 (Type A)".
2. In Para 6.2.1.1, in third line mentioned as "(Para 6.3.8.9 of this specification)" is replaced by "(Para 6.3.8.8 of this specification)".
3. First sentence of the Para No. 3.6 mentioned as "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IS:335:2018 (Type-II) and the additional requirements stipulated under clause 6.3.8.9" is replaced with "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IEC: 60296 (Type-A)".
4. Last sentence of the Para No. 3.6 mentioned as "For the sources of Insulating Oil, refer RDSO Vendor Directory available on RDSO website" is replaced with "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
5. Existing description of Para No. 6.3.8.8, Sub Para 6.3.8.8.1 & 6.3.8.8.2 are deleted and read as below:

Insulating Oil

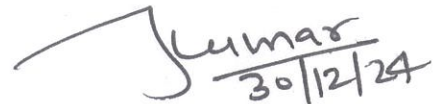
Inhibited Mineral Insulating Oil as per IEC: 60296 (Type-A) shall be used".


30/12/2024

(Sh. Ashutosh Gupta)
SSE/TI


30/12/24

(Sh. Ramesh Kumar Pal)
ADE/TI-3


30/12/24


(Sh. Jitendra Kumar)
DTI-3


Addendum & Corrigendum Slip No. 01 to the RDSO's Technical Specification No. TI/SPC/PSI/TRNPWR/4200 (02/2021) for 21.6 MVA & 38/53/63 MVA Single Phase Dual LV Traction Power Transformer.

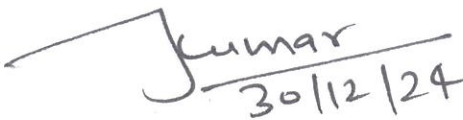
1. Standard of Insulating Oil mentioned as "IS 335:2018 (Type-II)" at Para No. 4.1-2 and 6.2.1.1 is replaced with "IEC: 60296 (Type A)".
2. First sentence of the Para No. 3.6 mentioned as "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IS: 335:2018 (Type-II) and the additional requirements stipulated under clause 6.3.8.9" is replaced with "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IEC: 60296 (Type-A)."
3. Last sentence of the Para No. 3.6 mentioned as "For the sources of Insulating Oil, refer RDSO Vendor Directory available on RDSO website" is replaced with "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
4. Existing description of Para No. 6.3.8.9, Sub Para 6.3.8.9.1 & 6.3.8.9.2 are deleted and read as below:

"Insulating Oil

Inhibited Mineral Insulating Oil as per IEC: 60296 (Type-A) shall be used"


30.12.2024
(Dhruv Maurya)
JE/TI


30/12/24
(Ramesh Kumar Pal)
ADE/TI-3



30/12/24
(Jitendra Kumar)
DTI-3


Addendum & Corrigendum Slip No. 02 to the RDSO's Technical Specification No. TI/SPC/PSI/TRNPWR/5200 (02/2021) for 54MVA & 60/84/100MVA Scott Connected Traction Power Transformer.


1. Standard of Insulating Oil mentioned as "IS 335:2018 (Type-II)" at Para No. 4.1-6 and 6.2.1.1 is replaced with "IEC: 60296 (Type A)".
2. First sentence of the Para No. 3.6 mentioned as "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IS: 335:2018 (Type-II) and the additional requirements stipulated under clause 6.3.8.9" is replaced with "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IEC: 60296 (Type-A).
3. Last sentence of the Para No. 3.6 mentioned as "For the sources of Insulating Oil, refer RDSO Vendor Directory available on RDSO website" is replaced with "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
4. Existing description of Para No. 6.3.8.9, Sub Para 6.3.8.9.1 & 6.3.8.9.2 are deleted and read as below:

Insulating Oil

Inhibited Mineral Insulating Oil as per IEC: 60296 (Type-A) shall be used.


30/12/2024
(Pramod Sahu)
SSE/TI


30/12/24
(Ramesh Kumar Pal)
ADE/TI-3

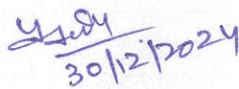

30/12/24
(Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 01 to the RDSO's Specification No. TI/SPC/PSI/TRNPWR/3201 (06/2021) for 13.5/18.9 MVA, 21.6/ 30.24 MVA, 30/42 MVA & 40/56 MVA Single Phase Traction Power Transformer.

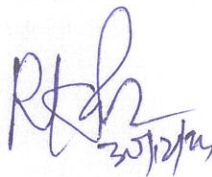
1. Standard of Insulating Oil mentioned as "IS 335:2018 (Type-II)" at Para No. 4.1-2 and 6.2.1.1 is replaced with "IEC: 60296 (Type A)".
2. First sentence of the Para No. 3.6 mentioned as "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IS: 335:2018 (Type-II) and the additional requirements stipulated under clause 6.3.8.9" is replaced with "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IEC: 60296 (Type-A).
3. In the Para No. 3.6 new sentence is added in last as "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
4. Existing description of Para No. 6.3.8.9, Sub Para 6.3.8.9.1 & 6.3.8.9.2 are deleted and read as below:

Insulating Oil

Inhibited Mineral Insulating Oil as per IEC: 60296 (Type-A) shall be used.


30/12/2024

(Pramod Sahu)
SSE/TI


30/12/24

(Ramesh Kumar Pal)
ADE/TI-3


30/12/24

(Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 01 to the RDSO's Technical Specification No. TI/SPC/PSI/AUTOTR/0091 (08/2021) for 50MVA, 75MVA & 150MVA, 220/ 132 kV, Three Phase Oil Immersed Type Auto Transformer.

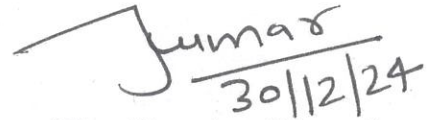
1. Standard of Insulating Oil mentioned as "IS 335:2018 (Type-II)" at Para No. 2.1-24, 22.2.1.1 and 22.12 is replaced with "IEC: 60296 (Type A)".
2. First sentence of the Para No. 11.1 mentioned as "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IS:335:2018 (Type-II) and the additional requirements stipulated under clause 11.2" is replaced with "The transformer shall be supplied with new Inhibited Mineral Insulating Oil conforming to IEC: 60296 (Type-A)".
3. In the Para No. 11.1, new sentence is added in last as "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
4. Para No. 11.2 and Second Sentence and table of the Para No. 22.12 is deleted.


30/12/2024

(Sh. Ashutosh Gupta)
SSE/TI


30/12/24

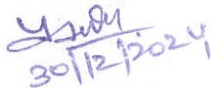
(Sh. Ramesh Kumar Pal)
ADE/TI-3


30/12/24

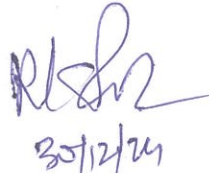
(Sh. Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 01 to the RDSO's Specification No. Technical TI/SPC/PSI/CT/0210 (06/2021) for Current Transformers for Railway AC Traction Substation.

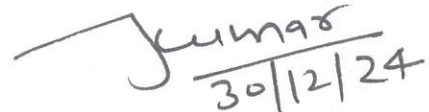
1. Standard of Insulating Oil mentioned as "IS 335:2018" at Para No. 2.1-1, 6.5, 14.4.4 and Para No. 4.11 of Annexure-VIII, is replaced with "IEC: 60296 (Type A)".
2. In Para No. 4.11 of Annexure-VIII mentioned "The Insulating Oil shall be procured from the manufacturers approved by RDSO" is replaced with "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website".
3. In Para No. 14.4.4, mentioned "or as per IEC 60296" is deleted and new line is added as "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."


30/12/2024

(Pramod Sahu)
SSE/TI


30/12/24


(Ramesh Kumar Pal)
ADE/TI-3



30/12/24

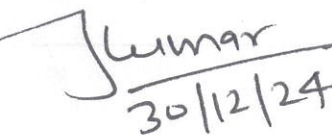
(Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 01 to the RDSO's Technical Specification No. TI/SPC/PSI/PT/0210 (06/2021) for 220kV or 132kV or 110kV or 66kV or 25kV Potential Transformer.

1. Standard of Insulating Oil mentioned as "IS 335:2018" at Para No. 3.1-2 and 7.5, 14.3.4 is replaced with "IEC: 60296 (Type A)".
2. Para No. 14.3.4 mentioned as "The sample of Insulating Oil drawn from the prototype unit shall be tested in accordance with IS: 335 or as per IEC: 60296" is replaced with "The sample of Insulating Oil drawn from the prototype unit shall be tested in accordance with IEC: 60296 (Type-A)".
3. In Para no. 14.3.4, new line is added at last as "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."
4. Standard of Insulating Oil mentioned as "IS 12463" at Para 4.8 of Annexure-7 is replaced with "IEC: 60296 (Type A)".

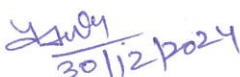

(Pramod Sahu)
SSE/TI


(Ramesh Kumar Pal)
ADE/TI-3

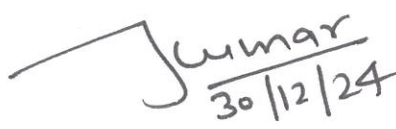

(Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 01 to the RDSO's Technical Specification No. ETI/PSI/15 (08/2003) for 5kVA, 10kVA, 25kVA &50kVA Auxiliary Transformer.

1. Standard of Insulating Oil mentioned as "IS 335" at Para No. 2.1-3 and "IS: 12463" at Para no. 7.1 are replaced with "IEC: 60296 (Type A)".
2. In Para no. 7.1 mentioned "The insulating oil shall be procured from the manufacturers approved by RDSO" is replaced with "For the sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website."


(Pramod Sahu)
SSE/TI


(Ramesh Kumar Pal)
ADE/TI-3


(Jitendra Kumar)
DTI-3

Addendum & Corrigendum Slip No. 02 to the RDSO's Technical Specification No. ETI/PSI/15A (07/1982) for 100kVA Auxiliary Transformer.

1. Standard of Insulating Oil mentioned as "IS 335:1972" at Para No. 7.3, 11.1 and 12.1 (a) is replaced with "IEC: 60296 (Type A)".
2. New Para 11.2 is added as, "For the Sources of Insulating Oil, refer CLW Vendor Directory (item ID: 2100653) available on IREPS website".

Y. S. S.
30/12/2024

(Pramod Sahu)
SSE/TI

R. K. Pal
20/12/24

(Ramesh Kumar Pal)
ADE/TI-3

Jitendra Kumar
30/12/24

(Jitendra Kumar)
DTI-3