

भारत सरकार GOVERNMENT OF INDIA  
रेल मंत्रालय MINISTRY OF RAILWAYS  
(रेलवे बोर्ड) (RAILWAY BOARD)

सं. 2011/Tele/9(3)/1

नई दिल्ली, दिनांक: 01/01/2013

The Executive Director/Tele,  
R.D.S.O.  
Lucknow.

**Sub:- Recommendation of 37<sup>th</sup> Telecom Standards Committee Meeting held on 23<sup>rd</sup> & 24<sup>th</sup> November, 2012 at Secunderabad.**

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Board's order on various recommendations for formal items from Item No.296 (i)-(xii), Informal items from 1 to 5 and others item 1 to 7 discussed in the meeting are as under:-

**(1) Formal Item:-**

1.1. **Item No.296 (i):** Specification No. IRS: TC 10-73 for "Minimum Performance Requirements for Long-haul Microwave System for 120 Channels on Indian Railway.

**Recommendation of TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. IRS: TC 10-73, for Minimum Performance Requirements for Long-haul Microwave System for 120 Channels on Indian Railway.

**Railway Board order: APPROVED.**

1.2. **Item No.296 (ii):** Specification No. IRS: TC 13-2000 for "Dehydrator System for Microwave Links".

**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. IRS: TC 13-2000, for Dehydrator System for Microwave Links.

**Railway Board order: APPROVED**

1.3. **Item No.296 (iii):** Specification No. IRS: TC 64-94 for "2 MB Digital UHF Equipment".

**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. IRS: TC 64-94, for 2 MB Digital UHF Equipment.

**Railway Board order: APPROVED.**

1.4. **Item No.296 (iv):** Specification No. IRS: TC 66-94 for "(34+2) MB, 7GHz Digital Microwave Equipment".

**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. IRS: TC 66-94, for "(34+2) MB, 7 GHz Digital Microwave Equipment.

**Railway Board order: APPROVED.**

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- 1.5 **Item No. 296(v):** Specification No. IRS: TC 67-94 for “3 M Dia , 7 GHz Microwave Antenna”.  
**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. IRS: TC 67-94, for 3 M Dia , 7 GHz Microwave Antenna.  
**Railway Board order:** **APPROVED.**
- 1.6 **Item No.296(vi):** Specification No. RDSO/SPN/TC/58/2006 for “Draft Specification for VoIP based communication system”.  
**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. RDSO/SPN/TC/58/2006, for VoIP based communication system.  
**Railway Board order :** **APPROVED.**
- 1.7 **Item No. 296(vii):** Specification No. RDSO/SPN/TC/60/2007, Rev.0 with Amendment -1 for “Draft Specification for DSL Multiplexer.”  
**Recommendation of the TCSC:** 37<sup>th</sup> TCSC recommends deletion of the specification No. RDSO/SPN/TC/60/2007, Rev.0 with Amendment -1 for DSL Multiplexer.  
**Railway Board order :** **APPROVED.**
- 1.8 **Item No. : 296 (viii):** Draft Specification No. RDSO/SPN/TC/50/2007 Rev. 5.0Amendment No. 1.1 for Composite (Optical and Quad) Underground Armoured Cable.  
**Recommendation of the TCSC:** The specification is to be continued till next TCSC.  
**Railway Board order:** **APPROVED.**
- 1.9 **Item No.:296 (ix):** Draft Specification No. RDSO/SPN/TC/56/2007, Rev. 2.0 Amendment No. 1.0 of Joint Closure for Composite Cable.  
**Recommendation of TCSC:** The specification is to be continued till next TCSC.  
**Railway Board order:** **APPROVED.**
- 1.10 **Item No. : 296 (x):** Draft Specification No. RDSO/SPN/TC/71/2008 Rev. 1.0Amendment No. 1.0 of Fibre Distribution Management System for Composite Cable.  
**Recommendation of the TCSC:** The specification is to be continued till next TCSC.  
**Railway Board order :** **APPROVED.**
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- 1.11 **Item No. : 296 (xi):** Draft Specification No. RDSO/SPN/TC/64/2006, Rev. 0.0, for Display and Public Announcement System on Running Trains.  
**Recommendation of the TCSC:** The specification is to be continued till next TCSC.  
**Railway Board order :** **APPROVED.**

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- 1.12 Item No. : 296 (xii):** Draft Specification No. RDSO/SPN/TC/78/2008,Rev. 0.0, for Public Address System for Passenger Trains.  
**Recommendation of TCSC:** The specification is to be continued till next TCSC.  
**Railway Board order : APPROVED.**

**(2) Informal Item:**

- 2.1 Item No. 1 :** RDSO/SPN/TC/99/2012, Rev.0 for “VoIP based Train Control Communication System”.

**Recommendation of TCSC:-**

- (i) Prepared draft specification shall be used for trial in a section preferably in RE Section.
- (ii) During trial following aspects shall be evaluated:-
  - (i) Requirement of AC/DC power supply for various equipments.
  - (ii) User feedback for facilities including ringing by ASM.
  - (iii) Reliability of the complete system.
- (iii) Specification to be finalized after trial and approved sources to be developed by RDSO.
- (iv) Feasibility of use of open source software shall be ascertained for further follow up by RDSO.

**Railway Board order: APPROVED**

- 2.2 Item No. 2:** RDSO/SPN/TC/98/2011, Rev.0 for “Surge protective devices for Telecommunication equipments”.

**Recommendation of TCSC:-**

1. Specification is to be implemented.
2. Life span of devices considering degradation of parameters of SPDs to be ascertained and guidelines to be issued by RDSO.
3. Flammability aspect of MOVs is to be examined separately by RDSO.

**Railway Board order: APPROVED.**

- 2.3 Item No. 3:** RDSO/SPN/TC/97-2012, Rev. 0 for “Telecom Cable Termination Box (Nonmetallic) for Indoor use”.

**Recommendation of TCSC:-**

1. Specification is to be implemented.
2. Approved sources to be developed by RDSO.

**Railway Board order: APPROVED**

- 2.4 Item No. 4 :** “LC Gate Control Equipment using Wired / Wireless Data Communication”. Specification No. RDSO/SPN/TC/49/2012.

**Recommendation of TCSC:** New version of specification based on the recommendations of committee shall be finalized and Trails shall be conducted with following remarks:

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1. Option of free band radio to be evaluated.
2. Wireless mode may be provided with option to be specified by the Zonal Railways/Purchaser.

**Railway Board order: APPROVED.**

- 2.5 Item No. 5 :** Draft Specification No. RDSO/SPN/TC/95/2009, Rev. 0.0, for Explosive Detection and Disposal System.

**Recommendation of TCSC:** 37th TCSC recommends that subject of Explosive Detection and Disposal System along with specification shall be dealt by Security Directorate (RPF) instead of Telecom Directorate of RDSO. 37th TCSC also recommends that subject of Access Control System and Personal & Baggage Screening System along with specifications shall also be dealt by Security Department (RPF) instead of Telecom Directorate of RDSO.

**Railway Board order: APPROVED.**

**(3) Other Item:**

- 3.1 Item No. 1:** Use of Silicone gel based jointing kit. RDSO/ SPN/TC/101/2012.  
**Recommendation of TCSC:-**

1. Specification is to be finalized.
2. Approved sources to be developed for trails and regular use by RDSO.
3. Performance feedback is to be provided by Zonal Railways, who have already used this jointing arrangement.

**Railway Board order: APPROVED**

- 3.2 Item No. 2:** New Transport Technology for Indian Railway.

**Recommendation of TCSC:** Various technology options shall be evaluated by RDSO.

**Railway Board order : APPROVED.**

- 3.3 Item No. 3:** VSAT based Train Control Communication System for Isolate Section.

**Recommendation of TCSC:** The arrangement may be useful only for isolated section due to constraints of time delay etc.

**Railway Board order : APPROVED.**

- 3.4 Item No. 4:** Loop protection schemes for PD MUX.

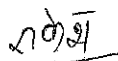
**Recommendation of TCSC:** Pending acceptance of report made by RDSO in Board, indicative channeling plan to be issued by RDSO.

**Railway Board order : APPROVED.**

- 3.5 Item No. 5:** Use of one specification for Control communication:

**Recommendation of TCSC:**

- (i) All the three specification may be continued & Zonal Railways may utilize the system best suiting to their requirement.



- (ii) Zonal Railways to provide information regarding performance of type of control equipment used to enable RDSO to issue guidelines regarding type of equipments to be used based on communication media available.

**Railway Board order : APPROVED**

**3.6 Item No. 6: RDSO Specification for "Integrated Power Supply for Telecom Equipments".**

**Recommendation of TCSC:** Draft specification of IPS for Telecom Equipments for station to be issued & trails are to be done incorporating following suggestions:-

- (i) Provision of Solar input.
- (ii) SMRs of 25A module only.
- (iii) AC output is not required.
- (iv) Option of keeping DC-DC converter at 150-200 Mtrs away from IPS room for telecom equipment in ASM room.

**Railway Board Order: APPROVED**

**3.7 Item No. 7: Datacom Equipments (2 Mbps Digital Modem, 64/128 Kbps.**

**Recommendation of TCSC:** 37th TCSC recommends that above revised draft specifications of Datacom equipments (2 Mbps Digital Modem, 64/128 Kbps Digital Modem & LAN Extender) shall be finalized & implemented.

**Railway Board Order: APPROVED.**

**(4) Items suggested by Zonal Railways**

**(a) Items by SCR**

1. For interfacing DAC (Digital Axle Counter) and UFSBI (Universal Fail Safe Block Inst.) system with OFC, finalization of specs. For E1 interface is urgently necessary. RDSO is requested to expedite the same.

**Recommendation of TCSC:** Arrangement for enabling Axle counter working on separate E1 is being examined by RDSO.

**Railway Board Order: APPROVED.**

2. For MMTS stations, automatic train announcement by making use of data loggers yet to be standardized.

**Recommendation of TCSC:** Interface with data logger not required in view of implementation of Real Time Train Information system.

**Railway Board Order: APPROVED.**

3. V-SAT propagation delay is much higher from Delhi-hub to accident spot (>1200 msec.) how to improve needs to be discussed.

The delayed RTT (Round Trip Time) causes the poor quality of video or frame freezing and requires resetting. The telephones of BSNL, RLY. and FAX are not functioning simultaneously with video transmissions.

**Recommendation of TCSC:** Site shall be tested jointly by IRPMU, Zonal Railway and RDSO for ascertaining corrective actions.

**Railway Board Order: APPROVED.**



4. For underground cable jointing, C-compound may be implemented for jointing purpose in place of jelly filled.

It is observed often that the low insulation of cable is due to ingress of water into the joint. The conductors after twisting, soldering and packed with sleeves are placed in jelly and wrapped with PVC tape. Even with that the water logged in joints are causing low insulation. If the C-compound is poured instead of jelly, it solidifies. With this the conductors are not exposed to water/moisture which causes low insulation. This is tried in this Railway and the showing positive results.

**Recommendation of TCSC:** Not required in view of new specification for gel based joints.

**Railway Board Order: APPROVED.**

(b) Items by NER

1. Common protocol should be designed for TIB/CIB (Train Indication Boards/Coach Indication Boards), so that software of one vendor can drive the boards of any other vendors to operate from any console in case of addition/alteration.

The specification of display boards have been issued by RDSO, but difficulties in the field is experienced that the display boards of two vendors are not functioning when they are integrated with existing / new console. It is also not possible to operate the display boards of one vendor with the console of another vendor. This difficulty is being experienced in case of addition / alterations or replacement of defective display boards.

**Recommendation of TCSC:** For IPIS, interoperability has been achieved at certain stations; however tests for interoperability shall be included in the type approval process by RDSO.

**Railway Board Order: APPROVED.**

2. Draft specification has been issued for FDMS & FTB for OFC termination, which is not in use. Now improved version of FMS are being used for termination of OFC. Presently HQ has issued guidelines for using FMS having SC-APC connectors. Specification for FMS may be issued with recommended list of manufactures.

**Recommendation of TCSC:** Specification of FMS to be issued by RDSO.

**Railway Board Order: APPROVED.**

3. Approximately 315 stations of NE Railway are to be covered by OFC communication.

~~There are many spur links which are imperative to be brought within ring protection through STM-1/4-Ethernet Radio. At present no specification is available for the same. So Railway may use different specification which may cause incompatibility in the network. Hence to ensure monitoring through NMS and for easy maintenance of network. Specification for STM-1/4-Ethernet Radio may be issued with recommended list of manufactures.~~

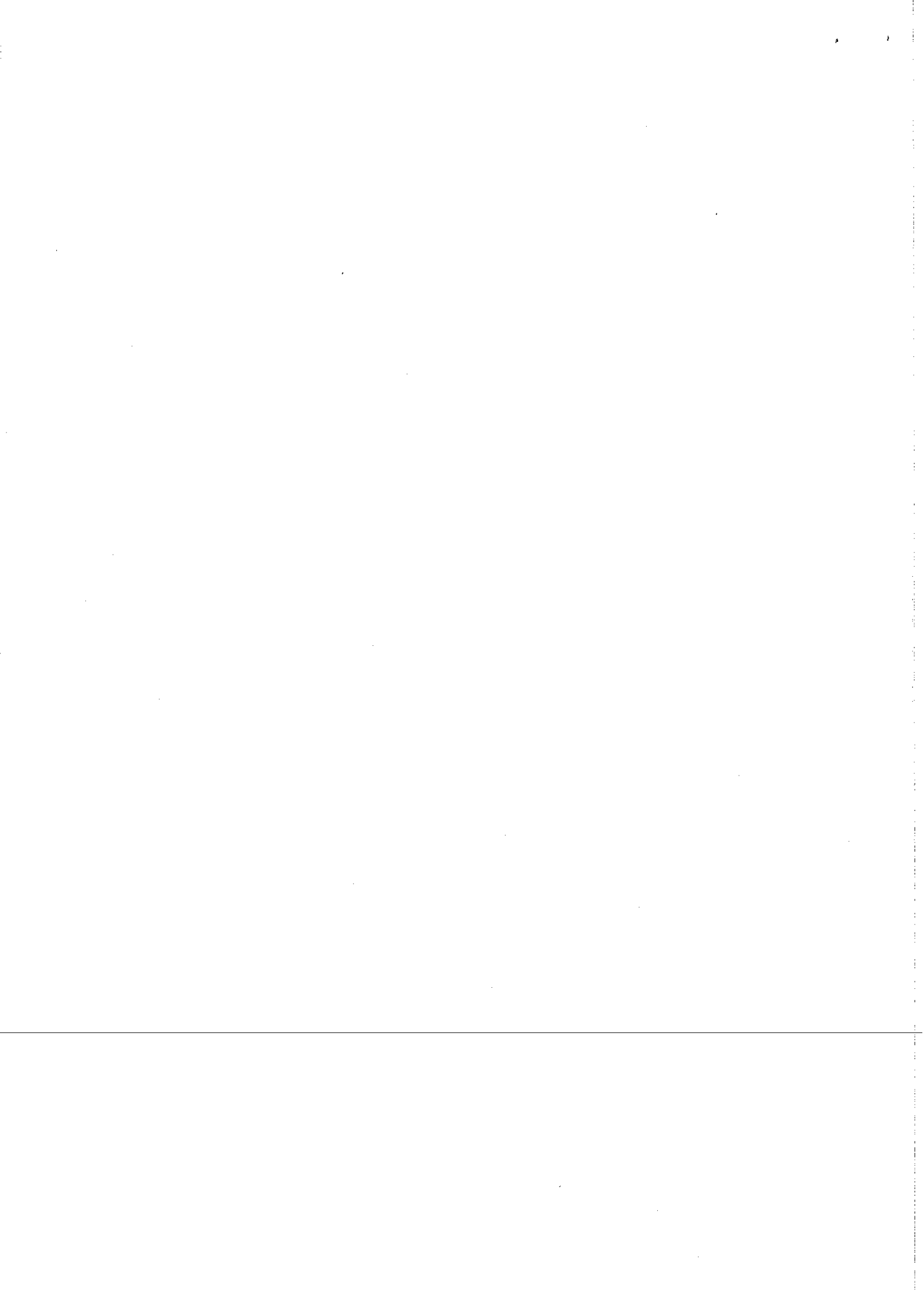
**Recommendation of TCSC:** TEC specification already exists & hence RDSO specification it not required. Inspection policy for such items already exists.

**Railway Board Order: APPROVED.**

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4. 1024 Kms OFC has been laid over NE Railway and approx. 1890 Km. for 191 stations OFC projects are in progress.  
Draft specification no. RDSO/SPN/TC/67/2007 has been issued by RDSO based on TEC GR No. J/OGC-0201 March-1999, but the same has been deleted in 2000 by TEC. Now TEC have issued specification GR No. GR/OJC-02/02 Sep-2003 for splice closure. However specification joint closure used by RailTel is quite different from TEC. Hence specification for OFC joint closure may be issued with recommended list of manufactures.  
**Recommendation of TCSC:** Latest revision of the TEC specification may be examined by RDSO for further action.  
**Railway Board Order: APPROVED.**
5. Specification for managed OFC media converter working in Ring having DC POE for extending E-I or Ethernet. This will be required in large quantities when LAN expands in Railway premises on OFC because of cost advantage over copper networking.  
**Recommendation of TCSC:** Specification for managed OFC media converter shall be initiated by RDSO.  
**Railway Board Order: APPROVED.**
6. Provision of low cost joint pits for 4/6 quad cable in form of simple pre-cast ring will help in protection of quad joints from damage and help in identification.  
**Recommendation of TCSC:** Precast rings not required to be provided due to chances of pilferage of metal.  
**Railway Board Order: APPROVED.**
7. Guide lines for setting of centralized Network Monitoring and Equipment monitoring centre in each Railway for management of bandwidth & other data circuit like Railnet, UTS/PRS, FOIS, IPAS etc. is required.  
**Recommendation of TCSC:** Not in RDSO domain & hence no action recommended for RDSO.  
**Railway Board Order: APPROVED.**
8. Development of Guide lines and specification for centralized Data Center for Railways.  
**Recommendation of TCSC:** Not in RDSO domain & hence no action recommended for RDSO.  
**Railway Board Order: APPROVED.**
9. Specification for Router and Switch operated on 230 Volt AC as well as 48 Volt DC for different application in the network.  
**Recommendation of TCSC:** Revision of the specifications be undertaken by RDSO.  
**Railway Board Order: APPROVED.**

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**(5) Items suggested by RailTel**

1. RDSO's specification to be issued for 48 fibers OFC.  
**Recommendation of TCSC:** Not used by Indian Railway & hence RDSO specification for such items not required.  
**Railway Board Order: APPROVED.**
2. HDPE Duct – RDSO specification exists, however no vendors has been approved so far.  
**Recommendation of TCSC:** Revision of the specification is under progress. Vendor development shall be undertaken after revision.  
**Railway Board Order: APPROVED.**
3. DWDM – RDSO specification exists, however no vendors has been approved so far.  
**Recommendation of TCSC:** RDSO specification already exists for DWDM. However no vendor has approached RDSO for approval. As such systems are not being procured by Zonal Railways, availability of RDSO approved vendor is not considered necessary.  
**Railway Board Order: APPROVED.**
4. RDSO's specification to be issued for STM 64.  
**Recommendation of TCSC:** Not used by Indian Railway & hence RDSO specification for such items not required.  
**Railway Board Order: APPROVED.**
5. RDSO specification for IP based Transmission Equipment.  
**Recommendation of TCSC:** Details to be spelt out by RailTel for further action/discussions.  
**Railway Board Order: APPROVED.**

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