

ISO 9001:2015	Document No. TCQ 0125	Version No. 1.0	Date Effective 01/09/2021	Reference Specification; RDSO/SPN/TC/66/2007 Version 1.0
Document Title: STR for Control Communication Equipments for OFC using 2 Wire Telephones (CCEO)				



TELECOM DIRECTORATE
RESEARCH DESIGNS AND STANDARDS ORGANISATION
(MINISTRY OF RAILWAYS)
MANAK NAGAR LUCKNOW-226011

TCQ 0125

SCHEDULE OF TECHNICAL REQUIREMENT (STR)

FOR

**CONTROL COMMUNICATION EQUIPMENTS FOR OFC USING 2-WIRE
TELEPHONES**

(CCEO)

1.0 AMENDMENT HISTORY

S.No.	Date of Amendment	Version	Reason for Amendment
1	03.12.2007	0.0	First issue
2	22.06.2021 w.e.f. 01.09.2021	1.0	Opened for Review in line with DG's Note No. DG/Misc. dated 10 June 2020. Approved by ED/Tele-I on 22.06.2021 at Note#104 in e-Office file No. RDSO-TELE0LKO (SPEC)/28/2020-Telecom Directorate/RDSO.

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1.1 DOCUMENT DATA SHEET

Document Number:	TCQ 0125, Version No. 1.0
Document Title:	STR for Control Communication Equipments for OFC Using 2 Wire Telephones (CCEO)
Prepared by, Director/Telecom-I	
Approved by, Executive Director/Telecom-I	
Abstract: This document defines STR for Control Communication Equipments for OFC Using 2 Wire Telephones (CCEO)	

1.2 DOCUMENT CONTROL SHEET

Designation	Organization	Function	Level
JRE/Tele	RDSO	Member	Prepare
ADE/Tele	RDSO	Member	Prepare, Check
Director/Telecom-I	RDSO	Member, Issuing Authority	Prepare/Review/Issue
ED/Telecom-I	RDSO	Approving Authority	Approve

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I. SCOPE:

The Schedule of Technical Requirement covers Machinery, Plants & Testing Equipments required for manufacturing of “Control Communication Equipments for OFC using 2 Wire Telephones” as per RDSO specification No. ROSO/SPN/66/2007 Version 1.0. Vendor shall also comply norms issued by RDSO time to time in this connection and other relevant laws of the country. This STR shall be applicable to all vendors applying for registration.

II. ESSENTIAL MACHINERY & PLANT REQUIRED FOR DEVELOPMENT & PRODUCTION:

Sr. No.	RDSO Requirements as per STR		Details of Machinery & Plants available with the Vendor					Calibration details as applicable	
	Description	Qty.	Qty.	Make/ Model	Sr. No.	Year of Built	Range/ Capacity	Date of Calibration	Due Date of Calibration
1.	Drilling Machine	1 No.							
2.	Grinding Machine	1 No.							
3.	#Shearing Machine	1 No.							
4.	#Shear Bending Machine	1 No.							
5.	#Electric & Spot Welding Machine	1 No.							
6.	Lead Cutting and Bending Machine	1 No.							
7.	*Coil Winding Machine	1 No.							
8.	*Vacuum Impregnated Plant	1 No.							

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9.	##PCB Assembly Jig	1 No.							
10.	Temperature Controlled Soldering Station	2 Nos.							
11.	Regulated DC Power Supply	2 Nos.							
12.	Attenuator adjustable from 0 dB to -60 dB in step of 1 dB	1 No.							
13.	Dual Trace Storage Oscilloscope	1 No.							
14.	Digital IC Tester	1 No.							
15.	Baking Oven	1 No.							
16.	Test Jigs	1 No.							

NOTE:

1. # These machines are not required if Cabinet fabrication is Outsourced to ISO approved firms.
2. * Not required if coil winding/transformer manufacturing is outsourced to ISO approved firms or procured as standard commercially available components.
3. ## Not required if PCB Assembly is outsourced to ISO approved firms.

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III. ESSENTIAL TOOLS & TEST EQUIPMENT REQUIRED FOR TESTING:

Sr. No.	RDSO Requirements as per STR		Details of Tools & Test Equipment available with the Vendor					Calibration details as applicable	
	Description	Qty.	Qty.	Make/Model	Sr. No.	Year of Built	Range/Capacity	Date of Calibration	Due Date of Calibration
1.	Regulated DC Power Supply	2 Nos							
2.	Variable VF Sine Wave Oscillator, 200 Hz - 20 KHz Continuous, Output Level adjustable -40 dB to 0 dB	1 No							
3.	Dual Trace Storage Oscilloscope with bandwidth of 15 MHz or Higher	1 No							
4.	Digital Multimeter 4 -1/2 Digit	2 Nos							
5.	4 Digit True R.M.S. High Impedance AC Voltmeter, 7 mV to 7 V, Measuring Range upto 10Khz or higher.	1 No							
6.	Transmission Measuring Set	1 No							
7.	Insulation Tester	1 No							
8.	High voltage Tester 2 KV Capacity	1 No							

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9.	Frequency Counter	1 No							
10.	Amplitude Distortion Meter	1 No							
11.	Single Phase Variac	1 No							
12.	PC/Laptop with Serial Port(RS 232) and Communication Cable	1 No							
13.	Function Generator	1 No							
14.	Illuminated Magnifying Glass	1 No							
15.	Burn-in-Chamber	1 No							
16.	Way Station Equipment as per IRS TC-60.	02 Nos. (min)							
17.	2-Wire control Telephone systems as per IRS: TC-37	02 Nos. (min)							
18.	4-Wire control Telephone systems as per IRS: TC-38	02 Nos. (min)							
19.	Hybrid Attachment to convert 4 wire operation to 2-Wire operation	02 Nos. (min)							

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