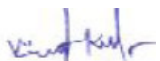
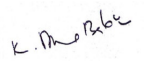


ESP-001 - 2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION		Std. / Doc. Number	
				PY 56524	
				Rev. No.	00
				Sheet 1 of 8	

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TECHNICAL SPECIFICATION SUPPLY/WORKS OF S&T Telecom Items-01 (RAILWAYS ELECTRICIFICATION)

PROJECT	ELECTRIFICATION WORKS FOR BIRLANAGAR - ETAWAH, BHANDAI -UDI,FARRUKHABAD- SHIKOHABAD INCLUDING MAINPURI - ETAWAH SECTIONS OF NORTH CENTRAL RAILWAY
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Revisions: Refer to record of revisions	Prepared by :	Checked by :	Approved by :	Date :
	 Vineet Kumar	 Kamal Kumar T.	 K. Anand Babu	17.11.2020



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TABLE OF CONTENTS

Sl. No.	Description
1.0	INTENT OF SPECIFICATION
2.0	TECHNICAL REQUIREMENTS
3.0	MATERIAL CODES
4.0	DOCUMENTATION
5.0	NO DEVIATION FORMAT
6.0	GENERAL
7.0	INSPECTION & TESTING
8.0	PACKING AND DISPATCH
9.0	TECHNICAL DATASHEET
10.0	DISPATCH INSTRUCTIONS

**1.0 INTENT OF SPECIFICATION:**

This specification governs the requirements of design, manufacture, testing and packing at manufacturer's work and delivery at site and complete in all respects of this specification.

2.0 TECHNICAL REQUIREMENTS:

All the technical requirements of Items/Works and Accessories shall be as per This technical specification and applicable RDSOs (As applicable) as indicated in the table-1.

3.0 MATERIAL CODES:

Bidder to offer materials as per enquiry and Below Table:

TABLE-1
MATERIAL CODE- PY9756524006

S.No.	Description	Unit	Quantity	RDSO
1.	STM-1 : (Managed Expendable rack type STM-1 ADM L 1.1 with STM-1 aggregate interface , 21 E1S and 4 Numbers of 10/100 Base-T Ethernet Port order wire, power supply unit, sub rack installation material and accessories manual etc.,)	No's	6	Note: 1
2.	PD MUX: (2 MB programmable primary digital drop insert multiplexer)	No's	6	IRS: TC 68/2012, Amnd:1.
3.	FDMS: (Rack mounted FMS fibre parts no.1U 24 Fs 24FP Raychem make including 24 Nos 0.2 db FC/PC Adaptors and 24 Nos 900 MICRON 1.5 meter FCPC pigtails with RDSO specification No.RDSO/SPN/TC-037-2000 (ver3))	No	6	RDSO/ SPN/TC/037-2000
4.	OFC Patch Cord : (FCPC To SCPC, each 10 meter long patch cords with 0 db adaptors)	No's	12	Note: 1
5.	19" U Rack	No's	6	Note: 1
6.	Communication Hub: MRO TEK make, MAPLE 4C or better, 1U, 19 " rack mountable device consisting of four E1 ports)	No	6	Note: 1
7.	SMPS battery chargers: (For telecom use 48V, 25 Amps in N+1 configuration using 3 modules of 25 Amps (FR/BC) suitable for 200 AH LM Batteries with lightning	NO's	6	Note: 1



	and surge protection with automatic switching between the modules)			
8.	Battery: 48V/200AH VRLA maintenance free battery	Nos	6	Note: 1
9.	NMS: (Network Management System) for divisional Head Quarter.	Nos	2	Note: 1
10.	10 Pair CT BOX: KRONE terminal similar to WAGO/Phoenix make	NO's	14	RDSO SPN 97-2012
11.	10 pair X 0.5mm cable: Switch board cable for indoor wiring.	KM's	3	Note: 1
12.	DWC Pipe with accessories	Mtr	600	Note: 1
13.	Fuse Holder 20 Amp: (Capacity to IRS Spec S 78/92 or IRS.S 78/Tentative or latest./Fuse links 20 / Amp capacity to IRS Spec S 78/92 or latest).	Nos	6	IRS S 75-2006
14.	Filter Unit	Nos	9	IRS S 68-89
15.	10PAIR x 0.63MM: (PIJF Cable)	KM's	5	IRS: TC-41/97 (Amnd: 1 to 3)
16.	Control room Equipment: (As per RDSO Spec.No.SPN/TC/66/2007 with amendment 2 with all accessories)	No's	2	SPN/TC/66/2007
17.	230- 110V / 1.5 KVA IPS Transfomer	nos	2	IRS_S_72_Ver_1_0

Notes:

1. Item shall be as per RDSO /IRS Standard and Item to be sourced from RSDO/Railways approved vendors only.
2. The list of RDSO specifications are available at page number 7 of 225 to 12 of 225 in RDSO approved vendor directory (issued half yearly).
3. If there is any discrepancy in the above mentioned RDSO specification number against each item, the RDSO vendor directory mentioned standards should be followed.

**4.0 DOCUMENTATION:****4.1.1 To be submitted along with bid**

a	Technical data sheets (for information).
b	RDSO approval certificate for manufacturing.
c	Type Test Certificates (for information).
d	RDSO Approved Quality Assurance plan.
e	Bidder shall furnish NO DEVIATION SHEET as per Clause .No 5.0 .
f	Check list for Bid Submission as per Clause .No 6.0
g	Duly filled unpriced price schedule as per Annexure-1

Document at Sl. no. "a" to "d" above shall be submitted in line with Applicable & latest RDSOs as mentioned in Table-1 against each material codes.

In case RDSOs approval certificate for the company to manufacture of the enquiry items is/are **not available, the bidder's offer will be rejected. Hence, OEM should have a valid RDSO approved certificate.**

4.1.2 To be submitted in 6 sets after award of contract

Sl. No.	Description
a	Completely filled in technical data sheets as per railways practices suitable for information & inspection (<i>Separately typed vendor datasheets are NOT acceptable</i>).
b	Type Test Certificates for review
c	Storage Instruction including handling of material at Site.

6 set of all Drawings & document shall be submitted as per latest applicable RDSO within 1-week time after release of LOI/PO whichever is earlier.

BHEL shall provide comments/approval within 10 days of receipt of drawings. Vendor shall incorporate comments (if any) and submit revised documents/drawings within 7 days for final approval. Vendor is responsible for completion of approval cycle and minimizing number of revisions.

**5.0 NO DEVIATION FORMAT**

ENQUIRY NUMBER _____

NAME OF BIDDER _____

ITEM _____

OFFER REF
NUMBER _____

S/N	Clause/ Spec Number	Description	Deviation	Nature of Deviation	Remarks
1					
2					
3					
4					
5					

NOTES:

1. **Technical offer of the bidder will be evaluated only on the basis of No Deviation Schedule. No**

Deviation Schedule constitutes this sheet (with these Notes) duly signed and stamped.

2. Deviations are not accepted against RDSO standard specification, RDSO approved drawings & RDSO approved quality assurance plan. Accordingly, No deviation schedule shall be filled and submitted along with technical offer.
3. No price implications shall be entertained by BHEL during technical scrutiny & order execution stage. Hence, in no case there will be consideration of price implications.
4. Bidder to submit the “No Deviation Schedule” by writing “NO Deviations” in this format.
5. If the “No Deviation Schedule” is not submitted along with the offer, the bidder’s offer is likely to be rejected without any further interaction with the bidder.

SIGNATURE OF BIDDER _____

NAME _____

DESIGNATION _____

DATE _____

COMPANY SEAL

ESP-001- 2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION	Std. / Doc. Number	
			PY 56524	
			Rev. No.	00
			Page 7 of 8	

6.0 **GENERAL:**

6.1 **CHECKLIST FOR BID SUBMISSION**

(TO BE FILLED BY BIDDER AND SUBMITTED ALONG WITH OFFER)

Sl. No.	Description	Bidder Confirmation	Comments/ Remarks
1	Technical offer is conforming to technical specification PY 56524 & its associated Annexures (if any), pre-bid clarifications (if any) etc., Bidder to confirm (Yes / No).		
2	Bidder confirms that they have read the provisions of the Deviation Schedule and have included the deviation Schedule in the Offer after agreeing to the said Provisions (Yes/No).		
3	Bidder confirms that Prices for all items have been Quoted. Unpriced & Priced Schedules are included in the Techno-commercial Offer and Priced Offer respectively.(Yes/NO)		

Notes: Offer received without affirmative confirmation against any of the above points may not be considered for evaluation.

(Signature and stamp of bidder with date)

6.2 Quantities mentioned are tentative requirement. Based on the actual requirement, quantity can be increased or decreased by about 15% on overall qty. Final BOQ will be informed before price bid opening. Unit rates quoted by bidder shall be applicable for the revised BOQ also.

7.0 **INSPECTION & TESTING**

- 7.1 Testing of Items and accessories shall be as per Number: latest RDSOs as applicable.
- 7.2 Stage and final Inspection including document review shall be carried out by RDSO/CORE/ their representative and BHEL at vendor works as per RDSO approved QAP.
- 7.3 Vendor shall furnish RDSO approved Quality Assurance plan for information to the purchaser”

8.0 **PACKING & DISPATCH**

Packing and Dispatch of Items and accessories shall be as per Number: latest RDSOs (As applicable).

9.0 **TECHNICAL DATA SHEET**

Technical data sheet shall be provided considering the technical requirement of the Applicable Latest RDSO specifications (As indicated against each material codes in table-1 of this specification). The technical data sheet should suitable for review & inspections. Standard format suitable for current railway practices are accepted with detailed information.

10.0 **DISPATCH INSTRUCTIONS**

1. Items and accessories to be manufactured after data sheet approval from BHEL / Railway Authority.
2. Dispatch location and corresponding lot quantities will be intimated during drawing approval stage.
3. BHEL will reserve right to modify the location (with in section), right to change the quantities.



RECORD OF REVISIONS

[illegible]