कार्यालय महाप्रबन्धक (कार्मिक), पूर्वोत्तर रेलवे / गोरखपुर-273012
Office of the General Manager (P), N. E. Railway Gorakhpur-273012

कमांक–34

आर.बी.ई. स:–19/2024

File No: NER-HQ0PERS(POLI)/6/2023-O/o SPO/HQ/HQ/NER**(Computer No:** 86343) दिनांक 19.03.2024

सचिव / महाप्रबन्धक
सचिव / अपर महाप्रबन्धक
सभी विभागाध्यक्ष
सभी मण्डल रेल प्रबन्धक
सभी कार्मिक अधिकारी
सभी मुख्य कारखाना प्रबन्धक
सभी अतिरिक्त मण्डलाधिकारी / स्थापना
पूर्वोत्तर रेलवे

विषय :- Course curriculam for Electrical and TRD for outsourced staff for PSS and PMS

संन्दर्भ:- रेलवे बोर्ड का पत्र सं. E(MPP)/2023/3/23 (RBE No 19/2024) दिनांक 20.02.2024

.....

रेलवे बोर्ड का पत्र सं. E(MPP)/2023/3/23 (RBE No 19/2024) दिनांक 20.02.2024 की प्रतिलिपि सूचना , मार्ग दर्शन एवं आवश्यक कार्यवाही हेतु संलग्न कर प्रेषित की जा रही है।

संलग्नक / यथोपरि

19.3.24
(गोपाल प्रसाद गुप्ता)
वकाधि / मुख्या.
कृते महाप्रबन्धक / कार्मिक

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कारवाही हेतु प्रेषित:-
1) महामंत्री /एन.ई.रेलवे मजदूर यूनियन/गोरखपुर
2) महामंत्री /प्रोमोटी अधिकारी संघ /पूर्वोत्तर रेलवे /गोरखपुर
3)पूर्वोत्तर रेलवे प्रथम श्रेणी अधिकारी संघ /गोरखपुर
4) महामंत्री /एस.सी/ एस.टी एवं ओबीसी एशोसियेशन /गोरखपुर

19.3.24
कृते महाप्रबन्धक / कार्मिक

Received through Email

RBE No. 19 /2024

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No. E (MPP)/2023/3/23 **New Delhi, dated 20.02.2024**

The General Manager,
All Zonal Railways/PUs
Metro Railway, Kolkata
CORE, Allahabad
DG/RDSO/Lucknow
CAO/DMW/ Patiala
CAO/COFMOW/New Delhi
ED/CAMTECH/Gwalior

DG/NAIR/Vadodara
DG/IRITM/Lucknow
DG/IRIEEN/Nasik
DG/IRICEN/Pune
DG/IRISET/Secunderabad
DG/IRIMEE/Jamalpur
DG/ IRIFM/ Secunderabad
DG/ JRRPF/ Lucknow

Sub: Course curriculum for Electrical and TRD for outsourced staff for PSS and PMS

One of the recommendations (Item no. 3.2 - Skilled Personnel)) given during Chintan Shivir-2023, held on 1st and 2nd June, 2023 at Manekshaw Centre, New Delhi was regarding introduction of Certification Courses (3 to 6 month) on Electrical/TRD by Railway Training centres to ensure availability of skilled supervisors for Project Supervision Services (PSS) and Project Management Services (PMS).

2. The matter has been considered in Board's Office and a 24 weeks course curriculum for Electrical and TRD for outsourced staff for PSS and PMS prepared by IRIEEN and approved by Additional Member/Railway Electrification (AM/RE) is enclosed herewith.

3. It may also be noted that since there is an over lapping in the duties carried out by Supervisors and Artisans (PSS & PMS), the curriculum have been kept same for PSS & PMS. Presentation, feedback, Group discussion and examination/Viva voce is to be conducted in the last week of the course and certificates are to be issued to the successful trainees. The knowledge of Electricity Act and Codes to be imparted is applicable to General electric works as well as TRD works in Railway. The Codes and Manuals applicable along with the methods of their applications will be imparted in the skill training. Training fees will be as per Railway Board Letter No. E (Trg) 2008 (22) 1-A dtd. 27.10.2023 (copy enclosed)

4. The course curriculum for Electrical and TRD for outsourced staff for PSS and PMS has been scanned and uploaded under **MPP Training Circulars** on 'Indian Railways' website and can be viewed or downloaded from Railnet.

5. Kindly acknowledge receipt.

D.A. : (i) Course Curriculum (04 Pages)

(ii) Railway Board Letter No. E (Trg) 2008 (22) 1-A dtd. 27.10.2023 (05 Pages)

20/2/24

(Amit Singh Mehra)
Director/MPP

No. E (MPP)/2023/3/23 **New Delhi, dated 20.02.2024**

Copy to:

1) The General Secretary, NFIR, 3 Chelmsford Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

2) The General Secretary, AIRF, 4 State Entry Road, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

3) The Secretary General, FROA, R.No.256-A, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

4) The Secretary General, IRPOF, R.No.268, Rail Bhavan, New Delhi for information (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

5) All Members, Department Council & Secretary Staff side National Council 13-C, Ferozeshah Road, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

6) The Secretary General, AIRPF Association, Room No.256-D, Rail Bhavan, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

7) General Secretary, All India SC & ST Railway Employees Association, 171/B-3, Basant Lane Railway Colony, New Delhi (Copy may be downloaded from E(MPP) Training Circulars/Railnet/Internet).

For Principal Executive Director (IR) /Railway Board

आज़ादी का अमृत महोत्सव

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

G20

No. E(Trg) 2008(22)/1-A **New Delhi, dt: 27.10.2023**

The General Managers/CAOs,
All Indian Railways/PUs.
CORE/Allahabad

The Director Generals/Directors,
All Central Training Institutes.
RDSO, Lucknow.

Sub: Training of Foreign Nationals and Non-Railway Organization Personnel on Indian Railways – fee reg.
Ref: Railway Board's letter of even no. dated 11.05.2022.

In partial modification to Board's letter of even no. dtd 11.05.2022 under reference, it has been decided that fee for the training of personnel of non-railway organizations working on IR Projects/Works will be applicable at the rate of Rs 500/- per day per person. Further, this rate will be applicable for training by any of the railway training centres (CTIs, MDZTIs, MDDTIs, STC, BTC, etc) either at campus or online.

2. Charges for other non-Railway personnel, foreign nationals and other cases will continue to be governed by Board's letter dated 11.05.2022, under reference.

3. The above rate is exclusive of GST and all other applicable taxes. Mess charges are not included and the same shall be applicable as per the prevailing rates.

4. This issues with concurrence of the Finance directorate of Ministry of Railways and approval of Board (MF and CRB & CEO).

27/10/2023
(Jitendra Kumar)
Dy. Director, Estt(Trg)
Railway Board
Ph: 011-23047251

No. E(Trg) 2008(22)/1-A **New Delhi, dt: 27.10.2023**

Copy for information to: -

1) The Managing Director, RITES, Plot No.1, Sec-29, RITES Bhavan, Gurgaon.
2) The Managing Director, IRCON, C-4, District Centre, Saket, New Delhi-17.
3) The Managing Director, Konkan Railway Corp. Ltd., Sec-11, Plot No.6, Belapur Bhawan, CBD Belapur, Navi Mumbai-400614.

.....contd/-

Training Branch, Room No. 359-C, 3rd Floor, Rail Bhawan, Ministry of Railways, Raisina Road, New Delhi-110 001
e-mail: trainingbranch.rb@gmail.com

5269/2022

आज़ादी का अमृत महोत्सव

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

Azadi Ka Amrit Mahotsav

No. E(Trg) 2008(22)/1-A **New Delhi, dt: 11.05.2022**

The General Managers/CAOs,
All Indian Railways/PUs.
CORE/Allahabad

The Director Generals/Directors,
All Central Training Institutes.
RDSO, Lucknow.

Sub: Training of Foreign Nationals and Non-Railway Organization Personnel on Indian Railways – fee reg.

In supersession of all the previous instructions issued on the above subject, Ministry of Railways have decided that the fee chargeable for conducting campus as well as online trainings for foreign nationals and personnel of non-Railway organisations at the IR Training Institutes will be as follows :

1.1. Campus courses :

Institution	For PSUs & Private Agencies (including Foreign companies) which work on IR Projects/Works		For Private agencies/Foreign Nationals	
	Residential	Non-residential	Residential	Non-residential
(I) Central Training Institutes (CTIs)				
(a) For regular courses	Rs. 4,200/- per trainee day	Rs. 3,300/- per trainee day	Rs. 5,000/- per trainee day	Rs. 4,200/- per trainee day
(b) One time Module Design charge for customised courses	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)
(II) Other Training Institutes viz. MDZTIs. MDDTIs, STCs, BTCs etc.				
(a) For regular courses	Rs. 2,100/- per trainee day	Rs. 1,200/- per trainee day	Rs. 2,900/- per trainee day	Rs. 2,100/- per trainee day
(b) One time Module Design charge for customised courses	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)	Rs.16,600/- (Minimum)

....contd/-

/3045269/2022

1.2. Online courses :

SN	Item	Rates
(I)	CTIs	
1	Online courses for personnel from PSUs & Private agencies carrying out projects for IR (per trainee day)	Rs. 2800/-
2	Online courses for personnel from Private companies & foreign nationals (per trainee day)	
3	One-time module design charge for online courses specially designed to suit the training requirements	Rs. 20,000/-
(II)	Other Training Institutes viz. MDZTIs. MDDTIs, STCs, BTCs etc.	
1	Online courses for personnel from PSUs & Private agencies carrying out projects for IR (per trainee day)	Rs. 1000/-
2	Online courses for personnel from Private companies & foreign nationals (per trainee day)	
3	One-time module design charge for online courses specially designed to suit the training requirements	Rs. 20,000/-

2. The above charges are exclusive of GST and all other applicable taxes. Mess charges are not included in the above charges and the same shall be applicable as per the prevailing rates.

3. The above rates will be effective with immediate effect.

4. This issues with the concurrence of the Finance Directorate of Ministry of Railways.

Signed by Jitendra Kumar
Date: 11-05-2022 16:41:59
Reason: Approved

(Jitendra Kumar)
Dy. Director, Estt(Trg)
Railway Board
Ph: 011-23047251

No. E(Trg) 2008(22)/1-A **New Delhi, dt: 11.05.2022**

Copy for information to: -

1) The Managing Director, RITES, Plot No.1, Sec-29, RITES Bhavan, Gurgaon.
2) The Managing Director, IRCON, C-4, District Centre, Saket, New Delhi-17.
3) The Managing Director, Konkan Railway Corp. Ltd., Sec-11, Plot No.6, Belapur Bhawan, CBD Belapur, Navi Mumbai-400614.

Annexure-A

Course curriculum for Electrical and TRD for outsourced staff for PSS and PMS.

Week	**Duration**	**24 Weeks**
	Place	**IRIEEN**
	Module No.	*Brief Description*

Power Supply (Electrical General Maintenance)

Module No.	***Brief Description***
Week 1	**Power supply installations**
	Theory and practice of earthing, maintenance free earthing
	Substation & its equipment and maintenance, transformer,
	Different types of circuit breakers, switchgear, protection systems,
	Power distribution systems,
	Introduction to power cables
	Condition monitoring of transformer, transformer oil, DGA, cables
Week 2	**Pumping Installations, UPS, and illumination**
	Water supply pumping installations, types of pumps their specifications and selection for various applications,
	Energy conservation measures in water pumping installations and maintenance of pumps.
	Application of UPS/ inverters and its upkeep, maintenance
	Illumination engineering, terminology, energy efficient lamps,
Week 3	**DG Sets and others**
	Diesel Generators sets used in GS installations and maintenance
	Lead acid batteries, Nickel Cadmium batteries, Maintenance free batteries.
	Safety at workplace, substation.
	Relevant codes, RDSO SMIs and Modification pertaining to power supply and energy efficiency
	Field trip to nearby power supply installations/ manufacturer for practical understanding
Week 4	**Electrical General**
	Introduction to coaching stock & Train Lighting Systems, theory and practice SG/EOG/HOG schemes.
	Self-generating coach and its equipment- Alternators, Rectifier /Regulator, Coach wiring, lighting and fans, V belts and pulleys
	Batteries including VRLA,
	Fundamentals of Air Conditioning. RMPUS
	Air conditioning in Vande Bharat & Metros.

2023/O/o Director EE(PS)

E(MPP)/2023/3/23

Week 5	**General Description of Fixed Installations**
	Principles of sectioning, Power supply arrangements at sub-station
	Power supply for signalling
	Remote control and communication arrangements
Week 6	Overhead Equipment in 1x25kV & 2x25kV system
	Special Warning Signals
	Visit to 1x25kV system TSS & 2x25kV system TSS
Week 7	**Overhead Equipment - I**
	Duties of SSE and JE (OHE)
	Foundations for OHE Structures
	OHE Structures
	Cantilever Assembly
	Regulating Equipment
	Section Insulator
Week 8	Isolators
	Droppers
	Neutral Section
	Conductors
Week 9	Tension length
	Overlap
	Jumpers
	Contact wire height
	Stagger
	Encumbrance
	Span Length
Week 10	Implantation/Setting Distance
	Turnout and Crossover
	Clearances
	Bonding and Earthing
	Numbering Schemes
	Visit to OHE yard and OHE section
	Foot patrolling in OHE section
Week 11	**Over Head Equipment - II**
	Maintenance schedule for overhead equipment.
	Tower wagon operation, maintenance and safety while working.
	Safety rules for OHE
	Current collection test (OLIVER-G)
	Tower wagon working in power block

Week 12	**Power Supply Installations - I**
	Duties of SSE and JE (PSI)
	Traction Power Transformers
	Circuit breaker, Interrupter and Isolator
	Auxiliary Transformer
	Current Transformer
Week 13	Potential Transformer
	Lighting Arrestor
	Capacitor Bank
	Bonding and Earthing
	Batteries and Battery chargers
	Numbering Scheme in PSI
	Visit to PSI depot
Week 14	**Power Supply Installations - II**
	Protection system and Relay setting calculations.
	Maintenance Schedule for power supply installations.
	Energy conservation measures for Traction installations
Week 15	Safety during working at power supply installations
	Uses of Thermo Vision Camera
	Visit to CLS supply arrangement at station
Week 16	**2X25 kV ac Traction System**
	Introduction and description of 2X25kV ac Traction System
	Visit to 2x25kV system TSS & neutral section
	Visit to 2x25kV system SP and SSP
Week 17	**Remote Control and SCADA system**
	Introduction
	Duties of SSE and JE (RC)
	Salient features of SACDA
	System Description
Week 18	**Traction Power Control**
	Operation
	Duties of CTPC and TPC
	Power blocks and PTW
Week 19	Joint procedure order
	Open Access
	Visit to TPC, control room
Week 20	**Breakdown and Electrical accidents**
	Sub-station and switching station breakdown
	Breakdown of RC equipment
	OHE breakdown
	Electrical accidents
	Emergency stores and breakdown equipment
Week 21	Railway Electrification
	Introduction
	Survey Team & its work.

Week 22	Abstract Estimate and Cost Benefit Analysis
	Format of the project report
	Commissioning of Electrical Installations and EIG Sanction
	Safety precautions on electrified section
	Station working rules
	Induction effects of 25kV ac 50Hz Single Phase Traction
	Working of steam and diesel locomotives in electrified section
	Loading and unloading of petroleum products
	Rules applicable to Permanent Way Staff
Week 23	Rules for S&T installations
	Over-dimensioned consignments
	Competency certificates
	Others precautions
	Regulations for Power Line Crossings of railway Tracks
	Typical case studies.

Week 24	Presentation feedback & group discussions Examination/ Viva voice
	TOTAL DURATION= 24 weeks