

5. विद्युत(कर्षणपरिचालन)ELECTRICAL (TRO)

5.1. कू प्रबंधन (CREW MANAGEMENT)

Administrative control of Electric & Diesel crew is with Sr.DEE/TRO. He is assisted by ADEE/TRO.

Major Assets

- Crew lobbies at Kota & GGC
- Running rooms at Kota, SWM & GGC
- Electric Loco trip Shed at Kota and Sawai Madhopur

5.2. कू समन्वित लॉबी CREW FRIENDLY INTEGRATED LOBBIES



At Kota and Gangapur City Lobby, single window booking facility has been developed for Loco Pilots & Guards for better coordination and improved working. Following facilities have been provided and functioning well:

- Crew Management System developed by CRIS
- Fuel Cell Sensor based Breath Analyzer (FCSBA) & BIOMETRIC Device integrated with CMS. Latest version of Equipment (Lobby Terminal Support System) installed on 25.10.2019 at Kota and GGC Lobby.
- Meditation Room.
- Waiting room equipped with good furniture and LED display for informative documentaries
- CLI room for counseling of LPs/ALPs
- Practice Bench.
- **Conventional locomotive Trouble Shooting Console** (Locomotive working model) named as “Parakh” has been developed at Gangapur City Crew Lobby. Model has features viz. LED circuitry board which lights up as per sequence showing actual flow of supply, functioning of relays and contactors, pneumatic equipments and especially creation of 60 type of faults and their trouble shooting method, thereof to improve trouble shooting skill of LP/ALPs.
- Working Model of MSA (Modified Semi Automatic Signaling System) has been developed at GGC Lobby. MSA system is implemented in NR/NCR during fog. Kota division crew have to work in this area. Training on working model has increased confidence amongst crew.
- At Kota & Gangapur City lobby, well furnished classroom facility have been provided where special capsule courses are arranged viz. 3 Phase Loco TSD, Microprocessor module of loco etc. Safety Seminars are organized. Besides, periodical training is also imparted to running staff at these centers.

5.3. क्रू केलिये ऑडियो विजुअल शिक्षण AUDIO VISUAL LEARNING TO CREW

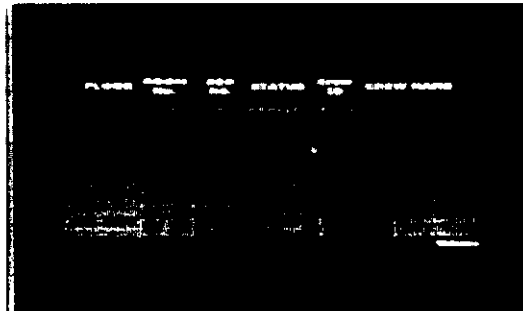
Various Learning Aids, Trouble Shooting and Locomotive Circuit Diagrams, Meditation Tips Movie are displayed to refresh Running staff in study centers developed at Kota & GGC. Wall mounted Projector is provided at Kota for graphical, Audio/video presentation for better and live explanation to crew.



5.4. रनिंग रूम प्रबंधन RUNNINGROOM MANAGEMENT

Kota division is having three running rooms having capacity of total 160 beds. Kota and SawaiMadhopur running rooms are having 62 and 60 beds respectively while Gangapur City running room is having 38 beds. These running rooms cater to the following:

Running room	Users
Kota Running room	LP, ALP, Guards of BRC, RTM, GGC, GUNA, COR, UJN
SWM Running room	LP, ALP, Guards of Jaipur, Phulera, Kota, GGC
GGC Running room	LP, ALP, Guards of Kota



Computerised Check in Check out System

5.5. रनिंग रूम गतिविधियाँ RUNNING ROOM ACTIVITIES

(i) Outsourcing of Housekeeping activities

The working of all three running rooms (Kota, SWM, and GGC) has been outsourced. Facilities of subsidized meal and ration meal both have been provided in running rooms. Other works viz. Care Taking and Housekeeping, Cleaning of linen, Horticulture etc are outsourced.



(ii) **Best Maintained Running Room Shield**

The Integrated Crew Running Room at SWM and Kota were awarded as 'Best Maintained Running Room Shield' 2009-10 & 2010-11 by Railway Board. GGC Running Room was awarded as Best Maintained Running Room at GM's level during 2018-19.

5.6. Running Rooms Kota, Gangapur City and Sawai Madhopur are **fully Air Conditioned**.

5.7. लोको रखरखाव की सुविधाएं **'LOCO MAINTENANCE FACILITIES**

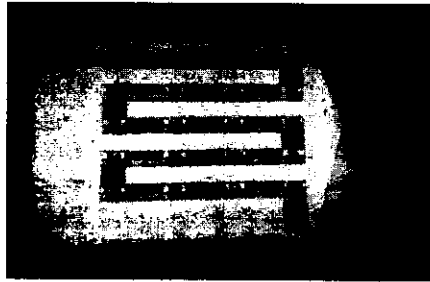
Division is having two electric locomotive trip shed at Kota and SawaiMadhopur where goods and coaching locomotives are given trip inspection. Average 55 goods locos, 183 coaching locos per month at Kota trip shed & 10 goods locos, 91 coaching loco per month trip inspections done at SawaiMadhopur trip shed.

5.8. ग्रेडिएंट चार्ट और स्टेशन डायग्राम **GRADIENT CHART AND STATION DIAGRAM**

5.9. For smooth train operation especially on gradients, a booklet containing gradient charts and station diagram has been printed and distributed to all the crew.

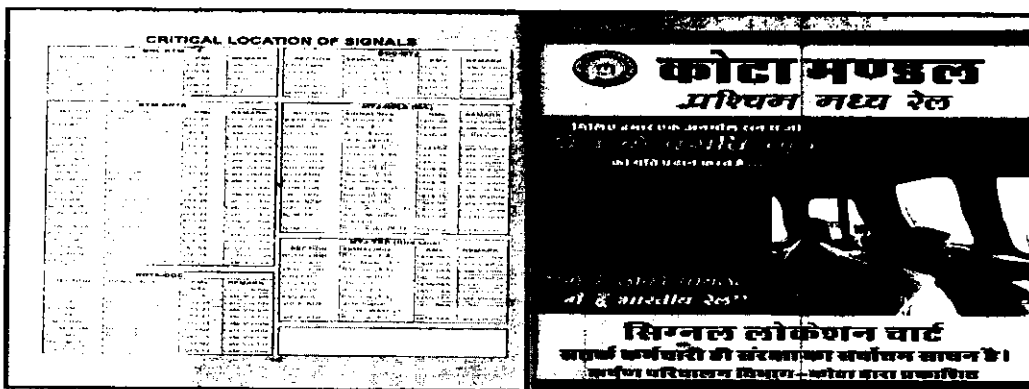
5.10. कम्प्यूटरीकृत चेतावनी आदेश **COMPUTERIZED CAUTION ORDER DISPLAY**

Caution Orders are displayed at a glance on the LED TV screen at GGC lobby.



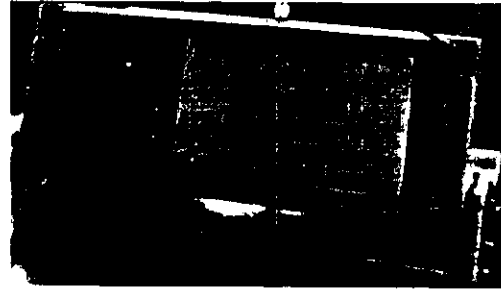
5.11. सिगनल स्थिति चार्ट **SIGNAL LOCATION CHART**

Booklet containing Signal Locations of all sections where Kota Division Crew works, has been prepared as an helping hand to crew. When Signal visibility is impaired, Signal Location Chart helps the crew in safe train operation



5.12. कोहरा सुरक्षा उपकरण FOG SAFE DEVICE

In the season of Foggy Weather, GPS based Fogsafe device (Kota lobby:105nos and GGClobby:200nos) are being provided to Loco Pilots of Kota and GGC HQs. This device helps Loco Pilots about location of approaching signals in the section.



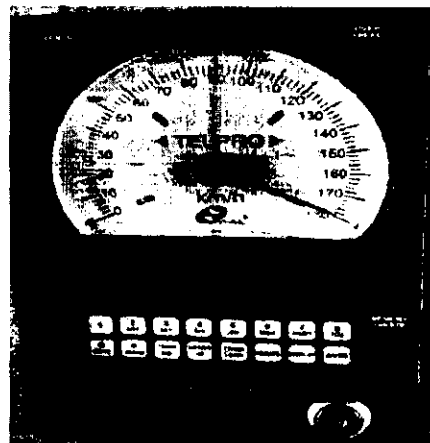
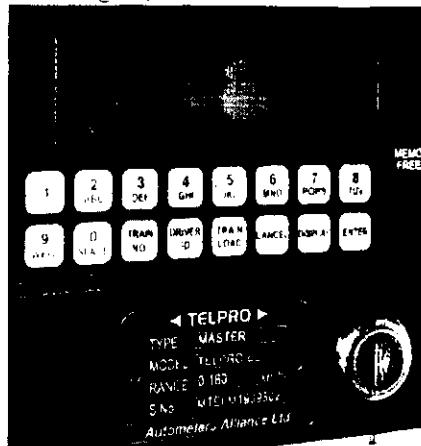
(GPS based Fogsafe device displaying signal locations between MTJ –DLI Section)

5.13. औसीलेसन ट्रायल : एलएचबी एसी विस्टाडोम कोचेज OSCILLATION TRIAL : LHB AC VISTA DOME COACHES

1. Detailed Oscillation trials of "LHB AC Vista Dome Coaches(LWCTZAC)" fitted with pneumatic suspension (One prototype with 120 KN air spring & other with 160 KN air spring) at the secondary stage on FIAT bogies upto a maximum test speed of 180 KMPH over NAD - KOTA - SWM section was done with 35008 / WAP-5/GZB Shed Electric Locomotive.

On 28.12.2020, Loco 35008(WAP-5)/GZB provided to RDSO Special, long confirmatory trial run was completed successfully between NAD to KOTA (Loaded condition -160 KN) with 180 KMPH by Kota division Crew. At CMU station Wedge test performed successfully. Required 54 km (approx) trial run with 180 kmph speed, planned between NAD-SWM, was achieved between NAD-Kota successfully by Kota Division Crew.

Also, Trial completed within 14 days (from 15.12.20 to 28.12.20) as against 23 days planned target (from 15.12.20 to 05.01.21)



(Loco 35008/WAP-5/GZB speed trial conducted by RDSO from 15.12.2020 to 28.12.20)

2. मॉक अप डायनेमिक परफॉरमेंस एसेसमेंट ट्रायल ऑफ एलएचबी डिजाइन्ड हाई कैपेसिटी पार्सल वैन विदाउट लगेज रैक्स (एलवीपीएच) : **Mock up Dynamic performance assessment trial of LHB designed High Capacity Parcel Van without luggage racks(LVPH)**

Mock up Dynamic performance assessment trial of LHB designed High Capacity Parcel Van without luggage racks(LVPH) coach upto maximum speed of 145 KMPH (Loaded and Empty condition) successfully completed between KOTA-NAD-SWM-KOTA section by Kota Division Loco Pilots with RDSO team.

(i) On 14.09.2020 trial successfully done with 145 KMPH between RDT-KRLS (UP & DN) and GQL N-LKE (UP & DN) in empty condition.

(ii) On 19.09.2020 trial successfully done with 145 KMPH between RDT-KRLS (UP & DN) and GQL N-LKE(UP&DN) in loaded condition.

3. आरडीएसओ औसीलेसन ट्रायलस ऑफ एलएचबी ईओजी एसी कोच : **RDSO**

Oscillation trials of LHB EOG AC Coach

RDSO Oscillation trials of LHB EOG AC Coach/LWACCNA (Empty Condition) was conducted successfully with 180 KMPH by Loco no 30179/WAP-5/GZB, between MEP – KOTA & KOTA – LBN section on 26.06.2020 & 27.06.20 respectively. On 30.06.2020 with this loco, loaded condition trial conducted between MEP-DKRA section with 160kmph and 170 kmph successfully. The trial (Loaded Condition) was conducted successfully with **180 KMPH** by Loco no 30179/WAP-5/GZB, between MEP to KOTA – LBN section(DN line) on 1.07.2020. **Trails done by Kota division crew and CLI.**

5.14. WAG12B क्लास लोकोमोटिव का परिचालन : Operation of WAG 12 class Locomotive

RDSO Rating & Performance and EBD trial of WAG12B class loco no. 60020 and 60021 was conducted on Kota division / WCR (Section GQL-LBN) in Jan-20 by RDSO team and CREW / CLIs of Kota division and locomotive is running successfully on the division.

Staff Trained for WAG12 Locomotives (Till date)

	Kota	GGC	Total
Loco Pilots	81	19	100
ALPs	72	22	94

5.15. रनिंग स्टाफ परिवार का सेमिनार FAMILY SEMINAR OF RUNNING STAFF

In compliance to Safety Action Plan, **Running staff family seminar on ZOOM App**, headed by Honourable DRM was organized on 14.01.2021. Seminar was addressed by ADRM(T&I) and other BOs. 80 families of LP, ALP and Guard, 35 CLIs, Safety and Operating Supervisors(Total=128) attended the seminar.

DRM, ADRM(T&I) and BOs interacted with families of running staff on ZOOM App, aiming to know their problems and to counsel them regarding needs of proper rest and stress free state of running staff. Problems narrated by families have been noted down and concerning department have been advised for early corrective action.



(मंडलरेलप्रबंधकमहोदय एवं शाखा अधिकारियों के साथजूम एपपररनिंगस्टाफफेमिलीसेमिनार: दिनांक 14.01.2021)

5.16. कर्षण परिचालन के महत्वपूर्ण पैरामीटर्स IMPORTANT PARAMETERS OF TRO

S.N.	Description	Apr to Jan	
		2019-20	2020-21
1	Electric Loco failures (SF+NSF)	183	115
2	Electric Loco Utilisation : Goods Kms / loco/ day	684.0	714.1
3	Electric Loco Utilization on Chg. Kms/loco/day	1438.6	1284.1
4	Running Of Crack trains : Avg. Nos / month	472	251
5	Average speed of Crack trains (kmph)	59.5	77.5
6	Average speed of Goods train (all) ; Kms/hr	32.1	44.8
7	9 hours performance of loco crew (WM to WS)	64.7	93.3
8	Crew trained for 3 phase Loco operation (in%)	100	100
9	Specific Energy Consumption (Goods) up to Dec	5.14	8.35
10	Specific Energy Consumption (Coaching) up to Dec	18.52	18.72
11	Locomotive Trip Inspection Goods in nos. (per/month)	65	6

5.17. 9 घंटे कार्य निष्पादन : 9 HOURS PERFORMANCE

Section	2018-19 (APR - JAN)				2019-20 (APR - JAN)				2020-21 (APR - JAN)			
	09 Hrs	09-11 Hrs	11-12 Hrs	Above 12 Hrs	09 Hrs	09-11 Hrs	11-12 Hrs	Above 12 Hrs	09 Hrs	09-11 Hrs	11-12 Hrs	Above 12 Hrs
	%	%	%	%	%	%	%	%	%	%	%	%
TKD-GGC	49.8	32.1	11.2	6.9	58.0	30.9	6.7	4.4	91.2	7.6	1.2	0.0
GGC-TKD	50.4	31.0	11.3	7.3	51.3	34.2	8.2	6.3	89.8	8.6	1.4	0.2
KOTA-GGC	85.5	11.2	2.4	0.9	74.2	24.3	1.4	0.1	97.7	2.0	0.3	0.0
GGC-KOTA	83.5	13.1	2.4	1.0	74.1	24.3	1.4	0.2	98.5	1.3	0.2	0.0
KOTA-RTM	23.0	46.3	22.6	8.1	68.1	26.1	4.8	1.0	92.1	7.1	0.9	0.0
RTM-KOTA	29.2	49.0	18.0	3.8	42.1	46.1	7.9	3.9	97.4	2.4	0.2	0.0
TDL-GGC	58.2	29.2	9.5	3.1	65.1	24.9	5.5	4.5	92.7	6.1	1.2	0.0
GGC-TDL	39.6	31.8	17.7	10.9	55.2	30.3	8.1	6.4	86.5	11.2	2.3	0.0
KOTA-GUNA	72.9	18.2	5.9	3.0	66.6	24.8	6.7	1.9	78.6	17.2	4.3	0.0
GUNA-KOTA	76.1	16.8	4.6	2.5	66.6	23.7	6.6	3.1	84.2	12.7	3.2	0.0
KOTA-COR	78.2	17.4	1.0	3.4	77.1	20.1	1.2	1.6	88.0	9.5	2.5	1.6
COR-KOTA	67.4	26.4	1.0	5.2	69.2	24.3	2.1	4.4	89.9	9.1	0.9	0.1
O/All	59.5	26.9	9.0	4.6	63.9	27.8	5.1	3.2	90.6	7.7	1.6	0.1

5.18. क्रेक ट्रेनों का संचालन : RUNNING OF CRACK TRAINS (RTM-GGC) : 438 km

Month	2019-20			2020-21		
	Dn Trains	Up Trains	Total	Dn Trains	Up Trains	Total
APR	136	341	477	115	228	343
MAY	114	348	462	51	126	177
JUN	128	351	479	103	100	203
JUL	174	353	527	116	108	224
AUG	148	362	510	87	114	201
SEP	112	334	446	127	103	230
OCT	150	409	559	128	175	303
NOV	128	355	483	51	99	150
DEC	61	299	360	136	183	319
JAN	77	336	413	174	182	356
Total	1228	3488	4716	1088	1418	2506