

ANNUAL  
REPORT  
2021-22

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FUTURE



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आधुनिक रेल डिब्बा कारखाना, रायबरेली  
MODERN COACH FACTORY, RAEBARELI





## आधुनिक रेल डिब्बा कारखाना, रायबरेली MODERN COACH FACTORY, RAEBARELI



मैं 31 मार्च 2022 को समाप्त हुए वर्ष के लिए  
आधुनिक रेल डिब्बा कारखाना, रायबरेली  
के कार्य की रिपोर्ट अग्रेषित कर रहा हूँ।

I forward herewith, the report on the working of  
Modern Coach Factory, Raebareli  
for the year ending 31st March, 2022.

*m/kan* 18.x.22  
(शमशेर एस. कलसी)  
महाप्रबंधक/आई.सी

सचिव,  
रेलवे बोर्ड,  
नई दिल्ली।

*m/kan* 18.x.22  
(Shamsher S Kalsi)  
General Manager/I.C

The Secretary,  
Railway Board,  
New Delhi.

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# IMPORTANT MILESTONES

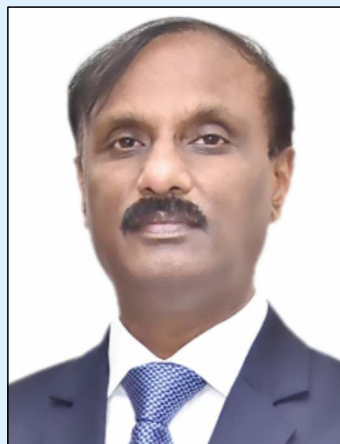
	Date
Foundation stone	Feb' 2007
Commencement of land acquisition	Aug' 2007
Preparatory Construction work commenced	Feb' 2009
Actual Construction of Factory started	May' 2010
Commissioning of 33 KV Transmission Line	Jan' 2011
Finishing & Furnishing shop work completed	April' 2011
First Coach Furnished from shell supplied by RCF/KXH	April' 2011
Furnishing of the 1st coach	April' 2011
Furnishing of the 1st LWSCZAC(Chair Car)	June' 2012
Furnishing of the 1st LWFCZAC(Ex. Chair Car)	July' 2012
Dedication of factory to the Nation	Nov' 2012
Furnishing of the 1st LWACCW coach	Nov' 2012
First Shell Assembly (Major sub assemblies by RCF/KXH)	July' 2013
Rolling out the 100th coach	July' 2013
Assembly of the First LHB coach shell by MCF	July' 2013
Completion of the Bogie shop	Feb' 2014
Completion of the Shell, Paint and the Machine shops	Mar' 2014
Rolling out the 200th coach	April' 2014
Manufacture of the first prototype fabricated Fiat bogie	Aug' 2014
Manufacture of the first LHB coach shell by RCF/RBL	Aug' 2014
Furnishing of the 1st LWSCN coach	Sep' 2014
Completion of the Administrative Building	Nov' 2014
Complete Bogie Assembly	Dec' 2014
Manufacture of the first Fiat bogie	Dec' 2014
Commissioning of the 132 KV MRS	Jan' 2015
First Bogie Manufacture	Feb' 2015
100th Shell, Manufactured	June' 2015
1st LSCN Shell, Manufactured	July' 2015
100 Bogie Manufactured	Dec' 2015
RCF, Raebareli Renamed as MCF, Raebareli	Dec' 2015
300th LWACCN Coach Furnished	Jan' 2016
Rolling out the 500th coach	Feb' 2016
1st GS Shell Manufactured	April' 2016

Formed Recognised Technical Training centre	May' 2016
IMS Certification	Oct' 2016
800th Coach furnished	Oct' 2016
1st Rake of Humsafar coaches despatched	Nov' 2016
Rolling out of the 1000th coach	Jan' 2017
1st Rake of Antyodaya Coaches despatched	April' 2017
1st Power Car shell manufactured	May' 2017
1000th Shell manufactured	May' 2017
5th Rake of Humsafar coaches despatched	June' 2017
1st Power Car handed over to ZR	Oct' 2017
Rolling out of the 1500th coach	Oct' 2017
1st coach of Deen Dayalu despatched	Jan' 2018
Total 25 nos. Power Car handed over to ZR	Mar' 2018
2000th Coach Rolling Out	May' 2018
1st SMART Coach despatched	May' 2018
1st LHB Under slung LDSLR Coach turned out	Jan' 2019
1st LHB AC Pantry car turned out	Jan' 2019
1st LHB Non-AC Chair Car turned out	Feb' 2019
1st LHB Track Recording Car Turned out	Mar' 2019
Green Co Platinum Rating Conferred to MCF	June' 2019
1st LHB First AC Coach turned out	Aug' 2019
4000th Coach Rolling Out	Aug' 2019
5000th Coach Rolling Out	Feb' 2020
2nd Rake of Smart version-2 Humsafar Coaches despatched	26th Jun' 2020
1st LSLRD-AC-750 KVA (LWLLRMDAC) coach despatched	July' 2020
Rolling out of the 6000th Coach	4th Nov.' 2020
1st LSLRD AC-750 KVA (18711) coach dispatch for trial	Nov.' 2020
Flagging off of the 1st ever Smart Tejas Sleeper Rake manufactured	27th Nov.' 2020
6th smart Tejas Sleeper Rake dispatch	Mar' 2021
Total No. of Coach's Rolled out as on Date.31.03.2021	6645Coach's
Rolling out of the 7000th Coach	July' 2021
1st Rake of 12 Loco Hauled Cape Gauge Coach ( to Mozambique )	Oct '2021
Rolling out of the 8500th Coach	March '2022
Vande Bharat Trainset (Shell ) prototype model	March '2022

# GENERAL ADMINISTRATION



## The Team MCF



**Sh. V.M. Shrivastava**  
General Manager



**Sh. S.S. Kalsi**  
PCME & CAO (L/A)



**Sh. N.D. Rao**  
PCMM



**Sh. Sanjay Agarwal**  
PCEE



**Sh. R.B. Yadav**  
PCE



**Sh. J.N. Pandey**  
PFA



**Sh. M.K. Agarwal**  
SDGM & CVO



**Sh. S.K. Katiyar**  
CPE



**Sh. Amarnath Dubey**  
PCPO



**Sh. Pranjeev Saxena**  
CME/IT



**Sh. M.K. Shakarwal**  
PCMO



**Sh. K.C. Joshi**  
CMM/Pro



**Sh. K.K. Kannoja**  
CMM/Shell



**Sh. Ajay Arora**  
CMM/Bogie



**Sh. Sandeep Shukla**  
CMM/Fur



**Sh. Sunil Agrawal**  
CMM/Elect



**Sh. Roopesh Srivastava**  
CPLE



**Sh. Mahesh Kumar**  
CPM



**Sh. Md. Saquib**  
CDE



**Sh. Sanjay Kr.**  
CEDE



**Sh. Raju Prasad**  
CQM



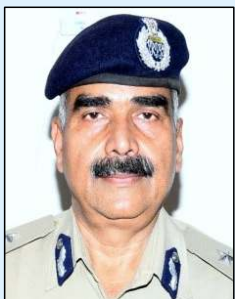
**Sh. S.S. Kero**  
CWE/Shell



**Sh. A. Sharma**  
FA & CAO-I



**Sh. R.K.M. Pasi**  
CWE/Tset



**Dr. S.K. Saini**  
PCSC



**Sh. R.N. Tiwari**  
Secy to GM & CPRO

# PUBLIC RELATIONS & PUBLICITY

## 1. PUBLICITY

All new developments and activities were publicized and highlighted through the publication and distribution of Publicity Brochures, Pamphlets and other publicity Material. The Photographs of different products and publicity data were displayed through Flex Display Boards at different locations in MCF. Several brochures were printed and distributed at the events and exhibitions. All ceremonial functions, important events, new developments and sports events were given due coverage by Electronic and Print media in their esteemed newspapers and TV channels.

Mode of Publicity	2021-22
No. of Press Release issued	43
No. of Display Banners displayed	30

## 2. CLASSIFIED ADVERTISEMENTS:

Tender Notice Advertisements were issued regularly during the financial year 2021-22. The contents were regularly scrutinized for space wastage and editing of matter to be published before releasing to various newspapers.

Description	2021-22
No. of Tender Notices Published	96
No. of Insertions	224
Expenses Incurred	Rs. 345   126.77

## 3. ASSISTANCE TO CITIZENS THROUGH RTI ACT, 2005

The Right to Information Act 2005 provides for setting out the practical regime of right to information for citizens to secure access to information under the control of public authorities to promote transparency and the accountability in the working of public administration. The Constitution of India has established the Democratic Republic and democracy requires an informed citizenry and transparency of information, which are vital to its functioning. MCF expedited to provide certain information to citizens of India who desired it.

Parameters	2021-22
Total number of Applications handled	203
Total number of Applications Disposed	203
No. of cases where CIC penalized MCF	0

## 4. CELEBRATIONS (DIVAS):-

### 4.1 Bharat Ratna Dr. Bhim Rao Ambedkar Jayanti.

130th Birth Anniversary of Bharat Ratna Dr. Bhim Rao Ambedkar was celebrated on 16.04.2021 at GM Conference Hall, MCF/RBL. On this occasion, speakers paid tribute to Dr. B.R. Ambedkar and remembered his contribution to society and the nation.



#### 4.2 World Environment Day

“World Environment Day” was celebrated at MCF/RBL on 05.06.2021. On this occasion for the purpose of environmental awareness, Different kinds of trees were planted in the Workshop and Township premises Eco park near Saraswati auditorium pound MCF/RBL.



#### 4.3 7th International Yoga Day

International Yoga Day was celebrated on 21.06.2021 in which a yoga camp was organised in Indoor Stadium following the COVID protocol Guidelines. A total of 115 officers, staff and their families participated and practiced yoga and pranayam under the guidance of a trained yoga Instructor Sh. Chandermohan Baghel as per protocol issued by the Ministry of AYUSH.



#### 4.4 “Cheer for India” Selfie Point

In the presence of Sh. V. M. Shrivastava, General Manager, MCF a Selfie Point was set up at the Sports Complex, MCF, to encourage the contingent of Indian sportspersons to participate in the Tokyo Olympics in compliance with the guidelines issued by the Railway Board. The “Cheer for India” program was organized in which the officers, employees and children encouraged the “Cheer for India” program by taking photographs at Selfie points.



#### 4.5 Fit India Freedom Run 2.0

“Fit India Freedom Run 2.0” was launched at Modern Coach Factory, from 13.08.2021 to 02.10.2021 under the leadership of Sh.Sanjay Kumar Katiyar, CPE & Hon'ble President of MCFSA. According to the

instructions of the Ministry of Sports and Youth Affairs and Railway Board, “Fit India Freedom Run 2.0” is being organized to mark the “75th Independence Day”. Under this, a nationwide campaign “Azadi Ka Amrit Mahotsav” will be organized on the concept of physical/virtual run. This movement involves taking a pledge to include at least 30 minutes of physical activity daily in our lives i.e. “Fitness dose half an hour daily”.



#### 4.6 Independence Day

75th Independence Day was celebrated on 15th August 2021 in a befitting manner. National flag was hoisted by Sh.V. M. Shrivastava, General Manager MCF/RBL. Parade, Cultural Programme and Award Distribution Ceremony were presented in front of Saraswati Auditorium MCF. Live streaming of the Independence Day Programme was done through Youtube. On the occasion of the Independence Day, MCF's administrative office, complex, Colony gates and Rest Houses were decorated with colorful lights which gave an enchanting view of the night.



#### 4.7 Rajabhasa Pakhwada

Rajabhasa Pakhwada Organised from 1st September to 14th September 2021. On this occasion various programs were organised like Hindi Quiz competition, essay writing competition, Poetry seminar etc. also a meeting was conducted to promote Hindi in day-to-day work.



#### 4.8 Hindi Divas

On the occasion of “Rajbhasha Divas” 14.09.2021, the 8th Edition of Pratibimb Patrika was released by Sh.V.M.Shrivastava, General Manager, Modern Coach Factory.



#### 4.9 Swachhta Pakhwada

“Swachhta Pakhwada-2021” was organized from 16.09.2021 to 30.09.2021 at Modern Coach Factory. On this Massive Drive, various programs were organised like cleanness drive, plantation, Swachhata pledge etc.. On 30.09.2021, under the leadership of General Manager Sh. V.M.Shrivastava, to make the Swachh Bharat Mission program more effective, given the message of cleanliness by doing Shramdaan in the MCF factory premises. On this occasion, all the senior HOD and officers, employees and sanitation workers of MCF donated Shramdaan.



#### 4.10 Rashtrapita Mahatma Gandhi Jayanti:

On the occasion of the 152nd birth anniversary of Rashtrapita Mahatma Gandhi dated 02.10.2021 Swachhta Awareness Pledge and Tree Plantation were organised at Eco Park located in the Residential Complex MCF. A documentary film on Mahatma Gandhi was displayed on screens.



#### 4.11 Pressure swing adsorption Oxygen Plant set up in MCF

Hon'ble Prime Minister Shri Narendra Modi dedicates 35 (Pressure Swing Adaption) Oxygen plants to the nation set up under PM Care Fund. In this sequence, the newly constructed oxygen plant in the hospital of Modern Coach Factory was inaugurated by the Chief Guest Sh. Dharendra Bahadur Singh,

Honorable Member of Legislative Assembly. During this MCF General Manager Sh. Vinay Mohan Srivastava was also with him.



#### 4.12 Welcome Programme of Padma Shri Sudha Singh

Padma Shri awardee athlete Ms. Sudha Singh has joined on 08.10.2021 as OSD (Sports) in Modern Coach Factory. A welcome program was organized on 19.10.2021. In the welcome ceremony, Mr. V.M. Shrivastava, General Manager and Hon'ble President of MCFSA, Mr. Sanjay Kumar Katiyar and General Secretary Mr. S. S. Kero and other senior officials were present.



#### 4.13 National Unity Day

On 31 October, the birth anniversary of "Sardar Vallabhbhai Patel", the architect of national integration, is being celebrated in MCF with great enthusiasm as "National Unity Day". Following the guidelines issued by the Ministry of Railways, the oath was administered by the General Manager MCF/RBL along with all the officers and staff members who took the oath of "National Integration". Bike Rally and Run for Unity was conducted by MCFSA, March-past was also organized by the Railway Protection Force to strengthen the spirit of unity, integrity and security at MCF.



#### 4.14 Blood Donation Camp

A Blood donation camp was organized in MCF on 12.11.2021 under the joint aegis of the Railway Protection Force and MCF Hospital. The officers and employees donated blood to the camp and did great work in the direction of saving the priceless lives of the people. There is a wave of deadly diseases like

dengue and malaria in the country, in which the patient needs blood separately, so the importance of this blood donation camp increases even more during this period.



#### 4.15 Volleyball Tournament

A Volleyball competition is being organized from 23.11.2021 to 25.11.2021 at Gomti Indoor Stadium, MCF. The competition was inaugurated by Sh.V. M Shrivastava, General Manager, MCF. In order to increase sportsmanship among the employees, the General Manager said that as much education is needed in our life, sports are equally needed, playing sports is our nature, not only physically and mentally healthy rather, it also makes us alert and disciplined citizens.



#### 4.16 Constitution Day

On the Occasion of the 72nd anniversary of the Constitution of India, in which the President recited the "Preamble" of the Constitution through video conference. Simultaneously, the "Preamble" of the Constitution was recited by the General Manager, Sh. V.M.Shrivastava and the officials and employees of the MCF recited the "Preamble" of the Constitution at their workplace itself. Apart from this, a picture display of the important contribution made by great men in the making of the Indian Constitution was installed in the administrative building. In this exhibition, the officers, employees, women and children of MCF participated and got information about the "Objective" and "Fundamental Duties" of the Constitution as well as information related to the struggles, efficiency and important contribution of the makers of the Constitution.



#### 4.17 Mahaparinirvan Diwas

The 66th Mahaparinirvan Divas of Bharat Ratna Dr.Bhimrao Ambedkar was organized in MCF on 06 Dec.

2021. The program was inaugurated by MCF General Manager by garlanding and lighting candles. After this, floral tributes were paid by the officers and employees of MCF.



#### 4.18 66th General Manager Rail Week Awards

The 66th General Manager Rail Week Awards were distributed by General Manager Sh. Vinay Mohan Shrivastava at the Saraswati Auditorium of Modern Coach Factory. A total of 195 employees and officers were given general manager level awards including 83 singles and 112 group awards in 25 groups.



#### 4.19 Republic Day

73rd Republic Day was celebrated on 26.01.2022 on the MCF campus with full enthusiasm. The flag was hoisted by General Manager Sh. V.M. Shrivastava. The Parade was performed by RPF, in which platoons of Uttar Pradesh Kalyan Nigam Limited and Northern Railway Bharat Scouts & Guides District MCF/Rae Bareilly etc participated. On this occasion, a colorful program was organized by the cultural organization in which songs, group songs and dance were presented. On the occasion of Republic Day, MCF's administrative office, complex, Colony gates and Rest Houses were decorated with colorful lights which gave an enchanting view of the night.



#### 4.20 Horticulture and Gardening Competition

The Prize distribution ceremony for the greenery and horticulture competition was organized in MCF on 09.02.2022. All types of householders were awarded in first, second and third categories by Sh. V.M. Shrivastava, General Manager of MCF. The General Manager told that the house is not only a physical

creation made of pebbles, but it is also an emotional creation, its cleanliness, decoration and beauty show the understanding of the dweller.



**4.21 First Vandebharat Train Set Prototype Model**

The Cell and Testing shed of the first Vande Bharat prototype coach was inaugurated at MCF on 30.03.2022. In this newly constructed testing shed, the work of electrical testing of Vande Bharat coaches will be done and the production of coaches will get a boost.



**5.0 SEMINAR:-**

**5.1 Vigilance Awareness Week**

The Vigilance Awareness week, 2021 was observed at Modern Coach Factory, Raebareli from 26.10.2021 to 01.11.2021 as per directives issued by Railway Board. The main theme of this year's Vigilance Awareness Week was "Independent India @ 75: Self Reliance with Integrity". Various activities conducted during this week like Vigilance pledge in the administrative building & workshop premises, pamphlets, posters and hoarding the exhibiting anti-corruption themes were distributed and displayed at prominent places in the admin building, workshop and township premises.





## 6.0 VISITS:-

**6.1 Visit of AM (Revenue ) Railway Board- Sh. Mohit Sinha** Additional Member (Revenue ) Railway Board visited MCF/RBL on 17.08.2021 .



**6.2 Visit of GM NCR- Sh. Kundan Kumar** GM NCR Visited MCF/RBL on dated 18.09.2021 .



**6.3 Visit of CFM Board Member, Mozambique:** Mr. Miguel Jose Matabel, CFM Board Member of Mozambique with delegation of CFM Board visited MCF/RBL on 22.09.2021 .



**6.4 Visit of DG/RDSO:** Director General/Research Design and Standards Organization (RDSO) Mr. Sanjeev Bhutani, visited MCF, participated in various programs and inspected the factory premises. In the meeting held in the General Manager's Auditorium, the Indigenous Technology Development, Industry 4.0 and

various types of other technologies were reviewed under TMIR (Technology Mission for Indian Railways) to be developed with the help of IIT Kanpur.



**6.5 Visit of Minister of Railway State and CEO & Chairman Railway Board at MCF Staul:**

The 14th International Railway Equipment Exhibition was held at Pragati Maidan, New Delhi from 16th to 18th December. In this exhibition the stall of Modern Coach Factory Rae Bareli was inspected by Hon'ble Minister of State for Railways Smt. Darshana Jardosh and CRB & CEO Sh. Suneet Sharma.



**6.6 Visit of Member (Infrastructure) and Member (T&RS):-** Railway Board Member (Infrastructure) and Member (T&RS) Sh. Sanjeev Mittal visited MCF. During the inspection of the factory, the coach production, quality of coaches and resources available in the factory were seen. After this, Mr. Mittal along with the higher officials of MCF inspected the residential complex and the resources made for many sports facilities here.

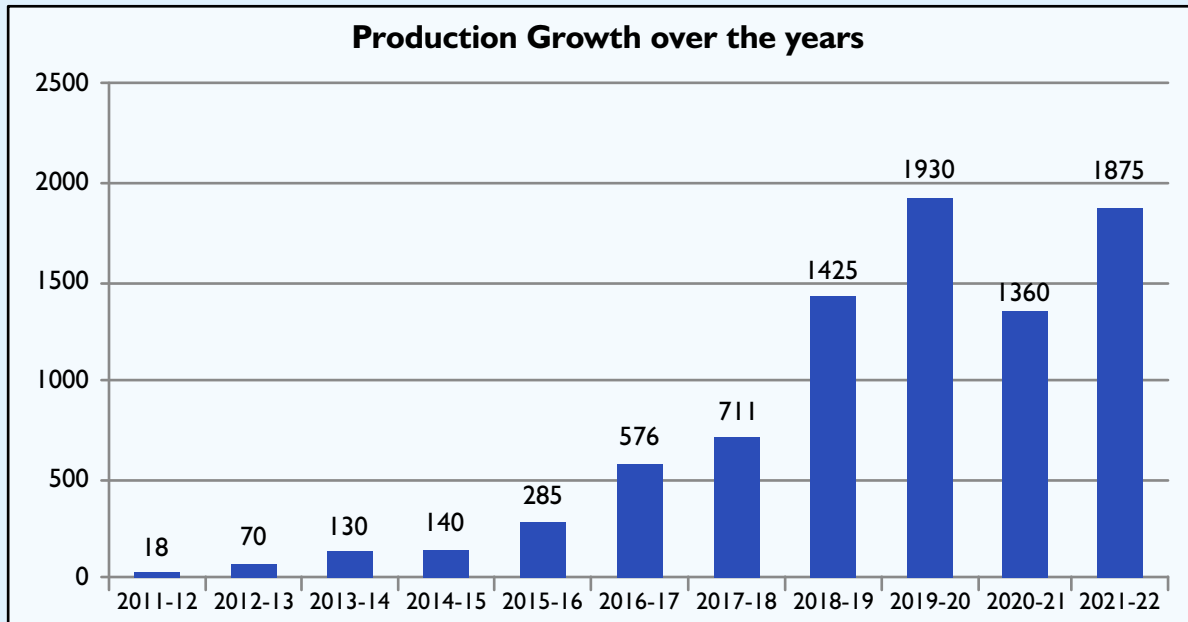


**6.7 Visit of GM RCF:-** General Manager of RCF Kapurthala Sh. Ashesh Agarwal visited MCF Rae Bareli.



# (MECHANICAL DEPARTMENT) PRODUCTION

## I. Furnishing Shop:



### I.1 Production Performance :-

Variants	Target FY (21-22)	Out Turn												Cum. Out turn (FY 2021-22)
		Apr -21	May -21	June -21	July -21	Aug -21	Sept -21	Oct -21	Nov -21	Dec -21	Jan -22	Feb -22	Mar -22	
LWACCN	610	18	12	25	40	48	63	61	65	68	70	81	55	606
LWACCNE	111	--	--	--	--	--	00	00	00	00	--	--	--	00
LWACCW (T)	174	10	--	09	15	12	12	20	15	16	20	09	24	162
LWSCN	217	27	04	09	05	25	02	17	14	07	--	--	--	237
LWSCN(G)		16	12	30	41		08				--	--	20	
LWSDD	269	23	10	26	39	29	33	47	25	13	--	03	21	269
LWSAC	66	--	--	--	--	--	00	00	00	00	--	--	--	00
Parcel Van	100	--	--	--	--	--	02	04	19	20	32	43	40	160
LSLRD	130	07	07	14	17	12	12	11	14	13	20	17	19	163
LWCBAC	30	--	01	03	02	4	00	03	03	04	07	04		31
LWSCZ	104	--	03	11	16	8	04	00	00	00	--	--	12	54
LWSCZAC	16	--	--	--	--	--	00	00	00	00	-	--	--	00
LWFAC	30	--	--	-	02	1	02	04	02	06	02	02	--	21
LFWWAC	00		01	01	-	1	02	02	04	05	03	05	05	29
Brake van	13	--	--	--	--	--	01	04	01	04	03	--	--	13
TEJAS	131	07	--	22	23	--	09	04	00	00	00	00	--	65
NRC	68	--	--	--	--	12	00	04	08	06	06	15	12	38
TRC/TRSC	02	00	00	00	00	00	00	00	00	01	00	01	00	02
<b>Total</b>	<b>2158</b>	<b>108</b>	<b>50</b>	<b>150</b>	<b>200</b>	<b>152</b>			<b>170</b>		<b>163</b>	<b>180</b>	<b>208</b>	<b>1875</b>

**a) Good work done:-**

- i) Production of 03 rakes of cape gauge loco hauled and DEMU rake Mozambique Railway.
- ii) Production of 1st VPH coach at MCF.
- iii) OHE work completed on line No. 5 and despatch of rakes started with electric engine.
- iv) In spite of Covid 2nd wave in First quarter of FY-2021-2022, maximum outturn of 200 coaches produced in July-2021

**b) Improved passenger amenities:-**

- i) 100% BIO digester Tank fitted with EP flushing system/vacuum flushing systems.
- ii) Easy to open wider windows on Non AC SCN/DDG coaches.
- iii) BRL and charging sockets for individual berth in AC coaches.
- iv) 100% provision of under-slung ventury system to minimize foul smell in toilets.
- v) Provision of RO water filters system in Non AC SCN/DDG coaches.
- vi) Provision of the cabin for disabled persons fitted with wider doors and toilets in SLRD coaches.
- vii) Fire detection & suppression system in power car & VESDA in all AC coaches.

**2. Scrap disposal:- FY 2021-2022**

Type of scrap	Weight (in kg)
Aluminium scrap	31835.0
Packing strip	1925.0
SS scrap	37531.0
MS scrap	36450.0
<b>Total scrap</b>	<b>107741.0 (approx 108 tonnes)</b>

**3. Paint Shop:****A. PERFORMANCE PARAMETERS:-**

Out turn of Paint Shop Was 1411 nos. in 2020-2021 & 1754 nos. of Shell were painted in 2021-2022, which is 24.30% Higher as Compare to Last Year.

S.No.	Month	Out-turn of 2021-2022 (Month Wise)	Mozambique Coach Out Turn	Total Out-turn of 2021-2022 (Month Wise)
1.	April	110	02	112
2.	May	53	02	55
3.	June	130	07	137
4.	July	170	01	171
5.	August	175	05	180
6.	September	126	02	128
7.	October	151	03	154
8.	November	141	02	143
9.	December	170	03	173
10.	January	157	02	159
11.	February	144	12	156
12.	March	181	05	186
<b>Total</b>		<b>1708</b>	<b>46</b>	<b>1754</b>

**Scrap Disposal:-**

- a) Disposal of Carpentry scrap Shop-

S.No.		2020-2021		2020-2021	
		Qty	Value	Qty	Value in Rs.
1.	Wooden scrap from carpentry shop	Nil	Nil	79395 kgs	2143665.00

## b) Disposal of Empty drums from paint shop and Yard:-

S.No.	Description	2020-2021	2021-2022	% increase in 2021-22 than 2020-21
1.	Empty containers 0.5- to 5 ltrs	Nil	25745 kgs	49.60%
2.	Empty drums 20 litres capacity	18485 Nos.	19323 Nos.	
3.	Empty drums 200 litres capacity	534 Nos.	204 Nos.	
<b>Total value of scrap in Rs.</b>		<b>929545.25</b>	<b>1390609.43</b>	

## c) Disposal of Hazardous waste from paint shop:-

S.No.	Description	2020-2021	2021-2022
1.	Hazardous waste generated from paint sludge, paint scoop etc.	16905 kgs	21305 kgs

**New Development:-**

1. Erection and installation of one new paint Booth and Drying oven in the paint shop which is under commissioning.
2. Painting work of newly introduced Mozambique Railway coaches.
3. Painting work of newly introduced 1st Vande Bharat shell.

**Main achievements of 2021-22:-**

1. Outturn of Paint shop increased 24.30% in 2021-2022 as Compared to 2020-2021.
2. In the month of Aug-21, the paint shop achieved the highest out turn of the paint shop ever in comparison to the August out turn since the commissioning of the paint shop.
3. Successful painting of newly introduced Mozambique Railway coaches done by paint shop and two rakes of hauled loco type and one rake of DMU type Mozambique coaches dispatched from MCF.
4. Successful painting of newly introduced Vande Bharat MC type shell done by the Paint shop.
5. Disposal of scrap expedited and long pending scrap disposed off from yard and paint shop. The revenue from scarp disposal increased by 49.6% as compared to 2020-21.
6. Proper disposal of hazardous waste ensured through Bharat oil and waste management, Kanpur. 0.5 Ltrs to 5 Ltrs containers 1st time disposed off in 2021-22 and revenue approx Rs.605007.50 generated from this scrap.

**4. Bogie Shop:**

At present, the Bogie shop is manufacturing LHB FIAT bogies of different types namely LWACCN, LWACCW, LWSCN, LWLRRM, LGS (LS5), LWCBACA, LDSLR, LWSCZ with the help of robotic welding line and other advanced machinery mentioned below. In the same line, the wheel shop is also producing wheel set in every 18 mins by the completely automatic line.

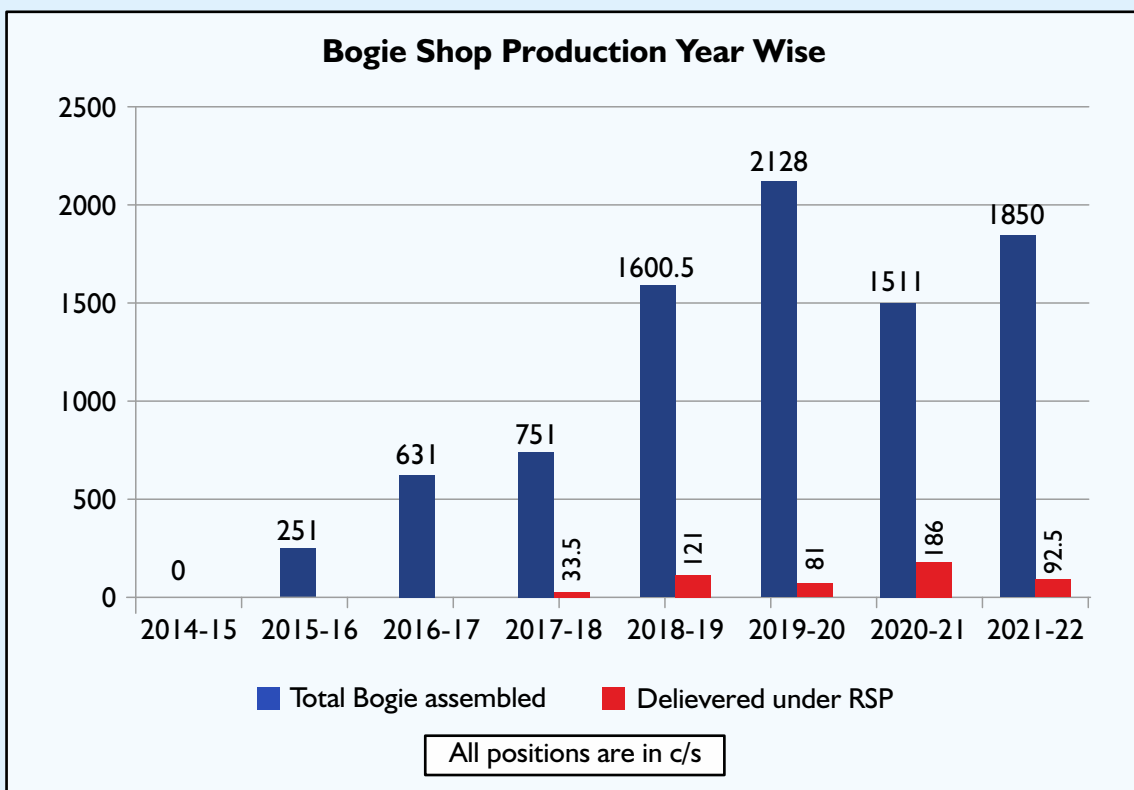
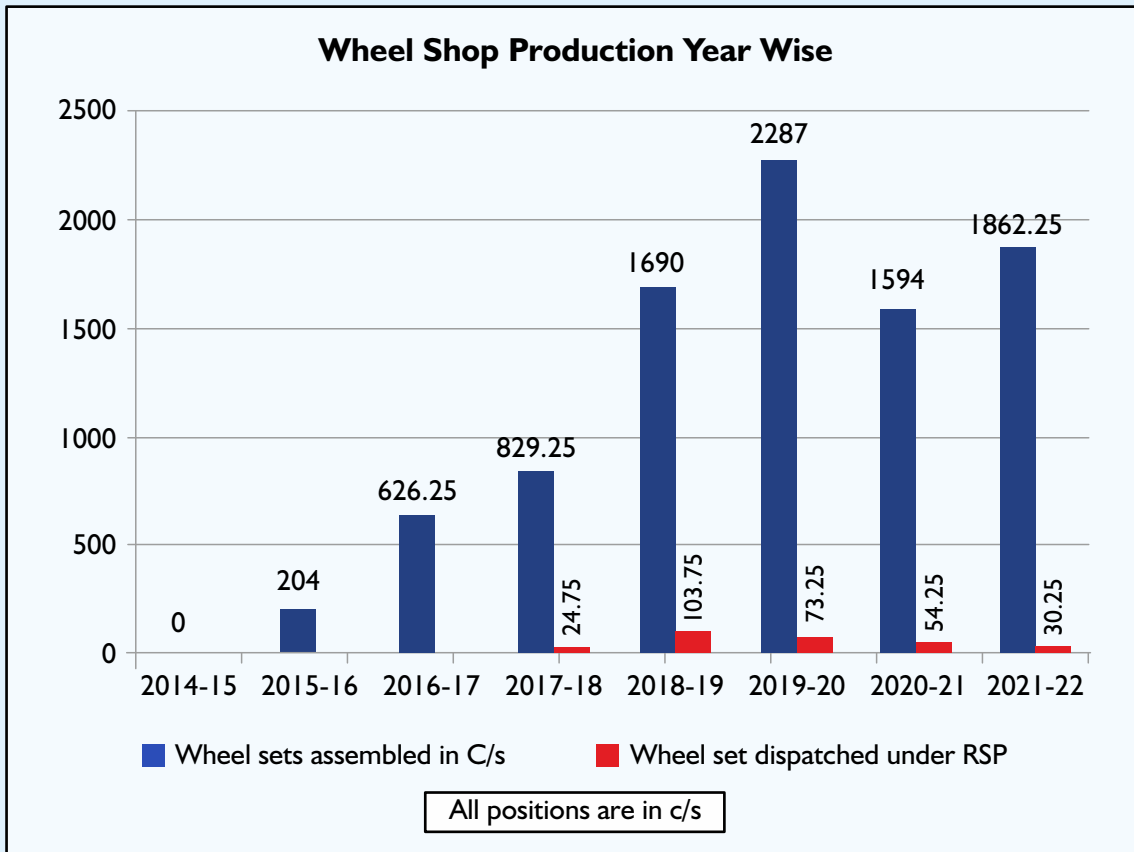
**MCF Bogie shop has produced the highest monthly out turn of 254 C/s Bogies in the month of January 2022 in the history of MCF.**

**In addition to this MCF has also produced Bogies for Mozambique Railways.**

Bogie and wheel shop both are IMS, 5S and IRIS 22163-2017 certified. Besides this Bogie shop has also achieved ISO 3834-2005 certification.

Because of the above reasons, currently, MCF/RBL has become OEM for manufacturing bogies and wheels for other zonal railways and workshops.

#### 4.1 Production Statistics of Wheel Shop & Bogie Shop in c/sets



**Note:** MCF Bogie shop has produced highest monthly out turn of 254 C/s Bogies in the month of January 2022 in the history of MCF.

### Comparative performance of Bogie and Wheel for FY 2020-21 and FY 2021-22

S.No.	Description	2020-2021	2021-2022
1	Fabrication of Bogie Frame	637	654.5
2	Fabrication of Bogie Bolster	700	500.5
3	Machining of Bogie Frame	576.5	638.5
4	Machining of Bogie Bolster	683	524
5	Bogie Assembled	1511	1850*
6	Wheel set outturn	1594	1862.25**
7	Delivery of Bogie under RSP	186	92.5
8	Delivery of Wheel Set under RSP	54.25	30.25

Note: 1. \*It includes 52 C/S Bogies of Mozambique Railways.

2. \*\*It includes 103.25 C/s Wheel sets for Mozambique Railways.

### Wheel Shop Outturn (in c/sets) over the years

F.Year	Outturn
2015-16	204
2016-17	626.25
2017-18	829.25
2018-19	1690
2019-20	2287
2020-21	1594
2021-22	1862.25

## 5. Shell Shop:

### 5.1 Variant-wise coach breakup:

S.No.	Coach Type	Quantity
1.	Brake Van Garib Rath	13
2.	LS/DDG	213
3.	LSCZAC	07
4.	LSLRD	135
5.	LWACCN	593
6.	LWACCNE	27
7.	LWACCW	152
8.	LWSCN	164
9.	LWSCZ	81
10.	LFCWAC	22
11.	LWFAC	20
12.	LWCBAC	23
13.	LWACCN/Tejas	49
14.	LWACCW/Tejas	22
15.	LWFAC/Tejas	10
16.	LWCBAC/Tejas	06
17.	LWLRRM/Tejas	09
18.	Mozambique	63
19.	VP LHB	160
20.	Vande Bharat	01
<b>Total</b>		<b>1770</b>

## 5.2 Monthly Performance:

S.No.	Month	Shell Fabrication
1.	Apr-21	111
2.	May-21	55
3.	Jun-21	133
4.	July-21	181
5.	Aug-21	179
6.	Sep-21	136
7.	Oct-21	174
8.	Nov-21	142
9.	Dec-21	169
10.	Jan-22	159
11.	Feb-22	165
12.	Mar-22	166
<b>Total</b>		<b>1770</b>

## 5.3 Production Performance:

S.No.	Description/Item	Production of Assembly and Sub-Assembly in FY 2021-22	Highest produced in a month i.e.
1.	Production of Shell	1770	181 (July-2021)
2.	Production of Sidewall	918	102 (July-2021)
3.	Production of Under frame	1101	161 (March-2022)
4.	Production of Roof	871	109 (October-2021)

## 5.4 Other Innovative work performed during the year:

S.N.	Description
1.	MEMU TC Shell assembly Jig modified into Vande Bharat & LHB Shell assembly Jig. 2nd MEMU Jig modification to T-18 and LHB Shell assembly Jig.
2.	First Vande Bharat motor coach Shell fabricated on modified shell jig.
3.	Fabrication of Vande Bharat (Train-18) sub assembly like Side wall- RH & LH Side, End Wall-RH & LH Side, Roof assembly middle part & Flat roof LH & RH successfully completed in Shell Shop.
4.	Vande Bharat Side wall assembly & Carline assembly Jig manufactured and installed in-house at side wall section by Tool Room.
5.	The First rake of Mozambique shell was completed in the Shell shop.
6.	Modification of holding arrangement done in LHB Lifting Tackles for Vande Bharat shell shifting for all rest lifting tackles PDC is 20/04/2022.
7.	In the shell and SMS section material stacking outside is streamlined. Road beside shell shop towards Mini-admin side cleared of scraps throughout the years.
8.	Unused Stands of BO Sub-assemblies were lying in the factory area and were used by firms as dump house was stopped and stands were scrapped. Other metallic scrap lying was set to Store approx qty. 211.51 MT worth 71 Lakh in the period of the last 6 months.
9.	110 EW LSCN changed to 3T for use in shell production, leading to the release of 1.88 Crore blocked inventory.
10.	70 C/s power car EW was successfully changed to 3T for shell production.
11.	Calibration of 12 Nos. (5 Shell assembly, 5 U/F and side wall) manual Jig was done by Tool Room.
12.	Total 620 AC LHB shells showered in Shell shop during FY 2021-22.
13.	Conversion of available 110 C/s LSCN End Wall (Rs. 87792/- Pcs) to 3T End Wall as per production plan.
14.	Metal Scrap disposed off by Shell shop is approx. 319.64 MT.

\*For a period of April 2021 to June 2021 as initial 3 months Shell production is affected and subsequently worked with restrictive SDOPs due to the Covid-19 pandemic.

# DESIGN

Activities undertaken by the Mechanical Design office during the year 2021-22 (upto 31st March 2022) have been listed in two heads.

1. New coach variants
2. Various design improvements

## 1. New coach variants:

### 1.1 Mozambique Railway Cape gauge Coaches:

S.N.	Item	Description																																								
1.1	Name of work done	Manufacture and Supply of Cape Gauge Passenger Coaches to Mozambique Railways.																																								
	Summary	<p>MCF is executing its first export order to Mozambique Railways through RITES (the nominated agency for dealing with export orders on behalf of IR). The order consists of Cape Gauge (1067mm) coaches -60 loco hauled and 30 DEMU coaches (05 rakes). The breakup of the variants to be exported are as under:</p> <table border="1"> <thead> <tr> <th>S.N.</th> <th>Coach Type</th> <th>Qty</th> <th>Passenger Capacity</th> </tr> </thead> <tbody> <tr> <td>I.</td> <td>1st Class AC 2 Tier</td> <td>6</td> <td>30</td> </tr> <tr> <td>II.</td> <td>2nd Class AC 3 Tier</td> <td>12</td> <td>48</td> </tr> <tr> <td>III.</td> <td>Non-AC 3rd Class (GS)</td> <td>20</td> <td>66</td> </tr> <tr> <td>IV.</td> <td>2nd Class AC sitting Coach</td> <td>10</td> <td>56</td> </tr> <tr> <td>V.</td> <td>AC Restaurant Car</td> <td>4</td> <td>30</td> </tr> <tr> <td>VI.</td> <td>Generator Car</td> <td>4</td> <td>0</td> </tr> <tr> <td>VII.</td> <td>Luggage Van</td> <td>4</td> <td>0</td> </tr> <tr> <td>VIII.</td> <td>DEMU coaches -05 Rakes (sets of 6 Coach i.e. 1 DPC + 4 TC + 1DTC)</td> <td>30</td> <td>TC = 87 DTC = 60 DPC = 0</td> </tr> <tr> <td></td> <td><b>Total</b></td> <td><b>90</b></td> <td></td> </tr> </tbody> </table>	S.N.	Coach Type	Qty	Passenger Capacity	I.	1st Class AC 2 Tier	6	30	II.	2nd Class AC 3 Tier	12	48	III.	Non-AC 3rd Class (GS)	20	66	IV.	2nd Class AC sitting Coach	10	56	V.	AC Restaurant Car	4	30	VI.	Generator Car	4	0	VII.	Luggage Van	4	0	VIII.	DEMU coaches -05 Rakes (sets of 6 Coach i.e. 1 DPC + 4 TC + 1DTC)	30	TC = 87 DTC = 60 DPC = 0		<b>Total</b>	<b>90</b>	
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	Impacts/Benefits	<ul style="list-style-type: none"> <li>• By executing the first export order MCF will be able to establish its global presence in market manufacturing of passenger rolling stocks and gain expertise to meet world standards in passenger safety and reliability.</li> <li>• MCF will add a feather in its cap by adding a new gauge in its production capability along with complying with specific customer requirements both in terms of interior furnishing as well as operating conditions.</li> <li>• With this order it is quite obvious that in the near future MCF will get orders from worldwide Railway Networks for Rolling stocks and ultimately adds up more to Non-Railway Customer (NRC) Revenue.</li> <li>• Increased demands of coaches from Non-Railway Customers will lead to a considerable increase in the profit of IR.</li> </ul>																																								
	Detailed description	<p><b>i. Loco hauled Coaches:</b> The Salient Features are as under:</p> <ul style="list-style-type: none"> <li>• Corrosion Free Coach</li> <li>• Undulation free Stainless steel car body based on LHB platform</li> <li>• Light Weight Coach</li> <li>• Interlocked Shell</li> <li>• CBC with Anti climbing feature</li> <li>• Y-frame bogie with superior ride quality</li> </ul>																																								

		<ul style="list-style-type: none"> <li>• Fire suppression system in Generator car</li> <li>• Fire alarm system in other coaches</li> <li>• Passenger Address System (PAS) which keeps the passengers informed about the travel status</li> <li>• Better Acoustic and Vibration Measures</li> </ul>
	<p><b>I. 1st Class AC 2 Tier</b>  <b>Salient features:</b></p> <ul style="list-style-type: none"> <li>• Seating Capacity :30</li> <li>• Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)</li> <li>• Interior Paneling : Fibre Reinforced Polymer,</li> <li>• Partitions Panel: Honeycomb Sandwich partition panel</li> <li>• Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.</li> <li>• Windows: Sealed window glass</li> <li>• Hinged type entrance Doors, Sliding type vestibule doors</li> <li>• FRP Modular lavatory equipped with modern fittings.</li> <li>• Berth Reading Lights and LED Lightings</li> <li>• Public address and Passenger Information system</li> <li>• Automatic Smoke/Fire detection with the alarm system</li> <li>• Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler</li> </ul> <div style="display: flex; justify-content: space-around;">   </div>	
	<p><b>II. 2nd Class AC 3 Tier</b>  <b>Salient features:</b></p> <ul style="list-style-type: none"> <li>• Seating Capacity :48</li> <li>• Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)</li> <li>• Interior Paneling : Fibre Reinforced Polymer,</li> <li>• Partitions Panel: Honeycomb Sandwich partition panel</li> <li>• Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.</li> <li>• Windows: Sealed window glass</li> <li>• Hinged type entrance Doors, Sliding type vestibule doors</li> <li>• FRP Modular lavatory equipped with modern fittings.</li> <li>• Berth Reading Lights and LED Lightings</li> <li>• Public address and Passenger Information system</li> <li>• Automatic Smoke/Fire detection with the alarm system</li> <li>• Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler</li> </ul> <div style="display: flex; justify-content: space-around;">    </div>	



### III. Non-AC 3rd Class(GS)

#### Salient features:

- Seating Capacity :66
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Partitions Panel: Honeycomb Sandwich partition panel
- Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- Hinged type entrance Doors, Sliding type vestibule doors
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Automatic Smoke/Fire detection with the alarm system
- Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler



### IV. 2nd Class AC sitting Coach

#### Salient features:

- Seating Capacity :56
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sealed window glass
- Hinged type entrance Doors, Sliding type vestibule doors
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Automatic Smoke/Fire detection with the alarm system
- Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler



**V. AC Restaurant Car**

**Salient features:**

- Seating Capacity : 30 (a table with 4 people sitting on one side and a table with 2 people seating on another side)
- Equipments: Deep Freezer, Refrigerator, Hot Case, Water boiler, Chimney etc.
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sealed window glass
- Hinged type entrance Doors, Sliding type vestibule doors
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Automatic Smoke/Fire detection with the alarm system
- Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler



**VI. Generator Car**

**Salient features:**

- 2x 500kVA silent Diesel Alternator Set (Onboard)
- Guard Area, Crew Room Area with 2 berths for sleeping and table and chair
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Partitions Panel: Honeycomb Sandwich partition panel
- Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Hand brake wheel.
- Public address and Passenger Information system
- Automatic fire detection cum suppression system
- Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler



### VII. Luggage Van

#### Salient features:

- Seating Capacity :06
- Luggage Capacity: 12 Tones
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Partitions Panel: Honeycomb Sandwich partition panel
- Seats and Berths: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- Hinged type entrance Doors, Sliding type vestibule doors
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Automatic Smoke/Fire detection with alarm system
- Anti-climbing feature: Fitted with AAR H Tight lock Centre Buffer Coupler



Detailed description

### ii. DEMU Rake:

#### Salient Features:

- 1800 HP DEMU Rake of 6 Coaches
- DPC-TC-TC-TC-TC-DTC
- ICF Type Bogies
- Semi Permanent Coupler Between DTC-TC & TC-DPC, AAR H Type CBC between TCs
- Dust Sealed Gangway
- Fire suppression system in Driver Motor Car

### I. Driver Trailer Car (DTC)

#### Salient Features:

- Air Conditioned : Driver Cab + Guard Room

- Seating Capacity : 60
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Seats: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Fitted with semi permanent coupler



## II. Driver Power Car (DPC)

### Salient Features:

- DG Set : 1800 HP
- Air Conditioned : Driver Cab + Guard Room
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Partitions Panel: Stainless steel
- Seats: Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Automatic fire detection cum suppression system
- Fitted with semi permanent coupler



**III. Trailer Car (TC)****Salient Features:**

- Seating Capacity: 87
- Floor Board: Sound insulation Floor Board (Cork- Sandwich Board)
- Interior Paneling : Fibre Reinforced Polymer,
- Seats : Cushioning material PU Foam + Fire barrier cloth + superior quality upholstery.
- Windows: Sliding windows
- FRP Modular lavatory equipped with modern fittings.
- LED Lightings
- Public address and Passenger Information system
- Fitted with semi permanent coupler

**2. LHB AC-3Tier Economy Class (LWACCNE) Coach**

S.No.	Item	Description
1.0	Name of work done	LHB AC-3 Tier Economy Class (LWACCNE) Coach
	Summary	Board in Production program of FY-2021-22 has entrusted to manufacture of LHB AC-3Tier Economy Class (LWACCNE) Coach. It is planned to manufacture 150 coaches during 2021-22.
	Impact/Benefits	These coaches are equipped with the latest features providing comfort and safety to the passengers, On board monitoring for the maintenance staff and higher speeds.
	Detailed Description	<p><b>The brief details of upgraded features are as under:</b></p> <ul style="list-style-type: none"> <li>• More passenger carrying capacity of 83 Nos. compared to 69 in existing ICF design Economy AC 3 Tier Coach &amp; 72 in LHB AC-3T coach.</li> <li>• Application of anti-graffiti coating for clean and user-friendly toilets.</li> <li>• Aesthetically better interior paneling and moulding.</li> <li>• Aesthetically designed, light weight, durable and EN-45545-2 complied seats &amp; berths.</li> <li>• Individual adjustable air conditioning vent opening on each berth</li> <li>• Under slung mounted Switch Board Cabinet</li> <li>• Pressurized flushing system in the Toilets.</li> <li>• World class passenger amenities items like glass holder, snack tables, ladders, luggage racks, cabin mirror, toilet fittings, taps etc.</li> <li>• Provision of LED type Luminaries with better aesthetics.</li> </ul>



### 3. LHB Parcel Van (LVPH) Coach

S.No.	Item	Description
1.0	Name of work done	LHB Parcel Van (LVPH)
	Summary	Board in Production program of FY-2021-22 has been entrusted to manufacture of LHB Parcel Van (LVPH) Coach.
	Impact/Benefits	<p>LHB Parcel Van has total carrying capacity of 24 ton. To facilitate transportation of wide goods, foldable 2-tier luggage racks have been provided. These coaches have three collapsible partitions and four numbers of sliding doors.</p> <p>The coach has complete stainless steel interior paneling and fitted with 140 KN air suspensions. It is also equipped with axle mounted disc brakes and anti climbing CBC coupler with transition screw coupling.</p> <p>The LHB parcel vans have been provided with the flushed-in type fire retardant LED lights. This coach can be attached at any position in the rake.</p> <p>The LHB parcel van will generate revenue for the Indian Railway through Parcel transportation business.</p>
	Detailed Description	<p><b>Salient features are as under:</b></p> <ul style="list-style-type: none"> <li>➤ Both end loco power connectivity. No need of reversal shunting on the rake.</li> <li>➤ 06 nos interior sunken led lights (9 WATT) for better illumination of interiors</li> <li>➤ 32 nos foldable 2 tier luggage racks for the efficient staking of small parcels.</li> <li>➤ Sliding doors with protection wall for the ease of loading and unloading.</li> <li>➤ 03 nos of the collapsible partition-04 nos. of the compartments for the modular use.</li> <li>➤ Tare weight= 33.5 T; luggage carrying capacity= 24T</li> </ul>

		<ul style="list-style-type: none"> <li>➤ Stainless steel shell on LHB platform for the longer life.</li> <li>➤ Fiat bogie with 140 kn air suspension for the smooth ride.</li> <li>➤ Axle mounted disc brakes (2.48 caliper ratio) with wheel slide protection system for the rapid and effective braking.</li> <li>➤ Anti climbing CBC coupler with transition screw coupling &amp; side buffer for safe and reliable coupling with high speed trains.</li> <li>➤ Axle end cover provided with the earthing arrangement.</li> <li>➤ Fleet graphic film on coach exterior in red and silver grey as per LHB color scheme.</li> </ul>
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#### 4. Vande Bharat train Sets:

##### Vande Bharat:

To fulfill the Prime Minister's vision of connecting different parts of India through the indigenous semi high speed train sets, Vande Bharat, MCF received the target of turning out 10 rakes of Vande Bharat in FY 2022-23. MCF has geared up for meeting the target and has taken various in-house initiatives like modifying MEMU TC Shell assembly Jig into Vande Bharat Shell assembly Jig and manufacturing of sub assemblies i.e. side wall & end wall in order to gain on hand experience in manufacturing of Vande Bharat coaches. Apart from this MCF took prompt action in initiating the procurement for the items to be procured by MCF, the supplies for the same have already been started.

##### Preparedness at MCF for the Vande Bharat Train set

- Modified 1st sidewall jig.
- Modified 1st roof jig.
- Modified end wall jig.
- Modified 1st shell jig.
- Supply started of high and low level diaphragms.
- PO placed for under frame jig modification.
- 2nd shell jig PO placed.
- 2nd Sidewall jig under procurement.

- Under frame jig in procurement.
- Furnishing and electrical works contracts being finalized.



Shell Assembly Jig



End wall



Side wall



Underframe

MCF has also planned for new infrastructure like testing shed (400mX20m) with inspection pits, furnishing and finishing shops, 25kV testing facilities etc. to cater the production requirements of Vande Bharat coaches.

- End wall framing work for Vande Bharat has been done successfully
- Side wall framing work for Vande Bharat motor coach has been done successfully
- Modification of shell assembly jig for Vande Bharat has been done successfully.



Prototype Motor Coach shell manufactured during FY 2021-22

## 5. Aluminium Body Coaches:

- LOA issued (through works) to M/s Dawonsys, Korea on 30.08.2019.
- Contract Value: Rs. 128.68 Cr. Contract signed on 04.10.2019
- BG-LoCo Hauled (8 coaches, as per RDSO specification, speed potential 160 KMPH upgradable to 200 KMPH) - ToT + Prototype

1	AC First Class Sleeper Car	01
2	AC 2-Tier Sleeper Car	02
3	AC 3-Tier Sleeper Car	03
4	AC Hot Buffet Car	01
5	AC DSLR with Driver/Guard Cabin	01

- Standard Gauge Metro coaches (3 coaches, Kolkata Metro Specification, 100 KMPH speed) ToT + Prototype

1	Driver Motor Car	02
2	Trailer Car	01

- BG Self-propelled coaches (DPRS): Only TOT for three types of coaches having speed potential up to 225 KMPH.
- AC Chair Car, AC Executive Chair Car and AC Chair Car cum Driver/Guard Cabin

Due to Covid situation, Firm was not willing to execute the contract. Recently has agreed to execute the contract, accordingly delivery schedule has been extended up to 30.06.2024.

## 2. Various Design Improvements:

### I. Complete switch over of Vendor Directory on U-VAM portal developed by CRIS:

S.No.	Item	Description
1.	Name of work done	Complete switch over of Vendor Directory on U-VAM portal developed by CRIS
2.	Impact/Benefits	<ul style="list-style-type: none"> <li>➤ Complete Vendor directory has been switched over to UVAM Portal and it is accessible on all public domains.</li> <li>➤ UVAM is a digitization initiative of Indian Railways through which all the activities related to the approval of vendors has been digitized.</li> <li>➤ Requests for approval can be submitted by the vendors online through their IREPS account, and the status of application can also be tracked.</li> <li>➤ All the drawings, specifications, and schedule of technical requirements can be viewed and downloaded.</li> </ul>

# PLANNING

## 1. Shell Planning:

- Procurement of the Shell Kits for newly two variants (i.e. LWFAC & LWACCNE) has been started from 2021-22.
- Stocking & indenting of Shell item for Train set (Vande Bharat Coaches) have been done.
- Roof Sheet and sole bar have been procured with CRF (Cold Rolled Forming) technology for the new variants coaches. By using this technology we can reduce welding joints in Roof Sheets, thus enhancing the strength.
- From the year 2021-22, Light weight Honeycomb Partition Frame has been introduced in LWACCW & LWACCN coaches. Hence the weight of the shell is reduced. Aluminum fire retardant HPL Sheet over honeycomb partition frame is being also introduced on trial basis.
- 01 C/set PO has been placed on trial basis for the Corrugated Side Wall of the LWACCN coach.
- Planning for manufacturing of new variants shell of Vande Bharat coach has been started this year.
- Cost is reduced for Side Wall, Roof and Underframe complete.

## 2. Bogie Planning:

- Stocking & indenting of the Bogie item for the Train set (Vande Bharat Coaches) has been done.
- Procurement of split brake disc (6600 nos.) for distribution to Zonal Railways has been initiated.
- 250 coach sets of RSP Bogie has been planned with I60 KN Air Spring for 2022-23.
- Primary coil springs for FIAT Bogie has been procured in kit form so as to reduce the number of PL.
- Switching of 100 % Air Spring from Coil Spring in the secondary suspension of LWACCN coaches.

## 3. Furnishing Planning:

- Furnishing of 05 rakes of Tejas coaches with Seat & Berth having silicon foam was planned on Turnkey Contract.
- Furnishing of 212 coaches of LWACCNE as per MCF spec. no. MMDTS 21006 Rev. 02 with seat & berth having silicon foam and 507 coaches of LWACCNE as per RCF spec. no. RCF-MD-PS-2021-5 Rev-1 with seat & berth having PU foam were planned on Turnkey Contract.
- Material planning for 10 rakes of Vande Bharat coaches was done with material assistance of major items from ICF.
- Policy issues of Turnkey Contract, Seat & Berth cushioning material, Ferrule fittings and Eligibility Criteria were dealt with.
- Ensured availability of material for the alternate plan issued by preponing certain variants in the last quarter of FY: 2021-22 to counter delay in the finalization of tenders of Turnkey Furnishing Contracts of Tejas and Garib Rath coaches.
- Ensured availability of material to achieve second highest production of 1875 coaches and highest ever production of AC coaches (927 coaches) in the history of MCF despite disruption in the supply chain of material due to 2nd wave of Covid-19.

## 4. Process Planning & RSP:

- Production plan for material planning, work contract and turnkey projects.
- Issuing of batch wise work order for regular production of coaches as per internal production plan.
- Issuing of special work order for in-house manufacturing of trade failure/critical items.
- Monitoring and ensuring availability of variant/rake wise coach allotment on the CMM portal for dispatch of manufactured coaches to various Railway divisions as per advice and priority set by Railway Board.
- Study, draft and issuing of work instructions for variant LHB coaches.
- To provide material assistance to Zonal Rly./PU's/Divisions/Coaching depots as per their requirement.
- Monitoring of variant/rake wise coach manufacturing for dispatch to various divisions/Zonal Railways as per defined priority.

- Maintain the status of supplied RSP Bogies along with other RSP work as per allotment given by 'Railway Board'. The current status of RSP work is tabulated below:

Name of Work	RSP P.B. No.	Sanction Year	Sanctioned Cost (Rs)	Status	Expenditure so far (Rs)	Remarks
Complete assemble FIAT Bogies (160 nos.)	654/21-22, 1246/18-19	2018-19	480000000	140 completed	420,000,000	Balance-20 Nos.
Complete assemble FIAT Bogies (408 nos.)	673/21-22, 733/19-20	2019-20	1224000000	348 completed	1044,000,000	Balance-60 Nos.
Toilet up gradation (100 Coach)	611/21-22, 1246/17-18	2017-18	25000000	76 completed	19,000,000	Balance-24 Nos.
Provision of GPS based PAS/PIS (50 AC/Non-AC coaches)	647/21-22, 1239/18-19	2018-19	22550000	NIL	1,353,000	Clubbed in Tejas Coach
Wheel sets (340 nos.)	685/21-22, 1219/19-20	2019-20	170000000	165 completed	82,500,000	Balance-175 Nos.
Split type Air Brake Discs (1600 Nos.)	688/21-22, 1222/19-20	2019-20	112000000	NIL	0	Balance-1600 Nos.
Split type Air Brake Discs (5000 Nos.)	1310/21-22	2021-22	350000000	NIL	0	Balance-5000 Nos.
Anti Chip Paint on FIAT Bogies (1000 Coach)	698/21-22, 1233/19-20	2019-20	150000000	NIL	0	Balance-1000 Nos.
Upgraded interiors in newly manufactured LHB coaches (1000 Coach)	641/21-22, 1231/18-19	2018-19	3000000000	NIL	0	Balance-1000 Nos.
Smart Coach (100 Coaches)	568/21-22, 631/18-19	2018-19	159182000	97 Completed	154,406,540	Balance-03 Nos.
Complete assemble FIAT Bogies (125 nos.)	732/21-22, 1335/20-21	2020-21	375000000	122 Completed	366,000,000	Balance-03 Nos.
Provision of Smart features in newly manufactured LHB coaches @ Rs. 16 lacs	733/21-22, 1336/20-21	2020-21	48000000	NIL	0	Balance-30 Nos.
160KN Air Spring Bogie @ 30Lacs (34 Nos.)	1308/21-22	2021-22	102000000	34	102,000,000	Completed
Wheel sets (218 nos.) @4.25lac	1309/21-22	2021-22	92650000	NIL	0	Balance-218 Nos.
Bio degradable, oleophobic & hydrophobic paintings for 500 LHB coaches @2.95 Lakh	747/21-22, 1350/20-21	2020-21	147500000	NIL	0	Balance-500 Nos.
160KN Air Spring Bogie @ 30Lacs (550 Nos.)	1265/22-23	2022-23	1650000000	NIL	0	Balance-550 Nos.
Wheel sets (254 nos.) @4.25lac	1265/22-23	2022-23	107950000	NIL	0	Balance-254 Nos.

**5. Other work of the planning department:**

- Internal audit of IMS and ISO: 22163 have successfully been done for planning office without N.C.
- Audit of IMS, ISO: 22163, ISO 3834 done in other departments/Shops by the planning office.
- Coach costing of LWLRRM, LSLRD, LWSCZ, LWCBAC, DEEN-DAYALU TRUN KEY, TEJAS ALL VARIANT, LWACCW, LWFAC, LWSCN, LFCWAC, LWSCN-G & LWACCN has been done in the financial year 2021-22.
- Preparation of different Budget Estimates for F.Y. 2021-22 like B.E, R.E. and FME under plan head WMS 7200 for MCF prepared on the basis of departmental/sectional estimates of MCF.
- Approx 1004 proposals of different department/section of MCF/RBL related to funding certification/cancellation from WMS disposed off during the year.
- Maintenance of Liability register 2021-22 under plan head WMS 7200 done.
- System improvement in the budget distribution has been done by decentralization and distribution funds to the concern wing/department of MCF so that unnecessary movement/delay in fund availability can be avoided.

# QUALITY

## I. Furnishing Quality Control:

No. of Coaches inspected	Audit inspection	Bio Tank Testing	CMM	RSC Uploaded
1327	1281	1237	1329	1448

### I.1 Activities of furnishing quality control:

- Coaches furnished at furnishing & finishing shops are inspected at stages of floor & PVC, Window & Ceiling, Partition & Paneling, Moulding & Door, Plumbing, Lavatory and Seat & Berths with Self Inspection (SIP), Quality Control Inspection (QCI), Cross Examination (X-Point) and Final Inspection for ensuring the complete quality of Product.
- RSC (Rolling Stock Certificate) Prepared and uploaded at MCF website for easy and early availability to concerned Railway.
- 1329 Coach Details is uploaded in CMM Portal.
- DDG-71 Coaches Inspected.
- SLRD-141 Coaches are inspected.
- LHB Power Car LWLRRM-12 Coaches Inspected.
- LWACCN-573 & LWACCW-139 Coaches Inspected.
- LSCN & LSCN (G)-117 Coaches Inspected.
- LHB Chair Car SCZ-45 Coaches Inspected.
- VPH 44 Coaches Inspected.
- Tej LWACCN- 65 coaches inspected.
- LBAC- 31 coaches inspected.
- TRC-01 coach Inspected.
- MOZ-46 Coaches Inspected.
- FAC-19 Coaches Inspected.
- FCWAC-23 Coaches Inspected.

## 2. Bogie Quality Control:

No. of bogie frame, bogie bolster and components measured on 3 D- CMM	QCI. of bogie frame and bogie bolster	Inspection of bogie assembly load testing
688	474	2503

### 2.1 Activities of Bogie Quality Control:

- Bogies fabricated at bogie assembly were inspected thoroughly in accordance with SIP (Self Inspection Proforma) submitted by production.
- Screws are checked for proper torque and air brake pipe fittings are also checked.
- Bogie final assembly is inspected for load testing.
- After completion of all records & SIP, the complete set of SIP are submitted to Quality Centre office for filling in the concern coach file for record.
- Bogie RSC prepared and submitted to furnishing quality for uploading.

### 3. Wheel Quality Control:

S. No.	Nos. of axle measured for seat and roughness values	Nos. of wheel disc measured for bore and roughness values	Nos. of complete wheel set checked in audit inspection	Nos. of CTRB Checked in audit inspection
01	628	974	2758	2758

#### 3.1 Activities of wheel quality control:

- Machining of semi finished axles and wheel discs, pre-fitting of brake discs and complete fitment of machined and bought out components is observed at all stages of the integrated wheel and axle assembly line.
- QC has advised adjusting the roughness values of the axle seating area during grinding operation and wheel disc bore during boring operation for achieving better interference in pressing operation and also minimise rejection.
- Wheel quality section is ensuring the parameters of the complete wheel set as prescribed in the drawing such as wheel distance, wheel diameter, axle journal seat, wheel disc and brake disc seats on a regular audit basis.
- Wheel quality section has taken special attention for proper fitting of CTRBs with its axial clearance, proper tightening torque of M20X60 mm bolts and application of sealant in the backing ring of CTRB.
- Wheel quality has played a vital role in the Design wing for assembling of Mozambique coaches wheel set at Loco Workshop Charbagh first time. Loco workshop Charbagh has been assembled 70 nos. Loco hauled wheel set and 124 nos. DEMU wheel set technical support of MCF wheel quality.
- In current FY 219 nos. Wheel set clearance memo issued on behalf of reports provided by M/s Bonatrans and RITES for first export order to Mozambique Rail.
- Wheel quality also ensures work of third party audit inspection by M/s Accurate

### 4. Shell Quality Control:

#### I- AUDIT INSPECTION (Sample checking)

##### Sheet Metal Shop

S.No.	Activity Plan	No. of inspection of Assembly
01	Dimensionally of Sheet metal components	764

##### Fabrication shop

S.No.	Activity Plan	No. of inspection of Assembly
1	Visually and Dimensionally inspection of Side wall	337
2	Visually and Dimensionally inspection of Lav. Side wall	392
3	Visually and Dimensionally Roof	114
4	Visually and Dimensionally End wall	61
5	Visually and Dimensionally of Under frame.	97

##### Shell assembly

S.No.	Activity Plan	No. of inspection of Assembly
1	Undulation of Side wall (shell assembly stage-III)	MCF shell-352 Mozambique shell-67
2	Dimensionally inspection of shell (shell assembly stage-I)	114

## 2- (100% INSPECTION)

### Shell assembly final inspection

S.No.	Activity Plan	No. of inspection of Assembly
01	Total shell rollout in paint shop (April-2021 to February-2022)	1693(MCF Shell) 67 Mozambique shell
02	Inspection of Shell Assembly (QCI)	1693 MCF shell 67 Mozambique shell
03	X-point	1813

#### 4.1 Activities of Shell Quality Control:

- All shell assemblies are inspected according to SIP, quality control inspection (QCI), Cross examination (X-Point) and final inspection for ensuring the complete quality of the product.
- Audit inspections of Shop made and bought out items (Roof, Side wall, Lav. Side wall. Under Frame, Sheet metal components, Shell assembly stage- I & III) are carried out.

## 5. Activities of Coach Complaint and monitoring cell (CCMC):

Cases of failure reported by Railway	Mechanical	Electrical	Total
Cased received	1166	976	2141
Case closed with the finalization of the warranty claim.	584	775	1359

#### 5.1 Performance of CCMC:

##### i. Failure within 100 days.

Year	Coach Complain (within 100 days)	Coach turned out in 01 Year	Coach complaint per 100 coach
2020-21	15	1358	1.10
2021-22	48	1875	2.56

##### ii Customer Complaint index (Mech)

Year	Coach Complain	Coach turned out in last 02 Years	Coach complaint per 100 coach
2020-21	678	3288	20.6
2021-22	1166	3233	36.1

#### 5.2 Activities of CCMC:

The Coach complaint portal at the MCF site is checked daily and complaint received in the portal is put up for further action.

- Monitoring of warranty claim compliance accordingly.
- A lot of complaints is being increased nowadays and the total pending complaints is 921. Concerned firms have been informed and despite many reminders, firms are not attending to the complaints. There is no guideline/Policy for redressal of warranty complaints against the firms w.r.t. penalty, the time limit to close the complaint and initiate monetary deduction by store and finance department. There is also no quality rating system adopted in the procurement of items.

## 6.0 Activities carried by the third party:

Inspection of Coaches manufactured by MCF/RBL is being carried out through third party inspection by M/s Accurate Sales & Services Pune as an internationally renowned organization. M/s Accurate Sales &

Services Pune is also engaged for the stage audit inspection from 01.02.2020 for assembly and sub assemblies manufactured in-house. Further, the inspection of jigs & fixtures for shell & Bogie assembly is also carried out by M/s Accurate Sales & Services Pune

## 7.0 M&C Lab and RI wing:

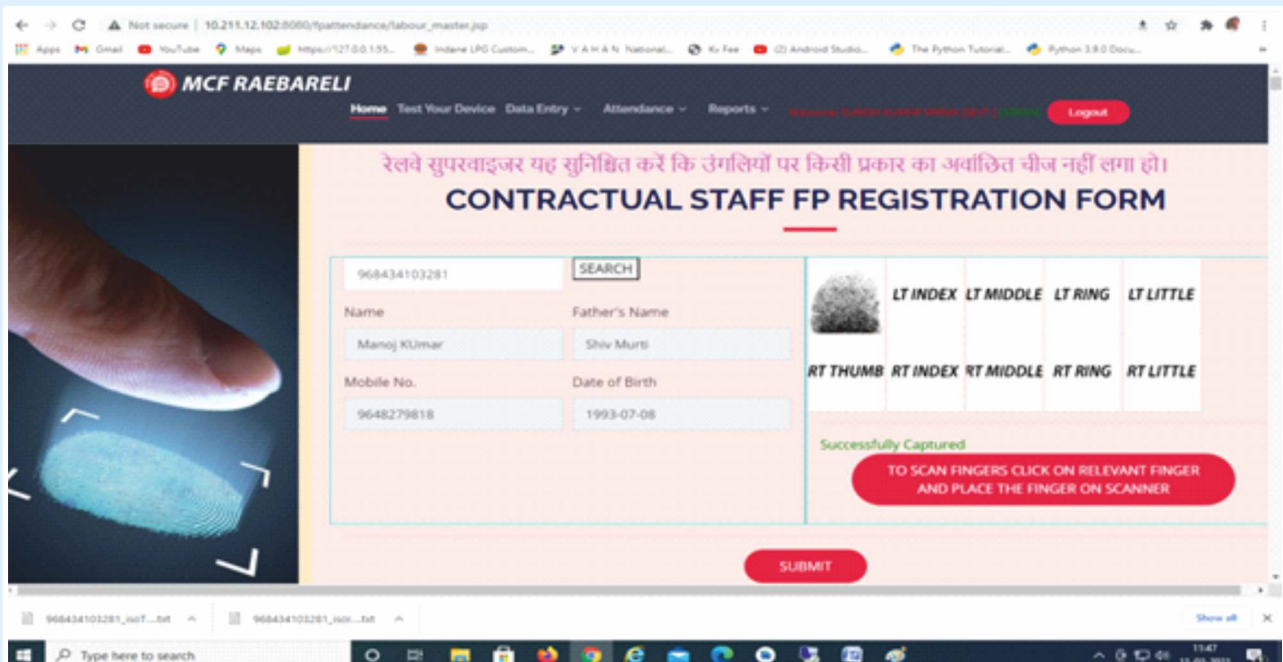
1. Testing of 2324 samples received in consignee, audit, and prototype done this year 2021-22.
2. 76 NCRs are received from the shop floor are scrutinised and confirmed this year 2021-22.
3. 6743 axles are checked by NDT technique-MPI in wheel shop this year 2021-22.
4. 1657 Shells checked by DPT in shell shop this year 2021-22.
5. 1700 painted shells are inspected and cleared from the initial to the final stage with help of outsourced inspectors this year 2021-22.
6. New M&P procured Small Angle Grinders, Sieve, Pulse Finger Tip Pulse Oximeter, Vicat, Argon Gas analyser and Salt Spray Chamber to enhance the efficiency of the Lab this year 2021-22.
7. 02 material modifications were suggested after a detailed study of different types of alternative materials.

## 8.0 ISO Cell:

S.No.	ISO certifications	Achieved	Validity
1	Green Co Rating (Platinum)	May 2019	May 2022
2	ISO 3834-2:2005 (Welding Quality Management System)	01.02.2022	31.01.2025
3	ISO 14001:2015(EMS) (Environmental Management System)	23.08.2021	26.08.2024
4	ISO 45001:2018(OHSMS) (Occupational Health and Safety Management System)	15.10.2019	14.10.2022
5	5-S Methodology– Workplace Organization Method (For Shell, Bogie, Wheel & Tool Room)	29.11.2020	28.11.2023
6	5-S Methodology– Workplace Organization Method (For Furnishing & Finishing Shop)	30.08.2019	29.08.2022
7	ISO 50001:2018 (Energy Management System)	04.09.2021	03.09.2024
Awards			
8	Green Co trending performer award 2021		October 2021

## IT

- I. MCF is using CRIS' IR wide software for Stores (iMMS) and Accounting work (AIMS) including salary portion (IPAS). On MCF's suggestions, CRIS developed a Planning module in iMMS which has created functionality for the paperless working of complete Materials Management.
- II. **Biometric Attendance System for Contract Manpower:** A LAN based software application for biometric attendance was developed in house by IT department. This application was being used at the factory premise over campus LAN for daily attendance of labour contract related manpower. Two Screenshots of the above application are as below:



- III. **Planning Application:** ERP Application on open-source platform was developed by CRIS as per MCF's specifications for monitoring online status of coach production across various shops in MCF. It has been further enhanced with shop wise production module, Machines Maintenance module, Quality control, Manpower utilization & shift management modules etc. The work is in progress for further enhancements.
- IV. **Computerization of Rajbhasha Library:** to help Rajbhasha Vibhag, computerized library application has been developed in house for Hindi Library run by Rajbhasha Vibhag. This software application caters all requirements of Hindi Library. Two Screenshots of above application are as below:

# SIGNAL & TELECOMMUNICATION

## 1.0 OBJECTIVES OF THE S&T DEPARTMENT:

- Provision and maintenance of Telecom and networking Facilities round the clock at Modern Coach Factory, Raebareli.
- Provision of CUG SIM to all officers, Supervisors and other staff as per Railway Board guidelines.
- Provision of Internet facility to all offices through LAN of RCIL and BSNL.
- Provision of internet in various machines installed at shops under Industry 4.0 implementation.
- Provision and Maintenance of Railnet facility in Railway quarter through IPDSLAM technology.
- Provision and maintenance of CCTV surveillance system at all the locations around the Modern Coach Factory premises.
- Provision of Audio - Video systems at various locations on several occasions like vendor meet, Independence and Republic day parade, VIP movement , cultural events, inter railway events etc.
- Establishing of Video Conferencing between the Railway Board and other railways via M/s RCIL.
- Procurement of Walkie-Talkie (VHF set) for MCF/RBL as per requirement.
- Issuing of cashless Ticket to all Railway staff at PRS in the TTC Building.
- Also maintenance of PRS equipments installed at the TTC Building and Post Office shopping complex.
- Maintenance and Provision of a Central announcement system around the factory and administrative Building due emergencies, VIP movements and important notices.
- Provision and maintenance of S&T assets and "on run DTH facility" in ACRA coach for GM/MCF/RBL Inspection Carriage.

## 2 Video Conferencing System:

Video conferencing facilities are now available in GM conference and Main conference Rooms in the administrative building. It is connected to Railway Board and all other Zonal Headquarters through the Railnet facility and also an alternative OFC path between MCF and Lucknow (From BSNL) which is used in case Railtel OFC cut in-between these locations. Video conferencing Between MCF, Railway Board and other Zonal Railways has been successfully done on Nos. of occasion



## 3. Telephone Exchange:

There is an in-house Railway Telephone Network connecting all-important offices and Township. Railway telephones exchanges are inter-connected through the Railway OFC network. It has the provision of IP phone which can be connected to existing LAN without any additional wiring.

### The Capacity of Telephone Exchange

S.No.	Location	Available Capacity	Used Capacity
1	Admin Building	1000 IP port & 650 Analog Lines	350
2	Township Building	1500 Lines	301

#### 4 Central Announcement System:

Speakers have been installed throughout the factory premises in all shops by M/s CRIS. These speakers have been connected to Data Center through LAN for central announcement in case of emergency and any other important offices. Total of 08 Nos of PM 8 Mic is available in this system for announcement purposes. This system is used for play soft music in the workshop premises for relaxing purposes during lunch time. Also it has been used for public announcement to all over MCF premises in view of oath ceremonies regarding shadbhavana divas, saheed divas and VIP Movement etc.

#### 5 Passenger Reservation System:

- There is an exclusive PRS network connecting MCF PRS and Indian Post PRS- Shopping Complex. The centers are connected either through the Railway OFC network or hired channels from BSNL (In between Lucknow and MCF) in case of failure of Rainet OFC.

#### 6 Internet Leased Line:

S. No.	Internet Service Provider	Internet Bandwidth	Remark
1	Railnet	Factory Area	
		Administrative Office	
		Township Through ADSL	
2	Other Railtel Ckts	Video Conferencing(Tpass)	Protected through BSNL between LKO-MCF
		Finance Budget Portal(MPLS)	
		PRS	
		Railway NGN PRI	
3	BSNL(ILL)	300 Mbps	It is for protection of railnet as above

Internet services in MCF has upto 2.5 Gbps through M/s RCIL and same has been distributed to different offices, shops and township area. Also Internet Leased Line from BSNL has also upto 300 Mbps which is used as secondary path for internet service in case of failure of Railnet connectivity.

List of **Wi-Fi Access Point** are as follows.

S.No.	Locations	Quantity
1	Workshop and Mini Administrative Building	45
2	Admin Building	40
3	Hospital and Township/ORH	18 (10+8)
4	GM Banglow	03
5	All officer Quarter	Through ADSL Modem

#### 7.0 Industry 4.0 Standard Networking:

- Provision of Internet network for implementations of industry 4.0 has been extended in the machines installed at shell shop, Wheel Shop and Bogie Shop.
- Internet network and a public IP address have been provided for the new server which is installed at data center by the IIT Kanpur. So it can be accessed from the outside networks for updating of data and other activities.

#### 8.0 SPECIAL WORK COMPLETED:

- You tube live streaming flag hosting, parade and culture programme at Saraswati Auditorium for Independence day .

- CCTV Surveillance camera has been provided in Shoping Complex Township Premises, Data Center Admin Building, Bogies Paint line, Bogies Shop in Factory Workshop area.
- **Arrangement of Large display at hospital to play live streaming video of Inaguration of PSA oxygen plant by PM.**

#### 9.0 Financial Summary of Financial Year 2021-22:

S. No.	Budget Sub Head	Allocation Head	Bill amount submitted	Bill Amount to be submitted
1	Contract	WMS 7200	88,78,000.00	0.00
	Total		88,78,000.00	0.00

# MACHINERY & PLANT

## I. Assets: Total machine= 644

S.No.	Types of Machines	Number
1	CNC Machine	75
2	Non CNC Machine	79
3	EOT Crane Jib hoists	76
4	Laboratory installations	28
5	Materials handling Equipments (Fork lifter, Road mobiles, Traversers, Hydra, RRV & Shuttle Car)	104
6	Welding sets	282

## 2. Modern Technology:

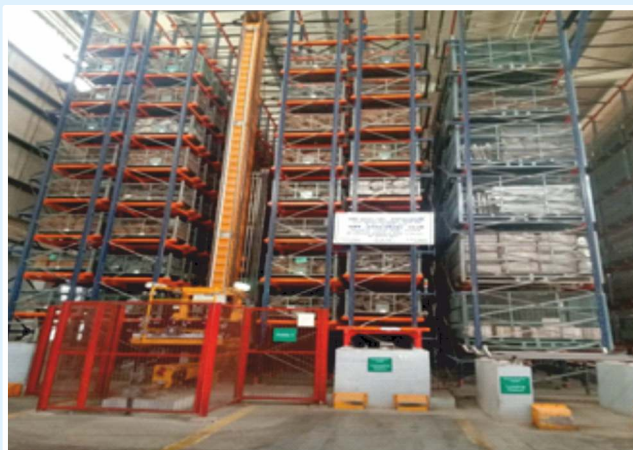
- a. **Wheel line** in Wheel Shop is totally automatic line where various stations work in tandem with synchronized gantry to perform all the machining operations on axel and wheel disc. Ultrasonic and Magnaflux testing, axel washing and auto dimensions measurement for matching the dimensions, pressing of wheel discs and brake discs have been also been provided . Portal wheel lathe and wheel balancing machine are provided for final tread turning and produce balanced wheel sets. From this line one wheel set is produced in 18 minutes with minimum human interface.



b. **ASRS (Automatic retrieval and storage system):**

ASRS is automated storage and retrieval system which works on WMS software. There is a PLC program for keeping track of pallets and logic for placing and retrieval. It has following major advantages-

- i. Low space high volume storage capacity.
  - ii. No manual intervention.
  - iii. Low man power requirement.
  - iv. Systematic Storage.
  - v. WMS software handles inventory and input and output command.
- c. **Automatic Paint Line-** Paint shop has been provided with the automated painting facilities i.e. automatic painting booth with environment control. PU painting is being done with electrostatic guns for airless spray painting and LPG ovens have been installed for drying painted coaches for



achieving high level of productivity. To meet environmental and pollution control norms, integrated ETP plant has been provided.

**d. SPARE MANAGEMENT SYSTEM:**

**Industrial grade barcode-based material management system for M&P spare cell.**

Design programming of the aforementioned system was successfully completed. This is an inventory management system. Tracing of material is done using barcode which is placed on the material when it first arrives in the store. This system stores crucial information about an item like date of receipt, date of issue, quantity, cost, associated machine, PL number, quantity, minimum quantity limit, lead time, supplier etc. By implementation of the software inventory management has become hassle free and transparent. Login IDs at all levels have been provided like store supervisors, shop supervisors and officers to enable transparency about the availability of spares. This helps in the proper planning of the procurement of spares. Proper identification of spares on the rack has been developed to search for required spares in minimum time. Google sheet of spares on Google drive has been shared with all concerned.



Tracking system of storage in spare house

**e. INDUSTRY 4.0:**

MCF has become the first factory to adopt Industry 4.0. A total of 39 machines have been networked and the key parameters of these machines are gathered continuously. This helps in keeping a watch on the health of the machine and identifying causes responsible for lower utilization/productivity.

The status is also available on the mobile app.

Further MCF is in process of integrating a production scheduler directly with work stations.

**3. Addition of New machine:**

**a) CNC edge milling machine Supplier: Nicolas Correa, Spain) in Bogie shop:**

Automatic integrated fixed/detachable type universal index able milling head for beveling and machining operation, automatic universal head with 1 degree indexing machine. It is a vertical machining center with the facility of magnetic clamping fixture for the side frame of the bogie. The complete operation can be performed with a single setup.



**b) CNC Air Plasma Machine in Bogie shop:**

It is a highly robust and rigid mechanical structure giving excellent cut quality with minimum operating costs.

It has various advanced features-

- Advanced control system with touch- screen interface
- Designed for 24X7 working with minimum down-time
- Easy to operate CUI ensures less setup time and quicker turnaround time
- Various edge- preparation facilities available in plasma cutting
- Longitudinal axis motion is guided by heavy-duty machined railway rails



It has two plasma torches with bevelling facility. A total of 8 servo motors operate various motions of two torches and the machine. It has Eckelmann controller, made specially for plasma and oxyfuel machines.

**c) CNC Spot welding machine in Shell fabrication shop:**

The fabrication shop has been provided with four integrated Robotic lines for the manufacture of under frame, sidewall, roof and end walls using high quality Fanuc Robots for MIG welding and Spot welding. Also, B&C spot welding machine is available for spot welding of the side-walls and any side wall vertical & horizontal member with skin, roof welding using electrode type welding.



**d) Installation of additional 40 KL Argon tank and tri gas mixture:**

Additional argon tank of capacity 40 KL, CO<sub>2</sub> Tank (13KL) and conversion of existing Argon tank (13KL) to O<sub>2</sub> Tank along with mixers and gas analyzers was done in addition to the existing 13KL argon tank. As production increases consumption of the di and tri gas mixture increased which has argon as the main component. This has resulted in decrease in pressure in these lines. As a minimum pressure is required to be maintained for desired welding quality there was a need for expansion of the existing gas bank facility. An additional gas mixture of capacity 250m<sup>3</sup>/hr for tri mix was also installed. With the installation of additional argon tank and tri gas mixture issues of pressure drop in pipeline has been resolved.



- e) **Oxygen plant:** Supply installation and commissioning of oxygen pipe along with 4X4 fully automatic manifolds in MCF hospital for 13 nos. beds have been successfully done and handed over to MCF hospital.



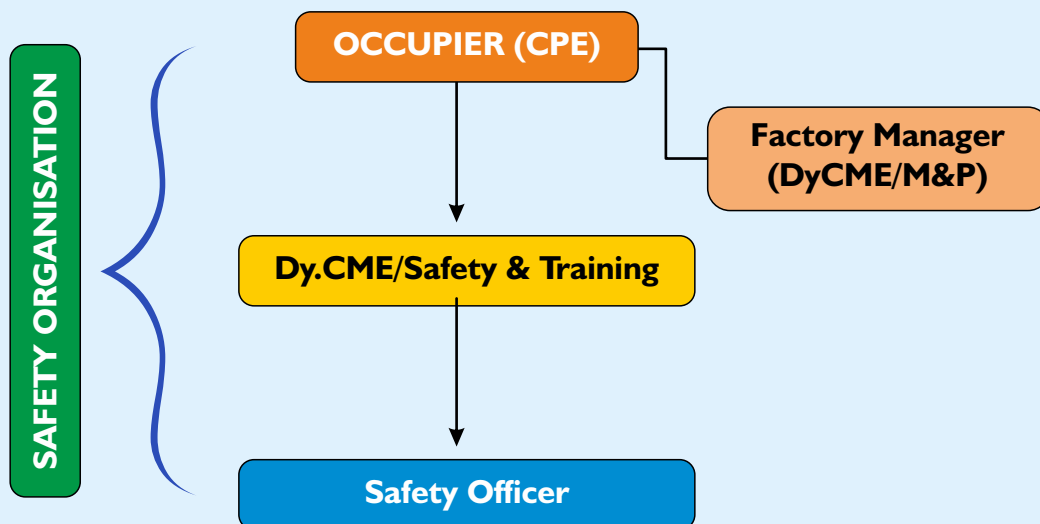
4. **Project in pipe line-**

- a) LCWM retro fitment from mirror based CO<sub>2</sub> slab resonator system to the fiber Laser system.
- b) Edge milling fixture modification.

# SAFETY



## SAFETY ORGANISATION



### **OBJECTIVE OF SAFETY CELL:**

- To Advise and assist the MCF administration in the fulfillment of statutory obligation prevention of personal injuries and to maintain a safe working environment.
- Compliance with statutory (safety) obligations related to The Factories Act 1948 & The U.P. Factories Rules 1950.
- Counselling to inculcate safety awareness among railway employees & contractor staff.
- To design and conduct Shop floor and classroom safety training programme for the prevention of personal injuries at MCF.

- To organize campaigns, competitions, contests and other activities to inculcate safety awareness among workers in the organization.
- To carry out safety inspection of regular work in various shops and stores depots in order to observe the physical conditions of work and the work practice procedures followed by the workers. To render advice on measures to be adopted for reducing the unsafe physical conditions and preventing unsafe actions by workers.
- To investigate serious accidents, industrial disease and dangerous occurrences reportable under Rules 110 & 112 of the U.P. Factories Rules 1950.
- Fire fighting operation inside/outside of factory premises. Maintenance (breakdown & Preventive) of Fire hydrant & Fire alarm system, Fire tenders, Fire Extinguishers.

### INFRASTRUCTURE OF SAFETY CELL:

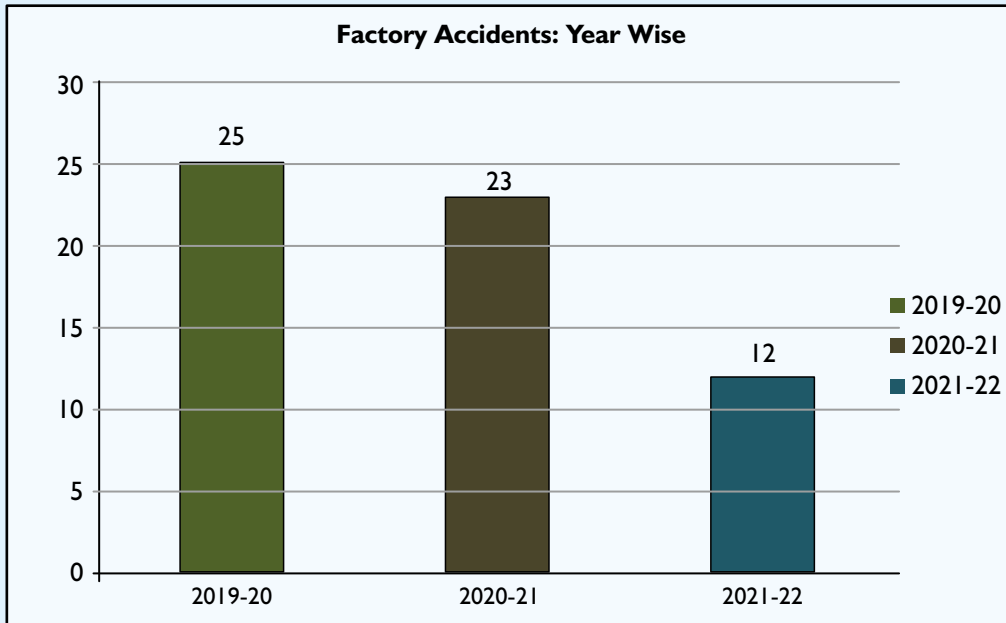
<b>A) INFRASTRUCTURE</b>	
(i) Total length of Fire Hydrant pipe line. (Working Pressure- 6 Kg/cm <sup>2</sup> ).	23,500 Mtrs.
(ii) Total no. of Fire pump house.	4 Nos.
(iii) Total no. of Hydrant Point	273 Nos.
(iv) Total no. of Fire Fighting Personal.	21 (Contractual staffs)
(v) Total no. of Fire Extinguishers DCP type, CO <sub>2</sub> type, Foam type and water type	1273 Nos.
(vi) Total no. of Fire Tender	3 Nos.
(vii) Total no. of Fire trolley pump.	1 No.
(viii) Total no. of Fire Alarm panels	3 Nos.
(ix) Total no. of addressable manual call points	144 Nos.
(x) Total no. of Optical Beam Smoke detector (In Store Depots)	70 Nos.
(xi) Total no. of Breathing Apparatus	4 No.
(xii) No. of Hydraulic Spreading Cutter with pump	1 No.
<b>B) Medical facilities</b>	
i) Name of medical centre in campus:	Railway Hospital, MCF/RBL
ii) Emergency Telephone No.	0535-2704290
iii) Ambulance No. Hospital (Township), (Mini Admin)	9670778108 62102, 9648778109

### Activities 2021-2022:

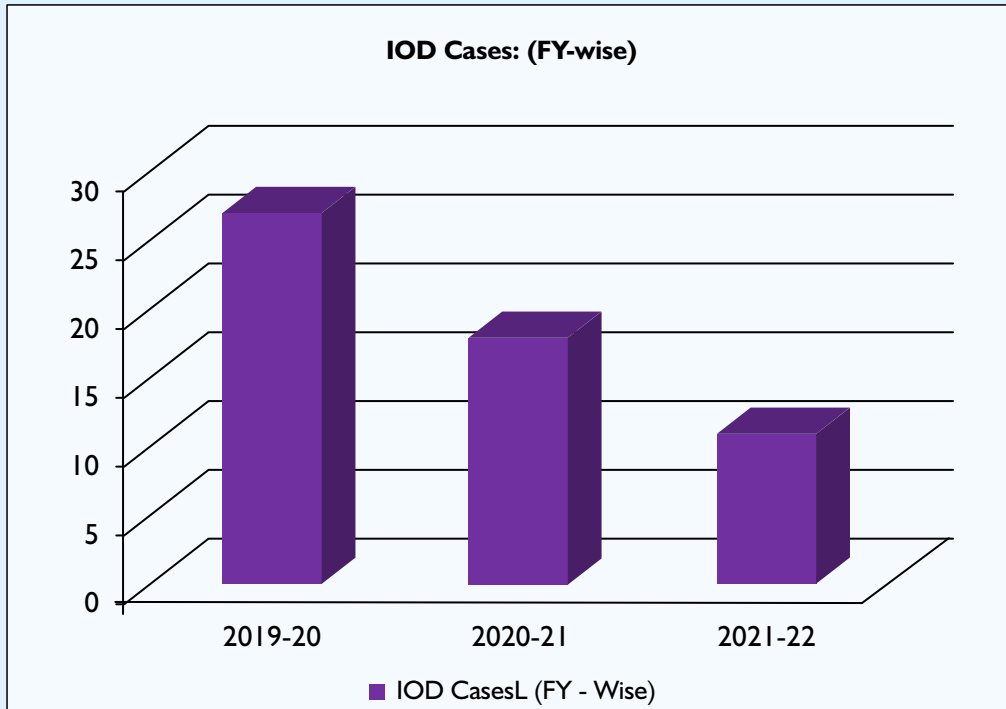
Description	Numbers
Safety meeting	02
Safety Seminar	02
Safety Counselling of SSE/JE/staff on shop floor	95
Mock Drill	02
Safety Classes in TTC	17
Fire Fighting Training to staff (Workshop + Colony)	95
Patrolling of fireman with fire tender in 3 shift	13697 KM

# COMPARATIVE SAFETY PARAMETER

**Factory Accidents: Year Wise**



**IOD Cases: (FY-wise)**



# SAFETY EVENTS ORGANIZED



**Fire Mock Drill**



**Fire Fighting Training**



**Safety Meeting**



**National Safety Week**

# SAFETY EVENTS ORGANIZED

## 1. Total Trainee Days:

Planned	Actual	% Achievement
18,000	28,258	157%

## 2. Courses conducted:

S. No.	Course Description	No. of Courses planned	No. of Courses conducted	No. of Trainees attended
1	Basic Training & Certification Course for Operators of Powered Industrial Truck (FLT's)	06	05	34
2	EOT Crane Operation Training	06	06	44
3	Safety Training for MCF artisan staff	12	09	107
4	Refresher course for SSE's & JE's (Mech)	12	06	40
5	Refresher course for Mechanical Artisan staff	12	06	45
6	Refresher course for Electrical Artisan Staff	12	01	07
7	Training and Testing of Welders including Contractual Welders	12	03	30
8	Basic Computer Training Program	12	06	27
9	Rail Kaushal Vikas Yojna	Special course, 05	05	183
10	Act- Apprenticeship	As per requirement	03	97
11	Safety Training for Newly Deployed/Working contractual staff	12	02	05
12	Induction Training of JE's	As per requirement	06	16
13	Induction Training of Artisan staff	As per requirement	01	05
14	Traverser operation training	As per requirement	03	37
15	Training and Certification of 'A' & 'B' Level Welders	As per requirement	03	59
16	Training of Welding Supervisors	As per requirement	01	05
17	Vocational Industrial Training for students of Technical Institute	As per requirement		30
18	Industrial visit of MCF/RBL for students of Technical Institutes/Dignitaries from other Govt./Private organizations	As per requirement		76
19	Field training for other Railways staff	As per requirement		179

### 3. Number of trainees attended training:

S.No.	Description	No of staff trained
1	MCF Staff	352
2	Contractual Staff	110
3	RKVY	183
4	Act- Apprentice	97
5	Other Railway Staff	179
6	Vocational Students of Technical Institutes	106
<b>Total trainees Trained</b>		<b>1027</b>

### 4. Initiatives taken:

- Rail Kaushal Vikas Yojna (RKVY): 183 Trainees trained in Welding, Electrician, Basic Computer, Fitting and Carpentry trades in FY 2021-22.
- Total revenue of Rs. 3,07,590 generated by charging training fee from the firms towards the training of their staff (Contractual) i.e. Welder's Certifications, EOT, FLT & Safety training.
- Under the Special initiative of a month long safety drive, 04 training seminars on industrial safety were conducted at TTC in Feb-2022 and 75 staff for production shops have been trained.
- 50,000 face masks were manufactured at TTC for MCF Staff & families to prevent the spread of Covid-19.

### 5. Rail Kaushal Vikas Yojna: Target: 1000 trainees in 2.5 years w.e.f. Sept '21 to Mar'24.

Batch	Trade	Total Enrolled	Passed Out			Dropout/Fall
			Male	Female	Total	
1 <sup>st</sup> + 2 <sup>nd</sup> + 3 <sup>rd</sup> + 4 <sup>th</sup> + 5 <sup>th</sup>	Electrical	145	57	20	77	33/09
	Welder	58	30	07	37	13/01
	Basic Computer	89	20	34	54	08/04
	Fitter	34	14	00	14	08/00
	Carpentry	04	01	00	01	01/00
<b>Grand Total</b>		<b>330</b>	<b>122</b>	<b>61</b>	<b>183</b>	<b>63/14</b>

- Target to train 1000 youth in 03 Yrs (From Sept-21 to March-24)
- RKVY training started on 20.09.21
- Total candidates trained so far in 3 batches 1<sup>st</sup> + 2<sup>nd</sup> + 3<sup>rd</sup> + 4<sup>th</sup> + 5<sup>th</sup> (48+26+30+54+25) = 183
- 05 Batches completed

# PROJECT

## 1.0 Annual Performance 2021-22:

Modern Coach Factory, Raebareli has been set up at a total cost of Rs. 3192 Cr, for producing LHB design stainless steel coaches with production capacity of 1000 coaches per annum. Factory is being set up on turnkey basis and the contract is awarded to M/s IRCON International on nomination basis. During the FY 2021-22, following works got completed:

## 2.0 M&Ps Commissioned in 2021-22:

SN	Machine Name	Qty./Set	Cost (Rs or Cr)
1	Tractor with Shunting Arrangement	02	0.17
2	Universal Milling Machine	01	0.22
3	Valve /Nozzle Lapping Machine	01	0.04
4	Set of Books	01	00.02

3.0 A work of augmentation of production capacity from 1000 to 2000 coaches per year (Phase-I) is sanctioned vide Pink Book 2018-19 (Item No.2 of MCF). It is decided to run the factory in 3 shifts for getting 1500 coach capacity with the existing facilities. For additional 500 coaches/annum detailed estimate is sanctioned at the cost of Rs.495.42Cr.

## 4.0 M&Ps Commissioned in 2021-22:

SN	Machine Name	Qty./Set	Cost (Crs)
1	Automated FIAT Bogie Assembly Line with Power Tools consisting of various assembly and Load Test Station.	01	10.67
2	Tractor with Shunting Arrangement	04	0.29

5.0 PH-4100 Following M&P received and commissioned during FY-2021-22.

SN	Machine Name	Qty./Set	Cost (Lacs)
1	CNC Air Plasma Cutting Machine	01	322.56
2	EOT Crane 05 Ton	01	35.03
3	Fork Lift Cap.-3 Ton	08	97.94
4	Fork Lift Cap.-3 Ton	04	33.36
5	Battery Operated platform Truck 2000 Kgs.	05	20.95
6	Utility Vehicle Double Cab Pickup Car	02	16.58
7	Oxygen Generator	01	39.00
8	Diplory for LHB Type Shell	44	48.65
9	Flat Pallets	400	72.17
10	Hydraulic Rerailing Power pack System for attending derailment of Locomotives and Wagons,	01	38.42
11	Tractor Trolley	01	1.90
12	Tipper Truck Hydraulic (3.3CuM)	02	12.96
13	Locker Cabinet	150	22.34

**6.0** Following M&P also received during 2021-22 and are under Commissioning.

SN	Machine Name	Qty./Set	Cost (Lacs)	Remarks
1	Bogie Load Testing Machine(50T)	01	37.21	PH-41
2	EOT Crane-10 Ton	01	40.30	PH-41
3	CNC Robotic Spot Welding Machine	01	2634.29	PH-41
4	E-Loader (Battery Operated) with battery, battery charger, RTO registration, Insurance	01	1.09	PH-41
5	Robotic Welding System for Bogie Side Frame & Bolster	01	384.32	PH-41

**7.0 Financial Progress:**

**Utilization of fund under plan head 4100, 4200 for the FY-2021-22**

(All fig. in Rs. Crs.)

PLAN HEAD 4100		
Allocation Head	BG	Actual Expenditure (2020-21)
CAP	10.36	14.08
RRSK	0.00	0.00
<b>Total</b>	<b>10.36</b>	<b>14.08</b>

PLAN HEAD 4200						
Description	Abstract Project Cost	Sanctioned Estimate	BG-2021-22	Actual Expenditure (2021-22)	Cumulative Expenditure up to March-2022	% Utilization
MCF/RBL/Project	1685.00	3192.00	24	54.69	3054.15	95.68
Augmentation 1000 to 2000 Coaches	480.00	495.42	40	69.47	123.82	24.99
<b>Total</b>	<b>2165.00</b>	<b>3687.42</b>	<b>64</b>	<b>124.16</b>	<b>3177.97</b>	<b>86.18</b>

# CIVIL ENGINEERING DEPARTMENT

## General-

- 1.1 Workshop comprises approx. 2.01 lakh sqm covered structures. In township, there are 2139 quarters (1124 type-II, 640 type-III, 232 type-IVDS, 90 type-IVSS, 46 type-V, 7 type VI & above) and 120 type-III quarters are under construction.
- 1.2 Various service buildings in workshop and the township, availability of full-fledged hospital, separate rest houses and clubs for workers, supervisors and officers, welfare centre, Nursery & KV School, Shopping complex, technical trainee & sports hostel. Entire indoor & outdoor sports facility, 3 MW solar power plant, a green environment and 60 hectare area Eco-Park with 7 large ponds.
- 1.3 Cost of the entire civil engineering assets of MCF is approximately Rs. 1435 Crore. Now Workshop is being augmented from a production capacity of 1000 coaches per year to 2000 coaches per year.
- 1.4 Dense forestation of 12500 trees has been done on the township side in consultation with Forest Department UP. Including this total plantation done so far in MCF is 1,33,000 trees. The nature of soil in MCF is alkali (Usar). Efforts are being made to cover the entire area of campus with plantation/greenery and maintain it suitably.
- 1.5 Green Co. Platinum certificate has been obtained for the workshop. The main emphasis is given to the conservation of natural resources and to provide a green & eco friendly environment. The entire sewage of the workshop and township is being treated in STPs (capacity 1.1MLD + 0.4MLD in township and 1.1MLD in workshop). Entire treated water is being used in the irrigation of greenery.
- 1.6 Assets are being maintained regularly in a planned manner with minimum departmental labour. General sanitation & horticulture activities are being outsourced along with other civil engineering maintenance works & special sanctioned works. Efforts of Civil Engg. Deptt. are to maintain assets regularly in due time with economical methods. All efforts are being made to maintain pollution free and pleasant environment in this Production Unit of Indian Railways.
- 1.7 Pre-fabricated structure with double layered roof sheeting has been used in various sheds of workshops. Large window openings with adjustable louvers have been provided to reduce the effect of heat in summer in most workshop structures, Skylights have been provided in roofs to facilitate daylight and conserve electricity.

## 2.0 Organisation setup-

- 2.1 Civil Engineering Department is headed by the Principal Chief Engineer, who is assisted by 2 Dy. CE & 4 XENs/AXENs.

There are 8 SSE/JE/W to maintain buildings & structures and maintain rail connectivity network along with the handling of special sanctioned and project works.

## 3.0 Main features-

### 3.1 Water Supply

There are 4 tube wells in the colony and 2 tube wells in the workshop each with a pumping unit. The requirement of water supply in the colony as well as in the workshop is met with through 200mm dia, deep tube-wells (320m to 360m) having enough yield. Water from the tube wells is pumped to over head tanks. The total capacity of available 5 overhead tanks is 2025 KL. The individual capacity and location of these over head tanks is as under.

OHT No.	Location	Capacity (KL)	Staging
OHT 1	Near type-II Colony in township	600	22 m high
OHT 2	Near type-V Colony in township	300	22 m high
OHT 3	Near type-IVDS Colony in township	450	22 m high
OHT 4	Near Gate No. 2 of Workshop	225	22 m high
OHT 5	Near MRS of Workshop	450	22 m high

The total length of the main water pipeline in the township is 25.50 km and in the workshop is 16.00 km. The average daily requirement of water is about 3050 KLD (2000 KLD for Township and 1050 KLD for Workshop). Every effort is being made to reduce consumption of ground water by providing push cock type taps in public places and preventing leakages from roof top tanks. This demand will further be reduced drastically after the commissioning of the distribution network of treated effluent for irrigation of lawns/greeneries in the workshop and parks, service buildings, playgrounds and Type-IV & V quarters in the township.

### 3.2 Rain Water Harvesting

The water requirement of MCF is met through ground water. To prevent depletion of ground water table of the area with the passage of time, an exhaustive plan of 21 number RWH (16 Nos. in Township and 5 nos. in Workshop) with an annual recharge capacity of 364 ML which is more than the statutory requirement of 25% of extract quantity.

### 3.3 Fire Fighting Arrangements

Sufficient fire hydrants at strategic points in the workshop, administrative building and public places like auditorium and school have been installed to meet the emergency requirement. 1 static ground water tank of capacity 900KL and 01 elevated tank of capacity 332KL have been provided.

### 3.4 Sewerage System

The sewerage system is separate from storm water drains. The sewage is carried to sewage treatment plants (STP) at 1.1 MLD near the type-II colony, 0.4 MLD near type-IVDS colony and 1.1 MLD in the workshop. These STPs are working on SBR technology. The details of the sewers are as under.

SN	Description	Length(meter)	
		Workshop	Township
1	SW 200mm dia	4537	7725
2	SW 250mm dia	2011	2410
3	SW 300mm dia	-	888
4	RCC pipes 300mm dia	-	904
5	RCC pipes 350mm dia	465	1185
6	RCC pipes 400mm dia	696	-
7	RCC pipes 450mm dia	210	1907
8	RCC pipes 500mm dia	-	1588
9	RCC pipes 600mm dia	-	2142
10	RCC pipes 600mm pipe NP2	-	50
11	RCC pipe 800 mm Pipe	-	3370
<b>Total</b>		<b>7919</b>	<b>22169</b>

### 3.5 Storm water drains-

The entire MCF complex has a well planned open drainage and covered drainage system network which is ultimately discharged into the natural drain (Mathana Nala) available in campus. Drainages are planned along both sides of main roads. To ensure the proper functioning of storm water drains cleaning of drains before on set monsoon is being ensured. The detail of storm water drainage is as under;

SN	Description	Length(meter)	
		Workshop	Township
1	RCC covered drain	9015	5000
2	RCC open drain	6296	15000
3	Brick drain (open)	-	9000
<b>Total</b>		<b>15311</b>	<b>29000</b>

### 3.6 Service roads-

There is well planned service road network. Details of the road are as under:-

SN	Description of Road	Area(Sqm)	
		Workshop	Township
1	CC Road	82785	33200
2	Bituminous Road	11123	1,89,557

### 3.7 Other features of the Civil Engineering Department of MCF are as under :-

#### (i) Land

Private land	283 Hectare
Govt land	189 Hectare
Gram Sabha land	68 Hectare
<b>Total</b>	<b>540 Hectare</b>
Book Value	60 Crore (Approx.)

#### (ii) Boundary Wall (km)

Township	10.78 Km
Workshop	7.00 Km
<b>Total</b>	<b>17.78 Km.</b>

Entire premises of MCF/RBL are enclosed with gap less boundary.

#### (a) Fencing/boundary wall of assets

Location	Brick walled	Fabricated concrete panel	Expansion metal/chain link fencing	Total length (Meter)
Township	14013	1107	30555	45675
Workshop	3457m	0	0	3457
<b>Total</b>	<b>17470</b>	<b>1107</b>	<b>30555</b>	<b>49132</b>

### 3.8 Residential Accommodation

Type	No. of quarters
II	1124
III	640
IVDS	232
IVSS	90
V	46
VI	6
GM Bungalow	1
<b>Total</b>	<b>2139</b>

### 3.9 Workshop Structures (sqm)

(i) Covered area	=	277875
(ii) Un-covered area	=	151843

### 3.10 Other Structures (sqm)

(i) Service Buildings	=	6858
(ii) Anc. Build. in Workshop	=	8600

**3.11 Welfare Buildings (sqm)**

(i) Township	=	17560
(ii) Workshop	=	3850

**3.12 Track**

Description	Length(Km)
Ballasted Track	10.749
Embedded Track	23.586
Points & crossing	27Nos

**4.0 Expenditure during the financial year 2021-22**

(Rs. in Th.)

SN	Plan head	Allocation	Expenditure
1	4200	CAP	850200
2	4100	CAP	266000
3	7200	WMS	450400
<b>Total</b>			<b>1566600</b>

**5.0 Major Achievement of the year 2021-22**

- 20 Unit Type-IV SS Quarters constructed and 12 nos. allotted to officer.
- 72 Unit Type-IV D/S Quarters constructed and allotted to staff.
- 80 Unit Type-III D/S Quarters constructed and allotted to staff.
- 94 Unit Type-II D/S Quarters constructed and allotted to staff.
- 120 Type-III quarters are near completion.
- Plantation of 12500 trees done in Township & Workshop area.
- 1400 meter Boundary wall and 03 loop line total length 1500 track meter have been constructed for stabling of coaches (capacity- 65 coaches).
- 5000 sqm covered shed has been constructed for stacking of coach material.
- 18000 sqm concrete flooring has been constructed in the New store yard area, near STP & near Mathana Nala for stacking of coach material.
- 3500 Track meter embedded/ballasted track constructed for stabling of coaches & smooth shunting of coaches.
- 65 meter long bridge has been constructed for the passing of 7 lines and 30 meter long bridge work is in progress.
- (i) Testing Shed (400M X 20M) – 95% of work completed and balance work is in progress.  
(ii) New furnishing shop (360M X 60 M) – 50% work completed and balance work is in progress.  
(iii) New Finishing shop (96 M X 60M) - 80% of work completed and balance work is in progress.
- 4600 sqm Parking shed has been constructed
- 400 meter Standard gauge Track constructed for stabling of Mozambique Rake.
- Approx 6.0 Km CC & 4.0 Km bituminous road work completed.
- 02 Nos Tube wells & 3000 m water feeding line completed.
- 8 Suites in TTH, 12 Suits of New ORH at MCF & 12 Suits at NDLS completed.

# PERSONNEL DEPARTMENT

## I. Over all Cadre position of MCF/RBL as on 31.03.2022

S.No.	Category	Revenue	W/C	Total	On roll	Vacancy
1	Gazetted	159	0	159	126	33
2	Supervisors	426	54	480	337	143
3	Artisan	1560	00	1560	1370	190
4	Ministerial	252	07	259	209	50
5	Others (A/C, RPF, Med. G. Branch)	136	18	154	118	36
6	Group-D	380	5	385	161	224
<b>Total</b>		<b>2913</b>	<b>84</b>	<b>2997</b>	<b>2321</b>	<b>676</b>

### a) Cadre of Gazetted Officers:-

The staff strength of Gazetted cadre during the year 2021-22 is given below:-

S.No.	Category	Rev.	W/C	Total	On roll	Vacancy
1	HAG+	1	0	1	0	1
2	HAG	5	0	5	4	1
3	SAG	22	0	22	20	2
4	SG/JAG	42	0	42	36	6
5	SS	30	0	30	30	-1
6	JS/Group-B	59	0	59	35	24
<b>Total</b>		<b>159</b>	<b>0</b>	<b>159</b>	<b>126</b>	<b>33</b>

### b) Cadre of Non-Gazetted Staff:-

The staff strength of Non-Gazetted cadre after Nursing staff cadre and Track Maintainer cadre restructuring during the year 2021-22 (as on 01.04.2022) is given below:-

S.No.	Category	Rev.	W/C	Total	On roll	Vacancy
1	Supervisors	426	54	480	337	143
2	Artisan	1560	00	1560	1370	190
3	Ministerial	252	07	259	209	50
4	Others (A/c, Security, Gen. Admn, Med.)	136	18	154	118	36
5	Group-D	380	5	385	161	224
<b>Total</b>		<b>2754</b>	<b>84</b>	<b>2838</b>	<b>2195</b>	<b>643</b>

## 2. Work Charged Non-Gazetted Posts:-

The details of work charged non-gazetted posts operated during FY 2021-22 are as under:-

S.No.	Deptt.	No. of Posts	Period of Currency	
			From	To
1.	Supervisor	48	01.07.2021	30.06.2022
2	Supervisor (CDMS)	6	01.07.2021	30.06.2022
3.	Ministerial	6	01.07.2021	30.06.2022
4.	Medical	2	01.07.2021	30.06.2022
5.	Others (Accounts)	16	01.07.2021	30.06.2022
6.	CLA/Personnel	1	01.07.2021	30.06.2022
7.	Group 'D'/Accounts	5	01.07.2021	30.06.2022
<b>Total</b>		<b>84</b>		

**3. Indent Position:- The detail of Indents placed and panel received during the year 2021-22 are as under:**

Category	Indent placed	Panel received	Balance	Remarks
Nil	Nil	Nil	Nil	Nil

**4. APPOINTMENT IN GROUP C & D AGAINST VARIOUS QUOTAS:-**

The detail of appointments on various quotas during the year 2021-22 is as under:

S.No.	Category	For the year 2021-22
1	Compassionate Ground	07
2	Sports Quota	00
3	Ex-Serviceman Quota	00
4	Physical Handicapped Quota	00
5	Crash Programme for wiping out the shortfall of SC/ST	00
6	Casual Labour absorbed	00
7	No. of Staff Recruited Scout/Cultural Quota	00
8	Sub. B/Kh.	00
<b>Total</b>		<b>07</b>

**5. Engagement of Act Apprentices:**

During the FY 2021-22, 43 candidates have been empanelled from Apprentice Mela. All have been directed to report Technical Training Centre, MCF/Raebareli.

**6. Settlement Dues:-Total no. of cases in which payment of settlement dues has been made during the year 2020-21.**

S.No.	Nature of Settlement	No. of Cases received	No. of Cases Settled	Balance Cases
1.	Superannuation	12	12	0
2	Voluntary Retirement	2	2	0
3.	Compulsory Retired	0	0	0
4.	Resignation	0	0	0
5.	Removal, Dismissal & Others	0	0	0
6.	Medical Unfit Cases	0	0	0
7.	Death Cases	11	10	01#
<b>Total</b>		<b>25</b>	<b>24</b>	<b>01</b>

\* 7 DCRG withhold due to non-vacation of Railway quarter, for death cases.

# 01 Case in pending due to daughter of Lt. Reeta Singh, Ex. Sr. Clerk/Store is minor.

**7. PROMOTIONS:-**

During the year 31 no. of selections, suitability & Trade Test were conducted. 326 Non-Gazetted employees of various categories have been promoted. 01 employee of Engineering departments has been promoted to Group "B" Gazetted posts.

Besides, this all MACP cases due during the financial year have been finalized.

S.No.	Category	Number of staff promoted this year.
1	Gazetted	01
2	Supervisor	42
3	Ministerial	14
4	Artisan	261
5.	Group "D" to "C"	09
	<b>Total</b>	<b>327</b>

### 8. Recruitment:-

10 candidates have been recruited in the following categories during the period of 2021-22.

S.No.	Category	Recruited
1	Supervisors	05
2	Ministerial	00
3	Technicians	05
4	Paramedical	00
5.	Group-D/TADK	00
	<b>Total</b>	<b>10</b>

### 9. BONUS:-

In the years 2020-21 Group-C&D staff of MCF/RBL has been Paid productivity linked Bonus detail of which is given below:-

No. of Employees 2020-21	Productivity Linked Bonus (In Rs.)
2115	37623859/-

### 10. Salary Payment during 2020-21:-

Type of staff	Amount Paid
Gazetted	250042377/-
Non Gazetted	1394261471/-
<b>Total</b>	<b>1644303848/-</b>

### 11. Disbursement of Advances for the year 2020-21:-

Following advances on various accounts had been disbursed during the year 2:

HEADS	FUND ALLOTTED	FUND PAID	FUND BAL.	No. of Staff	Remark
HBA	NIL	NIL	NIL	NIL	NIL
M.CAR	NIL	NIL	NIL	NIL	NIL
M.CYCLE/SCOOTER	NIL	NIL	NIL	NIL	NIL
COMPUTER	NIL	NIL	NIL	NIL	NIL
CYCLE	NIL	NIL	NIL	NIL	NIL
<b>TOTAL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>

**12. Online Portals being operated at MCF/RBL:-**

- **CPGRAMS**
- **NIVARAN**

**Welfare Activities:**

(a) Vitamin 'C' Tablets Limcee were distributed @ 20 tablets per staff & officers of MCF under the Staff Benefit Fund at the Welfare Centre, MCF/Raebareli from 04.06.2021 to 05.06.2021.

(b) The documentary film on the Quit India Movement was displayed on screens on Admin Building & Factory Campus, MCF/RBL on 09 Aug., 2021.



(c) A workshop was organised for the awareness of various Labour Welfare Schemes by the Labour Welfare Council, UP Labour Department, Raebareli at TTC Auditorium, MCF/RBL on 10.08.2021 with Labour Department Officers of Raebareli and labours working in MCF.

(d) Birth anniversary of freedom fighter Dr. Vikram Sarabhai was celebrated on 12th August, 2021 and a documentary film on Dr. Vikram Sarabhai was displayed on screens at Admin Building & Factory Campus, MCF/RBL.



(e) Birth anniversary of freedom fighter Arvindo Ghosh on 16th August, 2021 and a documentary film of Arvindo Ghosh was displayed on screens at Admin Building & Factory Campus, MCF/RBL.

- (f) All officers & staff took Sadbhavana Pledge with social distancing guidelines solemnly on their working place on the occasion of Sadbhavana Diwas, 20th August, 2021 at Modern Coach Factory, Raebareli.



- (g) A camp was organised on 23.08.2021 at Mini Admin, MCF/RBL to collect option forms of MCF employees for the date of the next increment options under Rule 10 of Railway Services (Revised Pay) Rules, 2016 in case of MCF employees promoted or granted financial upgradation including under MACP on or after 1st July, 2016.

- (h) 81 Labours of MCF have filled out application forms in labour welfare schemes at Mini Admin (Jan Suvidha Kendra), MCF/RBL on 17.08.21, 21.08.21 & 28.08.2021.



- (i) PCPO with Ch. WLI's and staff representatives inspected the colony Type-II & III, Prashanti Parisar, MCF/Raebareli on 26.08.2021.





- (j) Personnel Department initiates a drive for showing employees service books and leave record every Saturday in August at the Meeting hall of the Personnel Department.

- (k) The birth anniversary of freedom fighter Madam Bhikaji Kama was celebrated on 24th September 2021, and a documentary film on Madam Bhikaji Kama was displayed on screens at Admin Building & Factory Campus, MCF/RBL.



- (l) Essay Writing Competition was held successfully on 27.09.2021 from 03:30 to 4:30 PM on the subject of "Cleanliness" during Swachhata Pakhwada-2021; 20 employees participated from their workplace in this essay writing competition.



- (m) 2nd October, the Birth anniversary of Mahatma Gandhi (Father of the Nation) was celebrated on 3rd October, 2021 and a documentary film on Mahatma Gandhi was displayed on screens at Admin Building & Factory Campus, MCF/RBL.



- (n) Celebrated birth anniversary of freedom fighter Jai Prakash Narayan (Folk Hero) on 11th October 2021, and a documentary film of Jai Prakash Narayan was operated on display screen at Admin Building & Factory Campus, MCF/RBL.



- (o) March Past programme was organised to preserve the unity, integrity and security of the nation by the Railway Protection Force of MCF on National Unity Day-31st October, 2021 from 10:30 AM at Saraswati Auditorium, Prashanti Parishar, MCF/Raebareli.



- (p) National Unity Day pledge (Oath) was taken by GM and All PHODs, CHODs with staff of MCF/RBL on 31.10.2021 at 10:00 AM at Saraswati Auditorium, Prashanti Parishar, MCF/Raebareli.



- (q) A 'Run for Unity' programme was organised on National Unity Day, 31st Oct, 2021 at Saraswati Auditorium, Prashanti Parishar, MCF/Raebareli.



- (r) Motor Cycle Rally programme was organised on National Unity Day, 31st Oct, 2021 at Saraswati Auditorium, campus of Prashanti Parishar, MCF/Raebareli.



- (s) Cycle Rally programme was organised on National Unity Day, 31st Oct, 2021 at Saraswati Auditorium, campus of Prashanti Parishar, MCF/Raebareli.



- (t) **Azadi Ka Amrit Mahotsav:**

Birth anniversary of Maulana Abul Kalam Azad: To commemorate the birth anniversary of noted freedom fighter Maulana Abul Kalam Azad, a documentary film on his life was played on 11th November, 2021 at various screens in the Admin Building & Factory Campus of MCF/RBL.



- (u) Birth anniversary of Birsa Munda: Similarly on 15th November, 2021, a documentary film was played on the life of freedom fighter Birsa Munda on various display screens in the Admin Building & Factory Campus of MCF/RBL.



- (v) Constitution Day: The MCF joined the nation-wide celebration of the Constitution Day on 26.11.2021. On this occasion, all the officers and staff read the Preamble of the Constitution of India.



- (w) Divyang Camp: MCF organised two-day special camp on HRMS for Divyang Employees on 22.11.21 and 23.11.21. During the camp, 02 Divyang employees were trained on various functions of HRMS.



- (x) Training programme on HRMS: MCF organized a training programme on HRMS for all the supervisors of MCF on 21.12.2021 & 22.12.2021 at TTC Auditorium, MCF/RBL. The staff highly appreciated the effort of the Personnel branch in imparting training on various functions of HRMS.



- (y) Azadi Ka Amrit Mahotsav: To commemorate the birth anniversary of noted freedom fighter Sardar Udham Singh, a documentary film on his life was played on 27th December 2021 at various screens in the Admin Building & Factory Campus of MCF/RBL.



MCF celebrated National Girl Child Day on 24th January-2022 through Virtual/Online mode. On this occasion, a talk was organized for the “Women's health care in adolescence”



One Day Seminar and a Camp Women Employees of this Unit have been organized on the occasion of “Women's Day – 2022 celebration as part of the Azadi ka Amrit Mahotsav.



# ELECTRICAL DEPARTMENT

## Power Supply

### A. Power supply system of MCF/RBL consists of the following:

1. 132/11 KV MRS (Main Receiving SubStation) - 02 X 12.5 MVA Transformer
2. 33/11 KV Sub Station (ASS) - 01 X 10 MVA Transformer
3. Auxiliary SubStation (ASS) - 10 ASS X 03 T/F + 2 T/F = 32 no. each 750 kVA Transformer
4. Compact SubStation (CSS) Transformer - 11 X 750 kVA - 11 nos.
5. Compact SubStation (Solar CSS) - 03 X 1250 kVA - 03 nos. Transformer
6. Solar Power Plant -
  - a) Installed Capacity - 3MW (Land based, grid connected, MCF Owned-Capex Mode)
  - b) An additional 14 MW Rooftop solar plant (Opex Mode/ Escro mode) sanctioned. REMCL has been advised to float a tender.
7. DG sets
  - a) 04 X 1010 kVA installed at 132/11 kV MRS
  - b) 02 X 380 kVA DG set, One at MCF hospital (at present L2- Covid hospital), another one is used as a portable genset in the factory area of MCF.
  - c) 01 X 125 kVA DG set at PME Office / ORH Lucknow.
  - d) 01 X 10 kVA DG set at MRS for emergency control supply
  - e) 01 X 30 kVA single phase at ORH.
  - f) 02 X 30 kVA (received from IRCON)
  - g) 01 X 82.5 kVA (received from IRCON)

### B. Sanctioned Load-

1000 kVA at 132 kV line, UPPTCL (under open access)

1000 kVA at 33 kV, MVVNL (under migration to open access)

### C. Energy details -

Energy consumption during F.Y. 2021-22 – 191.73 Lakh units

Power generation by the solar plant during F.Y. 2021-22 – 35.22 Lakh units

### D. Miscellaneous Electrical Assets:

Total no. of Day Light Pipes – Approx. 1725 nos. (in factory area)

### Energy Conservation/ Expenditure Control measures

1. MCF has now attained ISO 50001:2018 certification for Energy Management System. This Certificate has been awarded by AQC Middle East LLC on date 04.09.2021 after due energy audit (Internal and External).
2. A Centralised controller for the HVAC system has been installed in the admin building to uniformly control the temperature. Approx 2200 Ton capacity, VRF type HVAC systems are installed in different buildings of MCF. 160 no. indoor units temperature setting has been done between 24° to 26° Celsius. Counselling is also done to occupants of Officers' Rest House and other offices regarding the setting of the temperature of window / split ACs between 24° to 26° C or above.

3. Power connection of 33 kV line has been migrated to open access w.e.f. 09.09.2021, by this a saving of Rs. 30 lakh per annum on electricity bills to MVVNL is achieved.
4. Electrification of track between LLJ to MCF is completed and now turning out of complete rake/shunting has been started with Electric Loco. In addition to that work for OHE in Train-18/ MEMU testing sheds has been completed during the year.
5. Astronomical timers have been provided in street lights in place of normal timers to avoid every month setting and check wastage of energy.
6. Energy conservation day has been observed on 14.12.2021. During the week from 14.12.2021 to 20.12.2021 various activities were conducted viz. awareness to staff, painting competition in govt. school, quiz competition for railway staff, seminar, display of posters, banners and stickers to promote energy conservation among stakeholders.
7. Provision of BLDC Fan (25-30W) is made in ongoing work of Residential Quarter in place of Conventional Fan (60W). Cumulatively 806 nos. BLDC fans have been provided in different types of quarters. This will result in reduction of consumption by 60,450 units per annum and saving of approx. Rs 4.5 lacs per annum.
8. Energy purchase from Grid in F. Y. 2021-22 is 1.57 Cr units compared to 1.41 Cr units in F. Y. 2020-21. Energy consumption has increased only 11.35 % in spite of an increase of 37.87 % in coach production.

### Safety Measures

1. To improve the safety of human beings and machines, five hundred ninety (590 nos.) Earthing pits have been replaced/renewed in the township and factory area of MCF.
2. Provision of new High Mast at MCF/RBL:- Two no. new high mast lights have been provided in Non Lighting area of MCF/RBL/Yard during the year 2021-22.
3. One month-long safety drive had been launched for the safety of electrical equipment and installations.

### Reliability Measures

1. One no. 11/0.433 kV, 750 kVA compact substation (CSS) has been installed and commissioned at new type II residential area to cater to the load of new pump houses and new quarters.

### Staff Amenity

1. During the year 96 nos. type-II, 176 nos. Type -III, 72 nos. Type -IV DS, 20 nos. Type IV SS and 2 nos. Type VI, total 366 newly constructed residential quarters have been electrified and energized.
2. Electrical work for the newly constructed ORH at Thomson Road New Delhi has been completed during the year. This includes complete wiring, light fittings, Air conditioning system for all three floors. In addition to that one lift of 10 passenger capacity and 10 kVA UPS has also been installed at this ORH.
3. A new Oxygen plant has been installed at MCF. The power supply arrangement has been done for the same.

# VIGILANCE DEPARTMENT

## ➤ Summary of Cases:-

In the year 2021-22, 06 Railway Board referred complaints, 17 other (Direct/Other Railway referred) complaints & 01 PIDPI complaint have been received.

## ➤ Achievement:-

- (i) During the year 2021-22, 24 vigilance complaints have been received including 06 Railway Board referred complaints, 17 others (Direct/Other Railway referred) complaints & 01 PIDPI complaint. Out of 24 vigilance complaints, 12 complaints have been closed (06 Closed due to being pseudonymous and balance 06 due to having no vigilance angle), and the balance of 12 complaints are in advanced stage of the investigation.
- (ii) During the year 2021-22, 10 System Improvements have been issued for transparent working & 51 preventive checks were conducted.
- (iii) The Vigilance Awareness week, 2021 was observed at Modern Coach Factory, Raebareli from 26.10.2021 to 01.11.2021 as per directives issued by Railway Board. The main theme of this year's Vigilance Awareness Week was "Independent India @ 75: Self Reliance with Integrity; स्वतंत्र भारत @ 75: सत्यनिष्ठा से आत्मनिर्भरता".

Various activities conducted during this week viz. Vigilance pledge, pamphlets, posters and hoarding exhibiting, anti-corruption themes were distributed and displayed at prominent places, Webinar on policies/procedures of the organisation and preventive vigilance measures, Works Contract/Service Contract, Stores Contract and customer/vendor, customer/contractor grievance redressal camp were organised.

The essay writing competition was organised at Ganesh Inter College, Aihar in which 70 students have participated & Cartoon/Poster/Essay writing competition in Central School, MCF/RBL, in which about 150 students have participated. E- Vigilance Bulletin, 2021 has been released by the General Manager/MCF. A prize distribution ceremony was also held at conference room, administrative building. During this, prizes were distributed by CVO to all winners of essay writing/poster/cartoon competition organised during Vigilance Awareness Week' 2021 at schools and colleges.



# ACCOUNTS

## 1.0 PROJECT

The project estimate was originally sanctioned under Capital 4200 (Raebareli-setting up of new Modern Coach Factory) at the cost of Rs. 2556.84 crore which has been revised to Rs 3192.00 crore vide letter no. 2016/M(W)/964/3 dated 21/05/2016

The Total expenditure under final heads for fixed assets and M&P is Rs 3085.39/- crore upto March, 2022. This includes expenditure incurred on the project cost of MCF (Capital) 4200 and machinery & plant (Cap-4100).

The Closing balance of floating assets (Inventories Cap-7100, Cap-7200 and Cap-7300) is Rs. -86.48/- Crore. The break-up of fixed and floating assets is as under:

### 1.2 Total Assets as on 31st March 2022:-

(in crore)

Assets		Value	Break up of fixed assets into important categories	
I	Fixed Assets		Fixed Assets	Amount
a)	Project (Land)	51.87	Land	51.87
b)	Project Township (Structural Engineering Works)	1295.83	Machinery and Plant	1544.62/-
c)	W/s & Offices	1732.69	Buildings and other structural engg. works including road & permanent way	1427.58/-
			General Charges	67.32
<b>Total Fixed Assets (a+b+c)</b>		<b>3085.39</b>	<b>Total Fixed Assets</b>	<b>3085.39</b>
II	Floating Asset			
a)	Stores Suspense	-115.70		
b)	W/s Mfg. Suspense	-49.88		
c)	Misc Adv. Cap	79.10		
	Total Floating Assets	-86.48		
<b>Total Assets (Fixed + Floating)</b>		<b>2998.91</b>		

## 2.0 DEPRECIATION RESERVE FUND ACCOUNT FOR AND TO END OF THE YEAR 2021-22 is NIL.

## 3.0 STATEMENT SHOWING PENSION FUND ACCOUNT FOR AND TO END OF THE YEAR 2021-22.

(fig's in units)

S.No.	Particulars	Amount
1	Balance as on 01.04.2021	-59,467,143
2	Appropriation during the year (2021-22)	60,000,000
3	Withdrawal from pension fund During the year	81,193,876
4	Net Accretion During the year (2-3)	-21,193,876

5	Half of the Net Accretion	-10,596,938
6	Amount on which interest is calculated (1 +5)	-70,064,081
7	Interest on Fund Balance	-2,347,618
8	Closing Balance as on 31.03.2022	<b>-83,022,713</b>
It is certified that the Grant totals have been reconciled with the figures in the Account Current to the end of March 2022.		

## 5. MANUFACTURING SUSPENSE ACCOUNT FOR THE YEAR 2021-22

Fig in Unit

PARTICULARS	01 April 2021 to 31 March 2022	PARTICULARS	01 April 2021 to 31 March 2022
	AMOUNT		AMOUNT
(1) WORK IN PROGRESS AS ON 01-04-2021	98,98,98,265	<b>(1) TRANSFER TO RLY.</b>	
<b>TOTAL (A)</b>	98,98,98,265	(i) SUPPLY OF COACHES	35,72,39,89,849
<b>B-(1) LABOUR</b>		(ii) MISC. SUPPLIES	0
(1) WORK SHOP DIRECT LABOUR	37,00,64,099.5	(2). BY CAPITAL STORE	0
(2) INDIRECT LABOUR	50,84,34,358.5	(i) MANUFACTURING	0
(3) SALARY AND ALLOWANCES OF ADM	51,75,01,512	(ii) RETURNED STORE	0
(4) WORKS CONTRACT	50,00,62,858.6	(3) BY CAPITAL WORK DONE PLANT AND MACHINERY & OTHER WORKS	0
(5) SALARY AND ALLOWANCES OF STORE	16,19,34,026.8	(4) BY WORK DONE ON THE DEPOSIT ACCOUNT	0
(6) SALARY AND ALLOWANCES OF TOWNSHIP	8,14,33,039	<b>TOTAL CREDIT</b>	<b>35,72,39,89,849</b>
<b>TOTAL LABOUR</b>	<b>2,13,94,29,894</b>	(5) BY EXPORT	
C-(2) STORES		<b>(6) BY CLOSING BALANCE (WORK IN PROGRESS AS ON 31-03-2022)</b>	<b>-44,08,66,594</b>
(1) STORE DIRECT FROM STOCK	30,31,57,22,303		
(2) STORE DIRECT FROM DDO	86,62,96,683.2		
(3) ADJUSTMENT	-55,20,00,000		
(4) INDIRECT STORE (FOH)	0		
(5) FOH DDO	49,55,43,132.1		
(6) FOH ADJUSTMENT	-12,41,68,844.7		
(7) INDIRECT STORE (AOH)	0		
(8) AOH DDO	21,91,44,727.3		
(9) AOH ADJUSTMENT	7,23,78,708		
(10) INDIRECT STORE (SOH)	0		
(11) SOH DDO	22,54,93,130.9		
(12) SOH ADJUSTMENT	0		

(13) INDIRECT STORE (TOH)	0		
(14) TOH DDO	24,62,61,819.7		
(15) TOH ADJUSTMENT	18,64,768.87		
(16) RETURNED STORE	20,48,72,102		
(17) MISC.ADJ. (TR) DR/CR FROM TO OTHER RLY.	0		
<b>TOTAL STORES</b>	<b>31,97,14,08,530</b>		
(3) OTHER CHARGES	0		
(1) APPRO. TO PENSION FUND	600,00,000		
(2) AOORI. TO DRF	0		
(3) APPRO. TO SBF.	0		
(4) ELECTRICITY (POWER)	12,23,86,565.2		
(5) STOCK ADJUSTMENT	0		
(6) FREIGHT INDIRECT	0		
(7) MISC. INDIRECT	0		
<b>TOTAL OTHER CHARGES</b>	<b>18,23,86,565.2</b>		
(1) RECEIPT ON RENT AND WATER	0		
(2) RECEIPT ON ELECTRICITY	0		
<b>TOTAL RECOVERIES</b>	<b>0</b>		
<b>TOTAL (B)</b>	<b>34,29,32,24,990</b>		
<b>GRAND TOTAL (A+B)</b>	<b>35,28,31,23,255</b>	<b>GRAND TOTAL</b>	<b>35,28,31,23,255</b>

It is certified that the Grant totals have been reconciled with the figures in the Account Current to end of March 2022.

# RAILWAY PROTECTION FORCE

## THE SECURITY BRANCH

Railway Protection Force has assumed the duties of Protecting the Railway Property of the Modern Coach Factory, Raebareli since 15th February, 2011. Railway Protection Force (RPF) is an Armed Force of the Union. The Responsibility of this Unit is to protect the Railway Assets of the Modern Coach Factory, Raebareli. For this purpose, the Strength of 64 members of the Force has been sanctioned.

At MCF, RPF has a set up of Executive Branch and Crime & Special Intelligence Units. A 24X7 Security Control Room has also been Operationalised. All these Units work under the control and command of Pr. Chief Security Commissioner/RPF Modern Coach Factory, Raebareli.

## RPF Strength

The General tenure of Non-Gazetted RPF Personnel at MCF is for 3-5 years. The Periodical Transfer of RPF staff is carried out by the PCSC/RPF/NR. The Members of the Force are regularly trained to update their Soft & Hard Skills. The Present Strength for the year 2021-22 of the RPF Personnel is as under:

Description	PCSC	SC	ASC	IPF	SI	ASI	HC	Const	Total
Sanction Strength	01	01	01	02	08	09	11	31	64
Present Strength	01	01	01	02	05	10	02	37	59
Vacancy	-	-	-	-	03	+01	09	+6	05

## PRIVATE SECURITY

The Railway Protection Force is being assisted by Uttar Pradesh Purva Sainik Kalyan Nigam Limited (A UP Government Undertaking), who had been awarded a Contract for a period of 36 months from the date of the actual commencement of the work (from 01.09.2019 to 31.08.2022) for Guarding the Railway Property in the identified Non-Core Areas, having a strength of 155 Security Guards.

## CRIME CONTROL

During the year 2021-22, the RPF unit of MCF was able to successfully implement the Zero Tolerance Policy towards criminal activities due to which 03 cases of theft of Railway Property were registered with the recovery of Railway Property total value Rs. 8000/- and arrested 02 accused and 13 cases of Railway Act were registered with the fine of Rs. 11500/-. This result was achieved due to 24 X 7 hours of Patrolling, Strict Access Control at all the Entry/Exit Gates and round the clock Surveillance of the Identified Vulnerable Points.

## ARMS & AMMUNITIONS:

This RPF unit is equipped with the latest Weapons. The details of which are as under:

S. N.	Arms	Quantity	Silling	Ammunitions	Spare Magazine	Bayonet	Nozzal Cap
1	Rifle 7.62 mm{SLR} IAI	04 Nos.	--	870 Nos.	16 Nos.	--	--
2	ARM 7.62x39mm ARM	05 Nos.	05 Nos	1160 Nos.	20 Nos.	05 Nos.	--
3	Rifle 5.56mm{INSAS} fold Butt 2A	08 Nos.	08 Nos.	760 Nos.	40 Nos.	04 Nos.	08 Nos.
4	Pistol Auto 9mm with Magazine	22 Nos.	--	2215 Nos.	44 Nos.	--	--
5	Carbine Machine Gun 9mm IA. IAI	08 Nos.	--		24 Nos.	--	--
		47 Nos.	13 Nos.	5005 Nos.	144 Nos.	09 Nos.	08 Nos.

## MODERNISATION

- To strengthen the working of the Force, the Force has been provided with the latest Security Gadgets modern Bullet Proof Jackets & Helmets, Polycarbonate Shield and Canes, Dragon Search Lights, High resolution CCTV Based Surveillance System, HHMD, DFMD, Drone Camera etc. and binoculars devices are under procurement. The details of the Security Items are as under:

Name of the Security Item	Quantity
Baggage Scanner	01 Nos.
Bullet Proof Jacket	04 Nos.
Bullet Proof Helmet	10 Nos.
Polycarbonate Shield	20 Nos.
Body Protector	20 Nos.
Polycarbonate Lathi	20 Nos.
Sony Camcoder	01 No
Sony Dsc Camera	01 No
Dragon Search Light	05 Nos.
HHMD	15 Nos
DFMD	02 Nos.
Drone Camera (UAV)	02 Nos.
Walkie-Talkie	30 Nos.
VHF sets	04 Nos.

## ACCESS CONTROL

The entry/exit process at factory gates & Township gate has to be made contactless in view of Covid-19 pandemic to prevent the contraction of the disease. Therefore, the electronic gate pass system is being implemented. The system shall have the following features:

- This system will be integrated with the electronic PVC card & RFID Based identification System at the Entry/Exit Gates.
- This system is also essential for improving punctuality & maintains discipline in the duty time of contractual workers engaged for the factory as well as Prashanti Parisar premises.
- In view of Covid-19 it also eliminates human contact interference at entry/exit points and control the entry of unauthorized persons in the MCF premises.

# SPORT'S

## 01. Sports Facilities in Modern Coach Factory, Raebareli

### (a) Indoor Sports Facilities

Sl.No.	Event
1	<ul style="list-style-type: none"> <li>Squish Court/Hall</li> <li>Basketball (Indoor)</li> <li>Aerobics Hall</li> <li>Power lifting</li> <li>Taekwondo</li> <li>One Kabaddi Mat</li> <li>One Multi games Mat</li> <li>One Boxing Rin</li> </ul>
2	<ul style="list-style-type: none"> <li>Two Wooden Badminton Courts</li> </ul>
3	<ul style="list-style-type: none"> <li>Wooden Basketball Court (Indoor)</li> <li>Wooden Volleyball Court (Indoor)</li> </ul>
4	<ul style="list-style-type: none"> <li>Gymnasium Hall</li> </ul>
5	<ul style="list-style-type: none"> <li>Squish Court/Hall</li> </ul>
6	<ul style="list-style-type: none"> <li>Five tables for Table Tennis</li> </ul>
7	<ul style="list-style-type: none"> <li>One Billiards table</li> </ul>

### (b) Outdoor Sports Facilities

01	Athletics Stadium
02	Cricket Stadium
03	Swimming Pool Stadium
04	Basketball Court (with flood lights)
05	Lawn Tennis Court (with flood lights)
06	Hockey Astro-Turf
07	Golf Course (18 Holes) with Driving range

## 02. Achievements at various levels.

2.1 Modern Coach Factory Sports Association has organized various interdepartmental sporting activities during 2021-22 as mentioned in table below:

S.No.	Name of the Security Item	Date	Month
01	Interdepartmental Badminton Championship.	08.03.2021 to 12.03.2021	March - 2021
02	Interdepartmental Football Championship.	22.03.2021 to 23.03.2021	March - 2021
03	Interdepartmental Volleyball Championship. (Night)	23.11.2021 to 25.11.2021	Nov -2021
04	International Yoga Day.	21.06.2021	June -2021
05	Hockey Tournament (w).	09.09.2021	Sep - 2021
06	Rashtriya Ekta Divas (National Unity Day)	31.10.2021	Oct - 2021
07	65th AIR Golf Championship	08.03.2022 to 10.03.2022	March - 2022

## 2.2 Cricket

Sh. Vikash Chaoudhary, Ch.OS Stores department was selected as Trainer to represent Indian Railways in Sr. Women's One days Trophy at Raj Kot from 13.03.2021 to 04.04.2021 and at Pune from 23.10.2021 to 20.11.2021.

Sh. Vikash Chaoudhary, Ch.OS Stores department was nominated as fitness trainer for Indian Railway Senior Women Cricket coaching camp from 10.08.2021 to 31.08.2021 at SCRSA/Secundrabad.

MCFSA is organizing a Golf, Cricket, Hockey, Football, Badminton & Athletics coaching camp at MCFSA sports Complex for children of MCF Employees & others.

## 2.3 Cycling

Sh. Ramesh N. Jr. Clerk was selected Tamilnadu Cycling state team to participate in 72nd Senior National Track Cycling Championship from 27th to 31st March 2021 at Hyderabad and in 73rd Senior National Track Cycling Championship from 24th to 28st DEC 2021 at Jaipur.

## 2.4 Athletics Team

Ms. Sudha Singh OSD/Sports has been selected in the National Athletics Coaching camps held at SAI NSSC/Bangalore from 15.10.2021 to 31.12.2021.

Sh. Munna Singh was deputed as Technical officials for selection Trials for Indian Railway Men & womens Team will be held at PAC Stadium, Lucknow, NER from 19.08.2021 to 21.08.2021.





**Vande Bharat Shell Prototype**



**Mozambique Coach**



**Tejas Coach**



**Humsafar Rake**



**Track Recording Car**



**Smart Coach**



**AC Pantry Car**



**MODERN COACH FACTORY**  
**RAEBARELI-229120**

**Website: [mcf.indianrailways.gov.in](http://mcf.indianrailways.gov.in)**