GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

By e-mail

No. 2018/M(N)/951/20

New Delhi, dated 22.4.2019

The Principal Chief Mechanical Engineers,
All Indian Railways and MCF, ICF, RCF, RWF,
DLW, CLW, DMW, KRCL, Metro Railway

CAO/COFMOW, New Delhi
CAO/Bela, Chhapra,
CAO/WPO/Patna
CAO/IROAF/New Delhi
Director/IRIMEE, Jamalpur

ED(Carriage), ED(QA),
EDS(Wagon), ED(PS&EMU),
ED/Motive Power,
RDSO, Lucknow.

Sr. Professor (Mech.)/NAIR/Vadodara

ED/CAMTECH, Gwalior

Sub: Agenda items for PCME’s Conference – April, 2019.

Agenda items for the next PCME’s Conference to be held at Secunderabad
(SCR) from 26th to 28th April, 2019 is sent for necessary action.

(Vivek Mohan)
Dir. Mech. Engg. (Frt.)
Railway Board
### Points for Discussion at PR. Chief Mechanical Engineers' Conference South Central Railway, Secunderabad from 26th to 28th April 2019

<table>
<thead>
<tr>
<th>Directorate</th>
<th>Description</th>
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</table>
| **Coaching** | 1. Roller bearing failures  
               2. Spring breakages: Investigation of failures & corrective action  
               3. Progress review of Project Swarn  
               4. Progress review of Project Utkrisht  
               5. Progress review of Quick Watering Facilities  
               6. Progress review of ACWP  
               7. Up-gradation of Carriage Depots  
               8. Bio-toilet issues - Bio- Toilet maintenance, Air Ventilation, Flushing, testing  
               9. 120/160 KMPH - Plan for enroute and depot examination facilities for 120/160 KMPH speeds. Instructions in this regard were issued vide Rly. Bd. letter dated 22-11-17.  
               10. Train-set – Planning of depots for maintenance at identified locations & other issues.  
               11. Modifications WSP system for wheel shelling.  
               12. Provision of under floor pit wheel lathe in depots |
| **Freight** | 1. Reducing ineffective through regional distribution: Performance of new system, System of monitoring  
               2. Running of freight trains at 100/75 kmph in empty/loaded condition  
               3. **DEVELOPMENT OF NEW WAGON DESIGNS:**  
                  3.1 Automobile carrier for trucks and automobile.  
                  3.2 Automobile carrier for 4wheeler and 2-wheelers.  
                  3.3 New steel coil wagon for eye to platform loading  
                  3.4 New tank wagon for Fly Ash and Cement  
                  3.5 Improved productivity BOBSN wagon  
               4. Freight operation control (Power control)  
               5. FMM/FOIS integration  
               6. Proliferation of FMM modules  
               7. Equipment failure performance (FATO)  
               8. Review of out turn – POH/ROH/Sick line out turn and ‘C’ category out turn  
               9. Running contract for ‘C’ category repair with M/s Braithwaite by ECR, SER & SER  
               10. IMS certification of wagon maintenance depots  
               11. ISO 50000 and SS/ISO 3834 certification in wagon care centres  
               12. Critical Items consumption and optimisation  
               13. Reclamation of excluded fittings, bogies for workshops and ROH depots (through Braithwaite)  
               14. Minimising depot stocking and consumption of freight items through improved quality in workshops |
| **Electrical (TL&AC)** | 1. Progress of HOG compliant coaches.  
                            2. Progress of retrofitment of LED lights in coaches.  
                            4. Manufacturing of fully air conditioned EMU rakes for Mumbai suburban.  
                            5. Aumentation of POH capcity of EMU/MEMU in workshops.  
                            6. Pending tests and trials of AC/TL/EMU/MEMU,  
                               6.1 Under slung air conditioned EMU train in Mumbai suburban.  
                               6.2 Under slung MEMU train in NR. |
6.3 On Board MEMU rake equipped with 3-phase propulsion equipment.

### Production Units

<table>
<thead>
<tr>
<th>Production Unit</th>
<th>2017-18 Actual</th>
<th>2018-19 Actual</th>
<th>2019-20 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICF</td>
<td>2397</td>
<td>3240</td>
<td>3070</td>
</tr>
<tr>
<td>RCF</td>
<td>1251</td>
<td>1350</td>
<td>1300</td>
</tr>
<tr>
<td>MCF</td>
<td>711</td>
<td>1425</td>
<td>1540</td>
</tr>
<tr>
<td>HALDIA (DMU)</td>
<td>85</td>
<td>59</td>
<td>30</td>
</tr>
<tr>
<td>RWF</td>
<td>72027</td>
<td>71001</td>
<td>104800</td>
</tr>
<tr>
<td>RWF Wheels</td>
<td>121121</td>
<td>131131</td>
<td>171200</td>
</tr>
<tr>
<td>RWF Axles (In units)</td>
<td>70825</td>
<td>71001</td>
<td>104800</td>
</tr>
</tbody>
</table>

2. PUs should turnout all coaches in 2019-20 in rake form only. Production of LWFAC, LWSCZ AC was 3 & nil against the production target of 16 & 26 respectively affecting the rake formation.

3. Train-set production at ICF should be given special emphasis.

4. 3-Phase MEMU production should be achieved as per the target assigned.

5. RCF should confirm the cut in date for 3-phase MEMU manufacture.

6. RWF should import balance axle requirement locally to avoid delays and bunching.

### Quality of Coach Production Units

2.1 A number of references have been received about the poor quality of coaches turned out by PUs like breakage of helical springs, roller bearing failures, modifications carried out by PUs in finishing items, resulting in maintenance problems in Depot. PUs to review their quality system to ensure proper quality of coaches and standardization of furnishing items. A recent complaint reported by Southern Railway on the heavy corrosion in 4-5 year old LHB Coaches needs to be thoroughly investigated.

### Certifications

3.1 Only MCF has so far achieved IRIS (International Railway Industry Standard) certification. Other PUs to expedite IRIS certification.

### Industry 4.0:

4.1 List of M&P needs to be identified, which is to be connected under Industry 4.0 standard. Detailed action plan with timeline for its implementation to be advised to Board by 10.05.2019.

### Integration on 3-D Parametric

5.1 3D Parametric model for each coach variants for Shell, Bogie and interiors should be planned. Detailed action plan with timeline for its implementation to be advised by 10.05.2019. Such drawings should be made available to Zonal Workshops on the Web.

### Warranty by PUs as a coach OEM
6.1 All the 3 Coach PUs should together decide a single standard list of items with warranty clause of 6 years. Mechanism needs to be worked for monitoring logging of warranty defects and realizing claims in a systematic manner.

| Mechanical Workshop |
|---------------------|-----------------------------------------------------|
| 1. Up-gradation of Workshop manufacturing systems - Automation of critical activities in workshops and networking – Bogie Shop, Air Brake Section, CTRB section, Fabrication and final testing |
| 2. Modern Drawing and Design capability – Capability for 3D parametric drawing and Integration on NX platform |
| 3. Workshops Capacity/Status - Sanctioned Capacity and status of Capacity Augmentation/Modernisation works under progress |
| 4. Workshops out-turn - POH and manufacturing out-turn with reference to targets, status of NMG and Camping coach conversion |
| 5. Quality of Workshop out-turn |
| 5.1 Sick marking and Local passing of coaches and wagons |
| 5.2 Accreditation to the quality systems – IMS, IS-3834, 5S, ISO 50001 and Green Co-Rating |
| 6. Status of RSP allotted for works related to coaches, wagons and others. |

<table>
<thead>
<tr>
<th>EnHM</th>
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</thead>
<tbody>
<tr>
<td>1. Environment</td>
</tr>
<tr>
<td>1.1 NGT directions/orders to be implemented in all NSG- 1 to 4 and SG – 1, 2 Stations.</td>
</tr>
<tr>
<td>1.2 Sanctioning, fund provision and utilisation of 1% provision for environment related works should be monitored.</td>
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<td>1.3 Green ratings.</td>
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<tr>
<td>1.4 Energy Efficiency Studies (ph I- 6 PUs , 2 WShps ; ph II - 2 PUs, 8 Wshps) – assess improvement in energy efficiency and reduction in energy consumption / bill.</td>
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<tr>
<td>2. Housekeeping</td>
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<tr>
<td>2.1 Progress of implementation of SBD for Housekeeping contracts: contracts awarded, tenders opened and estimates prepared.</td>
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<tr>
<td>2.2 Aadhaar enabled GPS tagged Bio-metric attendance system.</td>
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<tr>
<td>2.3 IT enabled feedback to be linked to payment.</td>
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<tr>
<td>2.4 Entry in Shramik Kalyan potal.</td>
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<tr>
<td>3. OBHS</td>
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<tr>
<td>3.1 Availability of staff – AEBAS (geo tagged).</td>
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<tr>
<td>3.2 IT enabled performance monitoring including attendance and passenger feedback to be linked to payment.</td>
</tr>
<tr>
<td>3.3 Coach Mitra - 138 &amp; CRIS Number 9821736069. Monitor and improve ‘Response time’ and ‘Closure type’ (closed with Code or manually).</td>
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<tr>
<td>3.4 Enter Name and Mobile No. of EHK (OBHS Supervisor) and Railway Supervisor.</td>
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<tr>
<td>3.5 Basic training for emergency attention to bio toilets.</td>
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<tr>
<td>4. Mechanised Laundries</td>
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<tr>
<td>4.1 Railways have to provide 100% coverage in this year. Maximum shortfall is in ECR (77.4%), NR (73.8%), NCR (56%), ECoR (49%), SR (48%), ER (46%), SWR (44%) and CR (35%).</td>
</tr>
<tr>
<td>4.2 Assess future requirements and also plan for adequate spare capacity.</td>
</tr>
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<td>4.3 Monitor auto dosing system for chemicals used.</td>
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<td>4.4 Nominate back up points on laundry network.</td>
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<td>4.5 IT based laundry management system – pilot taken up at JAT/NR, KKF/WR, JP/NWR.</td>
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<td>4.6 CCTV cameras with live feed on web.</td>
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<td>4.7 Water recycling, ETP.</td>
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<tr>
<td>4.8 HLAC / other applicable certification.</td>
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<td>4.9</td>
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</table>
### Project
1. KPIs AND KRAs
2. Targets (Last Mile Works 2018-19) and Compliance
3. Expenditure vis-à-vis Budget Grant
4. Macro-Picture for 2019-20
5. Progress under Umbrella Sanctions
8. THROWFORWARD

### Traction
1. Progress in relation to trial of 1600 HP DEMU for speed potential up to 110 kmph.
2. Progress of Installation of FIBA device in 1600 HP DEMUs

### Disaster Management
1. Railways to expedite the conversion of coaches to ART/ARME coaches. In the year 2018-19 only 21 coaches were converted.
2. Spares of cranes are long lead items. For emergencies in open line, ER and CR are required to create “Hot Spares” to assist the crane maintaining depots. ER and CR to discuss the status of indents & POs against item no 883 & 884 of RSP 2018-19 for JMP and Parel respectively.
3. In view of decision taken for closure of Parel workshop the work of POH & MLR of 140 T BD crane has to be relocated to JMP workshop. CR and ER to discuss the action plan. Likewise, for SPART/SPARMV - CR & NWR to discuss the action plan and preparedness.
4. Timeline for geo-tagging of ART/ARMV.
5. Status of control centres at JMP and Parel for maintenance assistance of break down cranes as soon as the crane is ordered.

CR and ER may discuss the issue related to AMC of SLI

### Development

#### Bio-toilet:

1. **Target for 2018-19:** As against target of 65,000 bio-tanks in FY2018-19, 69,166 bio-tanks installed in about 19,137 coaches. Commendable work has been done by ZRs as well as PUs. However, target for 100% fitment by June 2019 is to be achieved.

2. **Completion target:**
   
   - ECoR, WCR, SECR, NCR, ER, NR, SCR, SWR & KRCL were to finish the work of installation of bio-toilets by 31.03.2019. Compliance/status may please be provided.
   
   - CR, ECR, NER, NFR, NWR, SER, SR, WR to expedite the work to meet the target of 31.06.2019.
   
   - Status of fitment on other then ICF and LHB shell to be brought out clearly.

3. **Liquidation of stock available from old Rate Contracts-2016:** Railway to take necessary action to liquidate the old stock. Action planned to be communicated.

4. **Surplus quantity of Bio-Tanks:** Additional quantity of Bio-Tanks against RB’s Rate contracts for ICF coaches are available. ZRs may advice their requirement, if any.

5. **Bio-labs/testing facilities:** Adequate labs/facilities must be available in all ZRs for regular testing of (i) effluent discharge parameters (ii) quality of seeding bacteria before use in bio-tanks. Details of available infra-structure must be provided.

6. **Entries in CMM portal:** Entry in CMM portal for providing bio-toilets fitment details in coaches must be completed in a time bound manner. The same has been further simplified.

7. **Funds for bio-toilets:** Requirement of funds for the FY2019-20, if any, be communicated.

8. **OMRS:** Four OMRSs installed in NR (2 at Panipat & 2 at Ballabhgarh) alongwith Central Control Room for monitoring OMRS sites has been set-up at Delhi Kishanganj.

8.1 NR to monitor/analyze the performance of OMRSs and furnish the report. NR must start process for AMOC of OMRSs as per contract.
8.2 Order for additional 5 OMRSs given to firm for installation in CR, NCR & WR. Railways to take necessary action accordingly.

<table>
<thead>
<tr>
<th>ZRs</th>
<th>SECR</th>
<th>NR</th>
<th>SER</th>
<th>NW R</th>
<th>ECoR</th>
<th>WR</th>
<th>SCR</th>
<th>WCR</th>
<th>ER</th>
<th>NER</th>
<th>SR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
<td>JRMG/GTW/CPH/BSP</td>
<td>KKI-UMR/APR-NKJ</td>
<td>SPN-BTRA (DN)/BE-ROZA</td>
<td>BSPX-Tomka (UP)/CKP</td>
<td>BND-MJSG (UP)</td>
<td>GEK-KSG (DN)/ALL-FL</td>
<td>KNP-RMACR (DN)/CTC-NRG</td>
<td>PDT-KTV/VSCHKPTV</td>
<td>NIU-CVJS-TBRC</td>
<td>SKZ-RKHB/SGR-LNKJ</td>
<td>PWK-BPQ-WL</td>
</tr>
<tr>
<td>Priority</td>
<td>1 &amp; 2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9 &amp; 10</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

8.3 Further, priority for installation of remaining 16 OMRSs will be as under:

8.4 ZRs to get prepared for installation as per aforesaid priority, by carrying out site surveys.

9. All 7 Hill Railways - Provision of (i) aesthetically appealing coaches, (ii) Vistadome coaches and (iii) Improved/upgraded amenities for a pleasant travel experience to the passengers has been undertaken at scale.


10. Smart Coach: MCF has turned out three SMART Coaches till date, those are attached in different rakes of Kafiyat Express, these coaches are equipped with state of art sensors and centralized computer to monitor the status of all sensors. The performance of the same may be discussed. Further, MCF was directed to rollout of 100 new such coaches during the year 2019 for which funds are allocated by Railway board. The execution planned may be discussed.

11. Hot Box Detectors: Sanction is available for 200Nos of Hot Box Detectors. Board has advised COFMOW to procure 100 such Hot Box Detectors for Zonal Railways. Tender floated by COFMOW is scheduled to be opened on 27.05.2019. ZRs and COFMOW to take further necessary action in this regard.

12. SMART YARD: It is proposed to Rollout the SMART YARD project of IR at scale. To begin with, M/s RITES have been entrusted a study to identify the components of SMART YARD and study 3 indicative yards of IR (NKJ/WCR, BSP/SECR and ADTP/SER). A concept report has been submitted by RITES and reviewed by Board.

Based on the same, a detailed report will be prepared. Existing initiatives like OMRS, provision of HBD etc. to dove-tail into this effect. Infrastructure improvement, improvements to M&P and T&P on PPE to be initiated by PCMEs

13. CMM: Sanctioned Estimate of Rs. 80.45 crores is available for 65 depots under phase I and Rs 25 crores (Abstract cost) for 24 Depots under phase II. Currently about 43 depots are actively using the CMM module. Remaining depots, including DEMU/EMU car sheds & their respective divisions (around 250 locations) are expected to be covered under Phase III proposed by CRIS.

14. FMM: Detailed Estimate for the Rollout of FMM project in 155 wagon depots was sanctioned at a cost of Rs.77.58 cr. Funds of Rs.5 crore is earmarked in the interim budget 2019-
20. Since the project has been fast tracked, PCMEs to monitor field implementation.

15. **RFID**: Detailed Estimate of the project ‘Automated Rolling Stock Track & Trace System using Radio-frequency identification’, with sanctioned cost of Rs.62.96 cr, is undertaken by CRIS. CRIS vide their letter dated 02.04.2019 has issued Version 3 in supersession to earlier versions in regard to guidelines for using Data of RFID tags. As regard the project undertaken by COFMOW for Provision of RFID Tags on 2.5 lakh Rolling stocks it has been apprised that Tender for fitment of RFID tags on 45,000 wagons will be opened on 03.05.2019.

16. **Export of Rolling Stock**

- RWF has proposed to make their products competitive in the International market by changing the existing procedure of costing based on Board’s letter dated 19.10.2005 regarding Delegation of power to GM’s of PUs.
- A proposal is under consideration in Board (Finance) in regard to Board’s letter dated 19.10.2005 made applicable to all Rolling Stock and products intended for exports, irrespective of whether they are produced in PUs and repaired/refurbished in Indian Railways workshops.

17. **Rolling Stock Knowledge Portal**

- A Rolling Stock Knowledge Resource Portal in the domain http://rskr.railnet.gov.in has been created by the Railway Board. The objective of the portal is to provide a platform for exchange of ideas, posing of problems and providing solutions to the same by crowd sourcing and thus to create a platform for problem solving and encourage continual learning amongst officers, while posted on field assignments.
- In this Subject matter experts have been identified and they would moderate discussion threads on specific areas of interest. Nodal officers for each Zonal Railway, PU’s, IRIMEE, NAIR, COFMOW, CAMTECH & RDSO have been nominated. The nodal Directorate at Board is Development Dte.
- Any significant work done by the Zonal Railways/Units may be posted under Best Practices tab.
- The Zonal Railways/Units have also developed Centre of Excellence in various fields, the details of which may be posted under COE tab.
- Any Training material/Resources may be posted under Resources tab.
- A Video Conference(VC) was done with all the Nodal Officers on 12.04.2019 to brief them about the Portal and to invite feedbacks/suggestions.

PCMEs are requested to monitor the project initially, for contribution from their units.