The Chief Mechanical Engineers
All Indian Railways except ECR

Sub: Innovation of wheel changing gadget in yard of freight stock by Wagon Care Centre, Mughalsarai

Ref: ECR’s letter No. ECR/MEC/WAG/457 dated 15.12.2015
(copied enclosed)

Wagon Care Centre, Mughalsarai of ECR has developed one gadget for wheel changing in examination yard itself, the photograph of which is enclosed. With help of this gadget, defective wheel of wagons can be changed within 30 minutes without detaching the wagon from rake. This gadget will prevent detachment of wagons on account of wheel defect during examination and will help in system improvement of freight operations.

It is advised to replicate this innovation. Zonal Railways may assess the requirement and accordingly decide the quantity and location where this gadget could be deployed. Item wise estimated cost break up and drawings provided by JMP for making the gadget is enclosed for guidance. However, Railways may do their own market survey also for cost assessment. Thereafter action may be taken for procurement of the item following due procedure. Further details if required may be obtained by Railways from Sr. DME/MGS/ECR and CWM/JMP/ER. This is for your information & necessary action please.

Encl: as above

Copy to: CME/ECR

(Rajesh Kumar)
Dir. Mech. Engg.(Frt.)

Please sign
15/12/2016
EAST CENTRAL RAILWAY
(Fax: 06224-275822)

Office of the
Chief Mechanical Engineer
Hajipur - 844101.
Dated-15/12/2015

No-ECR/MEC/WAG/457

Chief Mechanical Engineers

Central Railway, Headquarter Office, C.S.T., Mumbai – 400001
East Coast Railway, Rail Sadan, Chandrashekharapur, Bhubaneshwar (Odisha) – 751017
Eastern Railway, Fairlie Place, 17, Netaji Subhash Road, Kolkata – 700001
Northeast Frontier Railway, Headquarters Office, Maligaon, Guwahati - 781001
Northern Railway, Headquarter Office, Baroda House, New Delhi - 110001
North Central Railway, Subedar Ganj, Allahabad – 211 001
North Eastern Railway, Gorakhpur
Northern Western Railway, Near Jawahar Circle, Jaipur – 302 017
South Central Railway, Headquarters Office, Rail Nilayam, Secunderabad – 500371
South East Central Railway, Headquarters Office, RE Office Complex, Bilaspur – 495004
South Eastern Railway, Headquarters Office, Garden Reach, Kolkata – 700043
Southern Railway, Headquarters Office, NGO Annexe, Park Town, Chennai – 600008
South Western Railway, II Floor, East Wing, Gadag Road, Hubli, Dist – Dharwad
(Karnataka) – 580020
West Central Railway, GM’s Office, Opposite Indira Market, Jabalpur (MP) - 482001
Western Railway, Churchgate, Maharishi Karve Marg, Mumbai – 400020

Sub: Innovation of wheel changing gadget in yard of freight stock by Wagon Care Centre, Mughalasari.

Wagon Care Centre, Mughalasari has developed one gadget for wheel changing in examination yard itself, photograph of which is attached herewith. With help of this gadget, defective wheel of wagons can be changed within 30 minutes without detaching the wagon from the rake. This gadget will prevent detachment of wagons on account of wheel defect during examination and will help in system improvement of freight operations.

You may like to depute your representatives for demo at Mughalsarai, Down Reception Yard. Shri Naman Kumar, DME/MGS (Mob – 9794848402) may be contacted in this regard.

This is for your information please.

DA: As above.

(Subodh Choudhary)
CRSE/Frt./ECR

Copy: i) EDME(Frt.), Railway Board – for his kind information.
   ii) ED (E&R), Railway Board – for his kind information.
   ii) ED (Wagon), RDSO, Manak Nagar, Lucknow – for his kind information.
**Item wise estimated cost breakup for In-Situ wheel changing Equipment**

**Item no. 1 (with six sub-assemblies) – will be developed and installed from trade to match with shop fabricated items (2 to 5).**

**Items at SI no 2,3,4 & part of SI no. 5 will be fabricated at JMP workshop to match with SI, no. 1**

<table>
<thead>
<tr>
<th>SN.</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit cost</th>
<th>Total cost</th>
</tr>
</thead>
</table>
| 1   | Synchronized Gang Hydraulic Jack Assembly Working Cap:- 10 X 2 = 20 Tons, Screwed Ram with lock Nut (02 Nos. 10 Tons 700mm lift closed height: 900 mm with hydraulic hand pump double action) Consisting following items:  
   i. Hydraulic Jack Quantity:- 02 Nos. made with alloy steel and properly heat treated with following specification:  
       a. Working capacity:- 10 Tons (Tested up to 25% Extra load)  
       b. Lift:- 700mm  
       c. Body Dia:- 100mm  
       d. RAM: Threaded type with safety lock nut and universal saddle.  
       e. RAM Dia: 65mm  
       f. Pressure required: 300Kg/sqcm  
   ii. Hydraulic hand pump double action with following specification:  
       a. Working pressure: 500Kg/sqcm max.  
       b. Oil tank: 5 liters  
       c. Internal relief valve fitted. Qty-02Nos. (1 No. for standby)  
   iii. Other valves like, flow control with throttle check valve: 04Nos, Oil distribution manifold: 01No  
   iv. Hydraulic synthetic Jack hose with | 01 No. | 1,10,000.00 | 1,10,000.00 |
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Quantity</th>
<th>Rate (₹)</th>
<th>Amount (₹)</th>
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<tbody>
<tr>
<td>2.*</td>
<td>Trolley assembly for IN SITU WHEEL CHANGING fixture as per JMP layout Drg.No.JMP/BOXN 04/2015</td>
<td>02 sets</td>
<td>1,20,000.00</td>
<td>2,40,000.00</td>
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<tr>
<td>3.*</td>
<td>Wheel changing trolley sliding channel with fixing tie bar as per JMP layout Drg.No. JMP/BOXN 05/2015</td>
<td>01 set</td>
<td>25,000.00</td>
<td>25,000.00</td>
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<tr>
<td>4.*</td>
<td>&quot;U&quot; Chanel for the sliding/withdrawal of trolley assembly with wheel. As per JMP layout Drg.No. JMP/BOXN 10/2015</td>
<td>01 set</td>
<td>18,000.00</td>
<td>18,000.00</td>
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<td>5*</td>
<td>Other accessories</td>
<td>L.S</td>
<td>75,000.00</td>
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<td></td>
<td>Sub Total ₹</td>
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