The Chief Mechanical Engineers  
All Indian Railways except SCR  

Sub: Innovations and system improvements in Indian Railways  

CME/SCR through his MCDO for the month of January, 2014 has informed about the following innovations/system improvements on the freight side:  

- **Working model for two stage Automatic load sensing device on BLC wagon at RYPS.**  

The same is enclosed for your kind information.

Encl: 01 page  
Copy to: EDS(W)/RDSO  

(Gaurav Puri)  
Deputy Director, M(N)  

Please refer  
27/2/14  
27/2/14
3. INNOVATIONS:

3.1 Working model for two stage Automatic load sensing device on BLC wagon at RYPS:

Braking Power needs to be different in empty and loaded condition of a wagon which is done through Empty-Load Box in a conventional wagon. In BLC /BOBRN wagons, Load sensing devices (LSDs) are used to serve the purpose of obtaining desired braking force in different loading condition. Two Load sensing devices are provided i.e. one on each bogie. EK DV with Pressure transformer OKC3W2 DV is used which supplies air to the Brake cylinder at 2.2 Kg/cm2 in empty condition and 3.8 Kg/cm2 in fully loaded condition.

RYPS shop has developed a working model for better understanding of the staff and trainees about the working of two LSDs and DV on BLC wagons.

This model is equipped with all air brake components associated with BLC wagons. Practical demonstration can be done to explain the functioning. Besides being a training aid, this working model can also be utilized to test the working of DVs as well as LSDs.

4. Multi Detector for fixing magazine bags at LGDS:

Passenger amenity items like Magazine bags, Bottle holders in a coach are very much susceptible to damages. The fastening screws coming out from the panel is a common phenomena. It is necessary to locate the screws on the steel frame which is behind the LP sheet and not visible. The shop has started using "Multi detector" to find the locations of the members of the metallic structure behind the LP panel. "Multi detector – BOSCH Make" is an electronic detector having light indications. This will ensure secured fitment of passenger amenity items in the coaches.