Innovations of ECOR in Freight (as on 1.4.14)

1. Development of BRN wagon as Wagon Mounted Mobile Crane

One BRN wagon No. SECR 56140450519 has been developed by Central sick line C&W staff as wagon mounted mobile crane having arrangement with chain pulling for the use in the division. This will enable in releasing the way side sick wagons (mostly loaded) and thus eliminates detention & demurrage loss.

2. Automatic twist lock test gadget developed

A gadget has been developed by C&W Central Sick Line staff which is used for assembling & disassembling of Automatic twist lock at the time of repair attention. The following material has been used for developing the gadget.

1. 10 mm MS sheet 1½"x2'
2. 'L' Angle Iron- 4 nos.
Developed at ROH depot VSPS by on Laser to group the different category springs which are used on Freight stock i.e. A,B,C groups based on its free height.

**Working Principle**: Laser Beam useding in ASGD illuminates the face of the Light Dependent Resistor and it conducts. This keeps the LEDs off. Whenever the coil spring is placed in the path of the LASER, the Laser beam breaks and LDR cease to conduct. This activates LED to glow at specified height and color of LED.

**Advantages**: 1. Less time and saves manpower for grouping of springs. 2. Accurate measurement of spring height 3. Simple Portable device and economical.

4) **Pneumatic Turn Table**

A Pneumatic Turn Table has been manufactured locally by VSPS C&W depot which is useful to turn the wheel set in required direction with less effort.
Material used: Air brake cylinder -1, ½" isolating cocks -2 nos, SAB bearing -1 nos, ¼" M.S.Pipe-2 mts, Iron rod-80 mm dia, 12" length, Angular channel "L" type- 75mmx75 mm size, Hand brake spindle and nut- 1 nos each and Air pressure required- 5 kg/Cm2.

Advantages:
1. Easy to operate as lifting and lowering of wheel sets will be done with compressed air.
2. Wheel turning takes hardly 10 seconds where as conventional type takes upto 1 min

(5) RAIL SKATE TO HANDLE LOADED WAGONS

Presently there is a rail skate for salvaging a hot axle/locked axle/seized bearing and under tunnel rescue of empty wagon in all divisions but that skate fails to negotiate wagon in Loaded condition. VSKP division has developed a similar Rail Skate for handling LOADED wagon in mid section. This is first ever innovation in ECOR and adjacent zonal railways.
6) BOLSTER MANIPULATOR

VSPS C&W depot has developed a Bolster Manipulator with locally available materials to facilitate down hand welding to liners.

7) Model of Bogie Mounted Brake System (Wagon)

The working model of BMBS has been developed at Training School/WAT with released and scrap materials. Pressure gauges are fixed in the model in which empty
and load pressures can be observed with EL60 functioning. Replacement of brake blocks, bk.shoe, pushrod and pins can be shown practically to trainees.


8) **Model Tight Lock Coupler 'H' type of Coaching CBC**

Model Tight Lock Coupler 'H' type of Coaching stock CBC has been assembled in working condition in C&W training school. This will enable to show the staff under training to improve their knowledge on opening and locking of CBC, identification of all parts and observation of transmission of draft forces. Colour code has been given to all parts by providing an index board so that the parts of CBC can be easily identified.