



BESCO LIMITED (WAGON DIVISION)

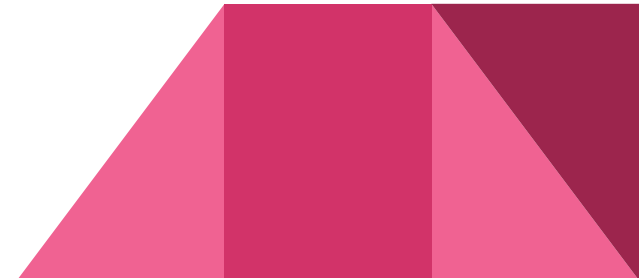


ABOUT US



OUR HISTORY

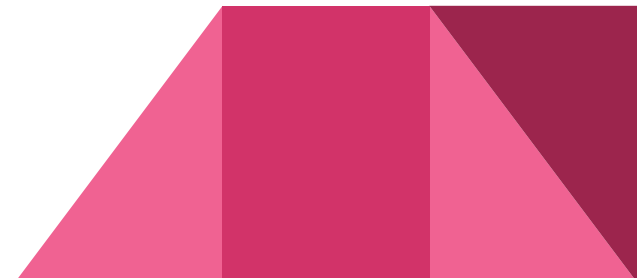
- Established in 1922 as Hukum Chand Electric Steel Co which was later renamed as Bhartia Electric Steel Company Limited
- The Company started as an ingot making and jobbing foundry unit .
- In 1959 the controlling interest in the company was purchased by the Tania Family which is running it till now.
- From the small foundry , the management moved onto manufacturing railway parts in bulk and thereafter Centre Buffer Couplers , Draft Gears and 3 piece Cast Steel Bogies for the Indian Railways in association with American Steel Foundries and Cardwell Westinghouse of USA .
- In 1994-95 , the company took a step for forward integration and started manufacture of complete wagons.
- We are one of the largest manufacturers in India and serve as a one stop solution provider to Indian Railways.





OUR FACILITIES

- Our manufacturing facilities are located at:
- *Baruipur Works, West Bengal - Wagon & EMU Manufacturing*
- *Poanta Sahib Works, Himachal Pradesh - Brake Shoes manufacturing*
- With integrated Research & Development center having capability of Design, Analysis and Testing of our products, we continue to be a technology-led Company





BARUIPUR WORKS



- Located 25 km SE of Kolkata, this plant houses manufacturing capability of all types of Wagons & 25kV EMU & MEMU
- Total land area of 60 acres; 21845 sq. m covered area
- Covered area under 10 overhead cranes - 15000 sq.m
- Power availability by direct line from WBSEB
- Our plant is connected to the Baruipur station by a dedicated siding.
- Facility for sheet metal cutting, fabrication, paint & assembly
- ISO 9001:2015 & 14001:2015 & G 105 Certified facility





Plant and Machinery

- CENTRALISED TESTING AT OUR WORKS
- - CNC Plasma Machines for accurate sheet and plate metal cutting to desired specification
- - CNC Shearing and Plate Straightening Machines for best fabrication practices
- - CNC Press Brake for double and triple bending of sheet and plate metal
- - Robotic Welding for best quality uniform welds on sheet metal surfaces
- - Manipulators to facilitate inverted superstructure bottom welding
- - Radial and Gang Drilling Machines for enhanced drilling on cold rolled form sections

ROBOTIC WELDING





INFRASTRUCTURE



1000T PRESS BRAKE



900 T PRESS



CNC SHEARING MACHINE



16 MM CNC SHEARING





OUR PRODUCTS



Freight Cars

- *Types of Wagons manufactured:*
 - Bogie open Wagons with doors 'BOXN', 'BOXN-HS', BOST & 'BOSTHS'
 - Bogie open Wagons 'BOY'
 - Bogie Covered Wagons 'BCNA' , 'BCNA-HS' & BCNHL
 - Bogie Hopper Wagons "BOBYN"
 - Bogie Hopper Wagons with Aluminium body 'BOBRNAL'
 - Bogie Tank Wagon 'BTPN'
- *Passenger Rolling Stock-*
 - *EMU*
 - *MEMU*



OPEN TYPE WAGON



BOGIE OPEN WAGON TYPE 'BOXN R'



BOGIE OPEN WAGON TYPE 'BOXN HL'



BOGIE OPEN SALT WAGON TYPE 'BOXNHL-E'



**BOGIE OPEN WAGON TYPE 'BOXNS' - 25T
AXLE LOAD APPLICATION**



FLAT TYPE WAGON



BOGIE FLAT STEEL WAGON TYPE 'BFNS'



BOGIE RAIL WAGON TYPE 'BRN 22.9' WITH MBS



TANK WAGON



BOGIE PETROLEUM TANK WAGON TYPE 'BTPN'



HOPPER TYPE WAGON



Aluminium Body Wagon



**PNEUMATIC BOTTOM DISCHARGE
HOPPER FREIGHT CAR 'BOBRN'**



SIDE DISCHARGE HOPPER CAR 'BOBYN'



**HOPPER WAGON TYPE 'BOBRNHSM1' FOR NTPC RAMAGUNDAM
PLANT**



ELECTRIC - MAINLINE ELECTRIC MULTIPLE UNIT

25 KV AC ELECTRIC MULTIPLE
UNIT



25 KV AC ELECTRIC MULTIPLE UNIT



MEMU MOTOR COACH AT BARUIPUR WORKS





Market Performance

- We are Market Leaders in the supply of Freight Cars to the Indian Railways.
- Entered Freight Car Manufacture from 1996/97.
- Supplied over 25000 Wagons to Indian Railway.
- Capacity to manufacture over 2400 nos various types of wagons per annum.



UNIQUE MILESTONES

- Besco Ltd (Wagon Division) has manufactured more than 5000 BCNHL (Covered) wagons
- Besco Ltd (Wagon Division) is the highest manufacturer of BFNS (Coil Carrying) wagon in India with more than 500 wagons produced till date
- Besco Ltd (Wagon Division) has recently executed the first BOBRNAL rake in the country with Aluminium Body having a lesser tare load & higher payload.
- Besco Ltd (Wagon Division) is the only manufacturer in the country having the expertise in handling Aluminium Plates and Extrusions for wagon making.



DESIGN, DEVELOPMENT AND TESTING

Besco Ltd (Wagon Division) was the first firm who in association with RDSO developed the first Stainless Steel wagon for the IR i.e. BOXN HL wagon in 2008.

Besco Ltd (Wagon Division) was the first manufacturer to introduce Squeeze load testing and conducted the first successful squeeze load test at its premises in collaboration with RDSO & IIT Kanpur .

Besco Ltd (Wagon Division) has manufactured more than 10000 BOXN & BOXNHL wagons till now and that is almost 20% of the market share .



SQUEEZE LOAD TEST - BCNHL



SQUEEZE LOAD TEST – FLAT WAGON

SQUEEZE LOAD TEST

BOBRNALHSM1 Wagon

- Length over Coupler 10600mm.
- Length over head stock 9671mm.
- Cubic capacity 56.60m³.
- Axle load 21.82t.
- Tare weight 23.54t
- Number of wagons per rake 58.
- ALUMINIUM SUPER STRUCTURE
WITH SPECIAL ALLOYED
ALUMINIUM PLATES & EXTRUSIONS

RDSO Designed BOBRNALHSM1 -22.32 t Axle load Aluminium Wagon



**Manufactured by BESCO LIMITED, Wagon Division
June 2011**



The Aluminium Bodied Wagon BOBRNAL WAGON



The Auxiliary Grind Car or Crew Car

Besco Limited Wagon Division is also presently executing 04 nos State of the Art Auxiliary Grind Cars to be used for track maintenance by the Indian Railways .



The Auxiliary Grind Car





Design Capabilities

- BESCO is a technology driven company.
- The company has adopted the technique of virtual prototyping for evolving optimum designs through computer simulations.
- The product is designed on the computer with adequate strength, 'manufactured' on the computer and put through a battery of acceptance tests on the Computer itself to withstand the loads that would arise in normal service.
- The enormous costs and time overruns involved in physical prototype manufacture, laboratory and field trials are minimized by this technique of Virtual Prototyping.
- Methodology governing the development and evaluation of new designs basically makes use of advanced software.



ABSORB Mark-II

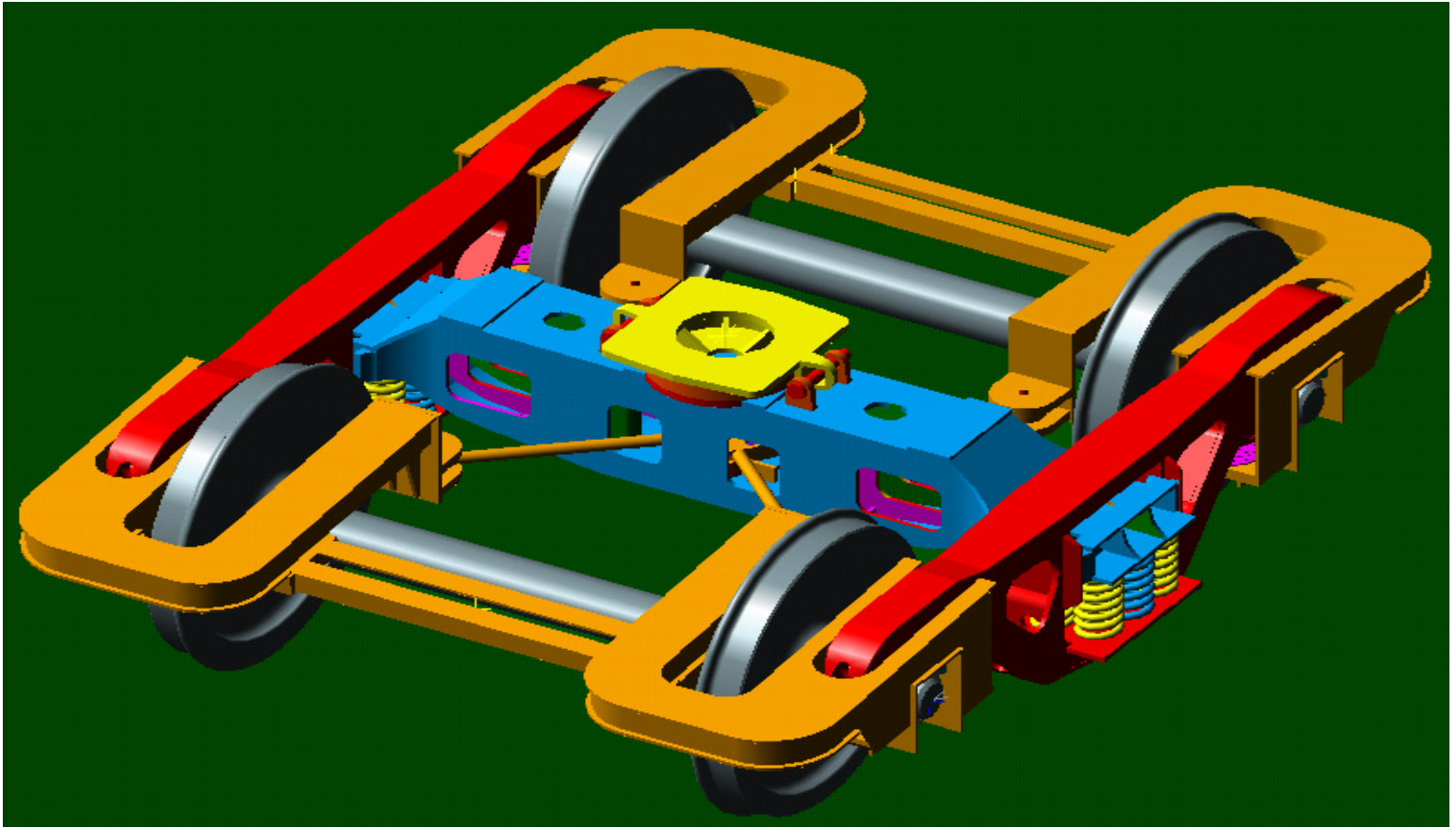
ABSORB Mark II SELF STEERING BOGIES – PATENTED

- Negotiate curves and track irregularities with minimum episodes of flange rail contact.
- Flange contact in even these isolated instances is in the trailing mode and not in the leading mode.
- This feature results in exchange of low level of lateral forces between rail and wheel and exceptionally high standards of Riding quality.
- Substantial reduction in wheel wear.
- Reduced Rail wear.
- Reduced rolling resistance leading to reduction in energy required for hauling.
- Lower fuel costs.
- Longer life of components.
- Low down time & Easy to maintain.



ABSORB Mark II

Freight Car Truck



Aligned BESCO Self Steering Outboard Retrofit Bogie

THANK
YOU!!

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(WAGON DIVISION)

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