



RAILWAYS

RAILWAY PRODUCTS

...Not Just Manufacturing, Delivering Innovative Products and Solutions



***Fabricated Bogie for
LHB Coaches***



***16 Cylinder Power Pack Item for
• Crank Case • Engine Block***



***Fabricated Bogie for
Locomotives***

- ❑ ***Since 1960***
- ❑ ***8 Manufacturing Units***
- ❑ ***6 Offices Across India***
- ❑ ***Workforce of over 2000***

OUR BEC

Bhilai Engineering Corporation Limited (Engineering Division) is an integrated engineering company with more than 53 years of rich experience in providing manufacturing solutions to its customer in Metals, Minerals, Railways and Power sectors. In the field of manufacturing engineering, we have strong engineering capabilities, experienced human resources and have integrated our manufacturing facilities with manufacturing process knowledge. The company has established its credibility for supply of high precision equipments; composite work packages, assemblies & projects meeting global standards. BEC is a family owned company with annual group turnover above INR 900 crores (200 million USD). It enjoys good credit ratings from the financial institutions which enables the company to continuous improve & modernize its infrastructural facilities, augmentation of production capacities & development of new products and projects.

GLOBAL PRESENCE



Our Railway Products

Power Pack Assemblies and Part for Diesel Loco

- ❑ 06 Cylinder Engine Block for Sentinel Loco
- ❑ 16 Cylinder Engine Block for Alco Locomotives.
- ❑ Crank Case Assembly for 16 Cylinder of EMD Locomotive.
- ❑ Power Pack Parts.



Extra Large Fabrications for Locomotives and Coaches

- ❑ Shell Assemblies.
- ❑ Under frame Assemblies for Loco and Coaches.
- ❑ Kits for Under-Frames.

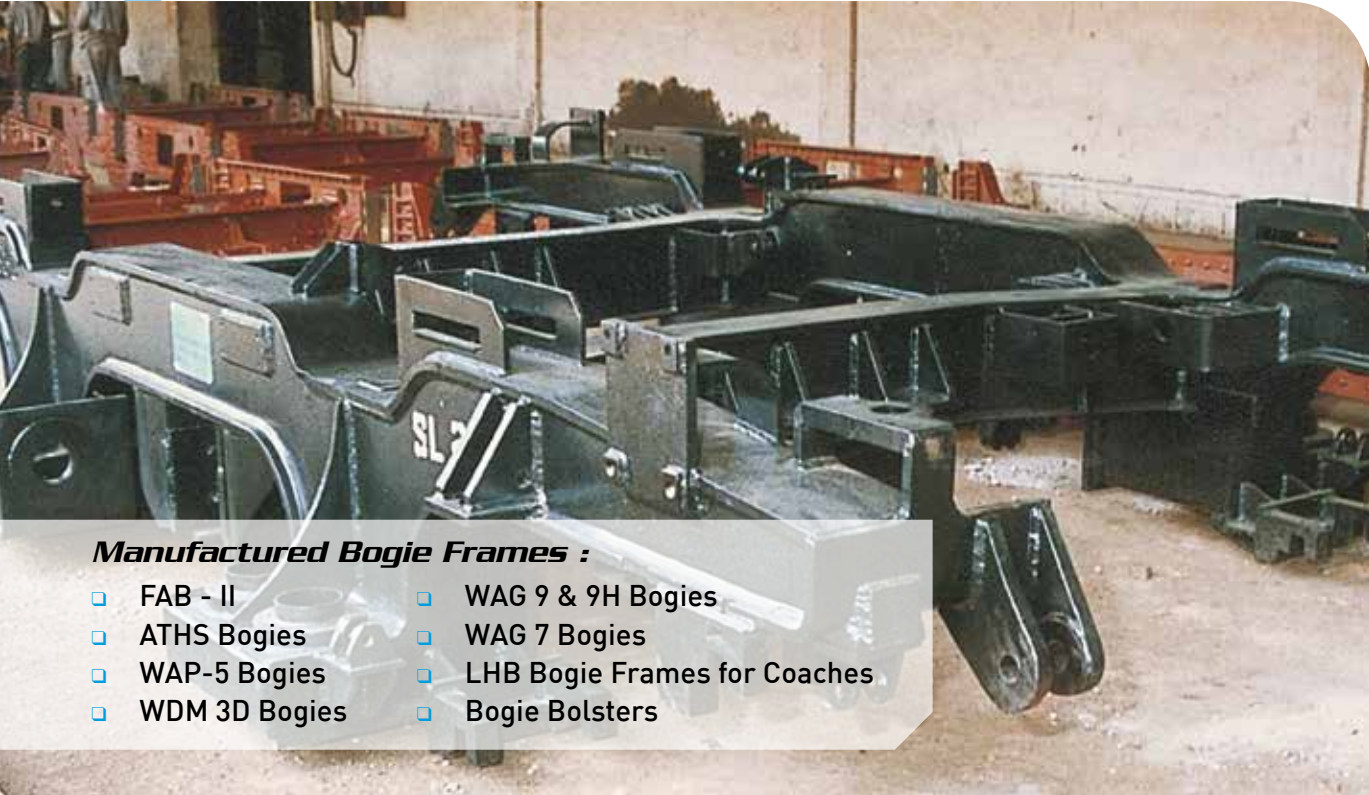
Components and Products

- ❑ Bogie Bolster.
- ❑ Pats for 140MT Brake Down JIB Cranes.
- ❑ Traction Motor Parts.
- ❑ Controlled Discharge Toilets System [CDTS].
- ❑ Wagons.
- ❑ Rolling Stock.

Fabricated Bogie Frames and Assemblies

- ❑ Locomotives
- ❑ Coaches

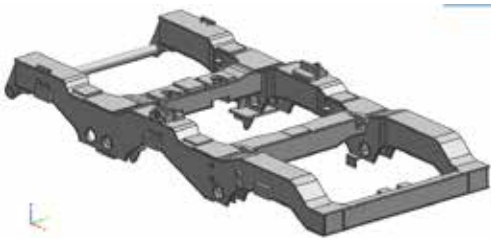
Fabricated Bogie Frames



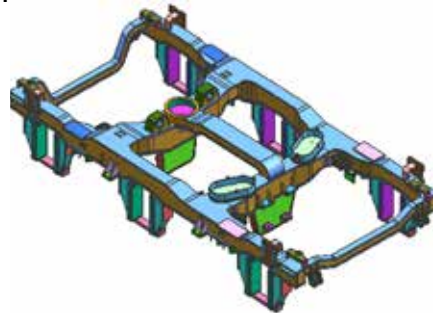
Manufactured Bogie Frames :

- ❑ FAB - II
- ❑ AHS Bogies
- ❑ WAP-5 Bogies
- ❑ WDM 3D Bogies
- ❑ WAG 9 & 9H Bogies
- ❑ WAG 7 Bogies
- ❑ LHB Bogie Frames for Coaches
- ❑ Bogie Bolsters

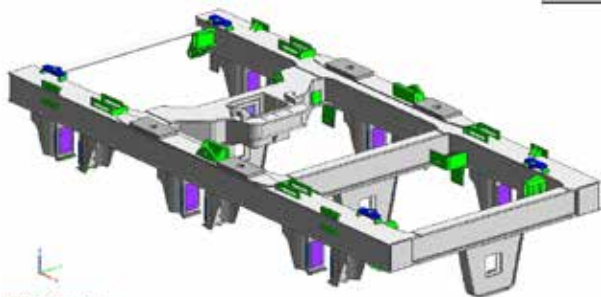
Bogie frame (FAB - II) for WDP 4 & WDG 4 Locomotives



Bogie frame for WDM 3A (ATHS) Locomotives



Bogie frame for WDM 3D Locomotives



Fabricated Bogie frame for Conventional and Advanced Railway Coaches



Power Pack Assembly for Diesel Locomotives



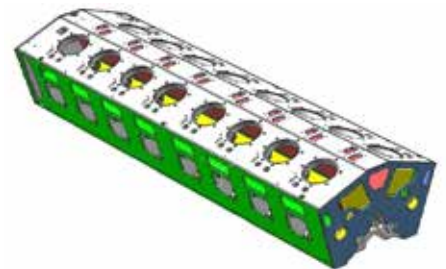
Manufactured Power Pack Assembly :

- ❑ 16 Cylinder Engine Block for ALCO Locomotives
- ❑ 16 Cylinder Crank Case for EMD Locomotives
- ❑ 6 Cylinder Engine Block

16 Cylinder
Crank Case
for EMD
Locomotives



16 Cylinder
Engine Block for
Alco Locomotives



Extra Large Fabrication

Under Frame and Shell Assembly

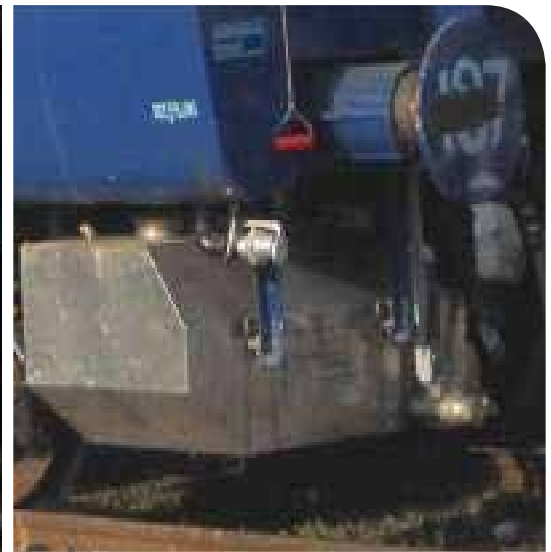
- ❑ BEC has dedicated shop to perform extra large fabrication for the Railways.
- ❑ It has setup complete production line to fabricate under frames and shell assembly for Locomotives and Coaches.
- ❑ Each under frame weighs 20 to 28 tons and length upto 23 meters.
- ❑ Each shell assembly weighs upto 40 tons and length upto 23 meters.
- ❑ Specialized manipulator is designed to ensure all welding in down hand positions.



Environment Friendly Toilets

With a commitment to provide Hygienic Environment to the passengers **BEC** along with **Defence Research and Development Organisation (DRDO)** have developed Environment Friendly Bio Toilets.

Controlled Discharge Toilet System (CDTS) in Railways Coaches provides clean environment around railway tracks within City limits, Railway Station Premises and Maintenance Sidings. The system works on Electro-Pneumatic Principle wherein, the waste generated from teh coach lavatories during run is collected in a Retention Tank and is disposed off far away from the city limits.



Stator Chamber and Magnet Frame for Traction Motor

- ❑ 3-Phase Traction Motor Type 6FRA6068 for WAG-9 and WAP-7 Locomotives
- ❑ 3-Phase Traction Motor Type 6FXA7059 for WAP-5 Locomotives
- ❑ 3-Hitachi Traction Motor Type H515250A for WAP-4 and WAG-7 Locomotives



Other Components



Cover and Frames of Power Pack



Parts CF JIB Crane



Bogie and Bogie Bolster Assembly for Coach



Oil PAN Assembly for Power Pack



Magnet Frame for Traction Motor



Equilizer Beam for Bogie Assembly



Turbo Dowelling for Power Pack

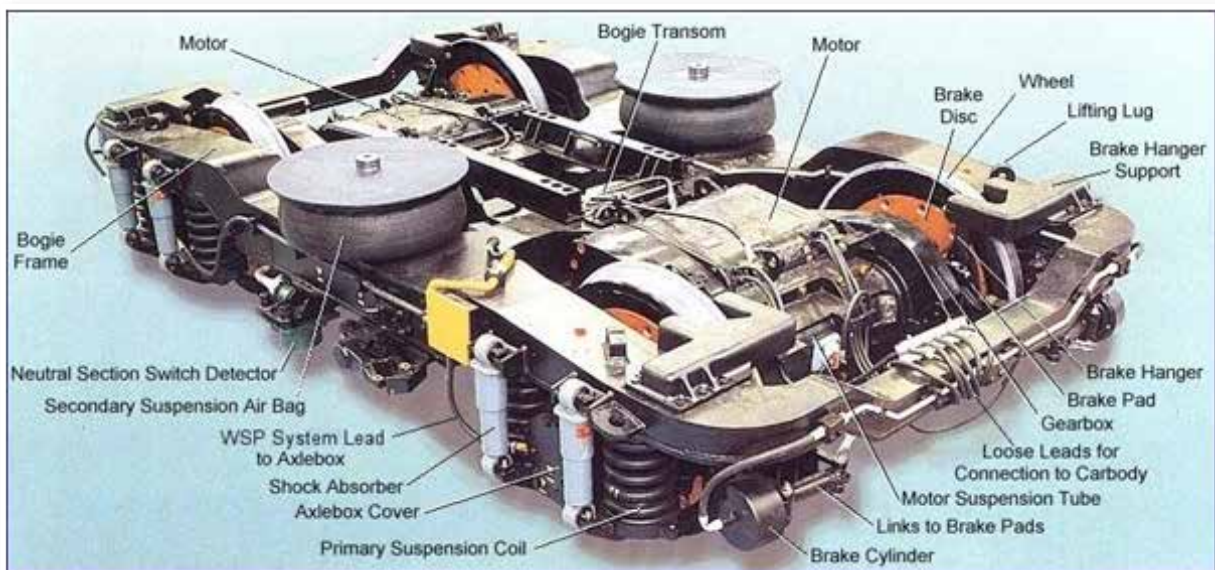


Retention Tanks for COTS



Bogie Bolster for LOCO

Bogie Frame Assemblies for Coaches and Locomotives



- ❑ Motorised Bogie for Locomotives
- ❑ Fully Assembled Fiat Bogie for Coaches
- ❑ Repair and Rehabilitation work of Motorised Bogie for Locomotives.

Wagons



BOBC Wagon



BOX Wagon



BOI Wagon



BOXN Wagon



BOBS Wagon



BOBSN Wagon

Approvals

- ❑ Diesel Locomotive Works
- ❑ Chittaranjan Locomotive Works
- ❑ Rail Coach Factory
- ❑ Diesel Loco Modernisation Works
- ❑ Research Design and Standard Organisation (RDSO)
- ❑ Integral Coach Factory
- ❑ Association of American Railroad
- ❑ Eastern Railways - Jamalpur Works

Certifications



Our Valued Customers in Railways



Indian Railways

SIEMENS



ELECTROMOTIVE



BANGLADESH RAILWAYS



NATIONAL RAILWAY EQUIPMENT CO.

Our Infrastructure



Robotic Welding with Manipulator

Make:
EWAC Alloys Limited

Arc Welding Software
package including
Seam Finding, Arc
Tracking & Multi-layers
Welding Function.
Welding Fixture with
Track to accommodate
3M to 6M Long Jobs.



Advanced Welding Systems

- ❑ TIG, MIG, GMAW, SMAW
- ❑ Column & Boom Welding
- ❑ Tandem Welding Systems
- ❑ Robotic Welding Systems



CNC / NC / Machine Tools (More than 50 Nos.)



SKODA WD-200
X - 11000
Y - 2150
Z - 1600
Spindle DIA - 200



Make:
FRORIEP
X - 7000
Y - 2500
Z - 1400
Spindle DIA - 180



Make:
FEMCO, Taiwan
X - 3000
Y - 2100
Z - 1500
Spindle DIA - 1100

CNC Press Brake



Make:
Jeckson Machinery Pvt. Ltd.

CNC Press Brake
Capacity : 400 Tonnes x 3100 MM

CNC 5-AXIS Special Purpose Machine

Make:
Plano Miller FPV-70
Nicholas Correa, Spain

X - 7500
Y - 4500
Z - 1500
Capacity - 30 MT



Make:
TOS - Kurim
FU - 150B

X - 8000
Y - 1500
Z - 4000
Spindle DIA - 180

Coordinate Measuring Machine (CMM)

Make:
Coord 3 Industries SRL
CMM
(Coordinate Measuring Machine)

X - 6000
Y - 3000
Z - 2000



Laboratory

Destructive Testing Lab

- ❑ Universal testing Machine – 400 tons
- ❑ Brinell hardness testing machine - 3000 kg
- ❑ Rockwell Hardness testing machines with A,B,C Scales
- ❑ Impact testing Machines
- ❑ Impact notch cutting machine
- ❑ Metallurgical microscope x 450 magnification with microphotography attachment
- ❑ Grinding & polishing Machine
- ❑ Portable Vickers Hardness Tester
- ❑ Shcleroscope' Shore Hardness Tester

NDT Lab

- ❑ RT
- ❑ UT
- ❑ MPT
- ❑ DPT



Engineering Services Division



ENGINEERING SERVICES

It is an Engineering Arm of BEC group, with infrastructure facilities to provide basic and detail engineering services globally in the areas of Metallurgy and Minerals. It offers Consulting, EPC Contracting and Equipment integration services from its own group company having State of Art Talent Pool includes Veterans from Multinational and Public Sector Companies, with vast relevant experience and young talent groomed internally which also enabled the division to offer integrated solution from concept to commissioning.

BEC-ESD : Functional Areas :

- ❑ **Design & Engineering**
- ❑ **Consultancy**
- ❑ **Manufacturing & Supply**
- ❑ **Project Management**
- ❑ **Construction Supervision**

DELIVERING TECHNOLOGICAL EQUIPMENTS ON TURNKEY BASIS.



METALLURGY

- ❑ **Coke Oven Machines :** Coal Charging Car, Coke Guide Car, Coke Pusher Car, Quenching Car, Electric Loco
- ❑ **Coke Dry Cooling Plants :** Charging & Discharging Device, Coke Bucket Car, Coke Bucket, Carriage, Electric Loco, Cooling Chamber, Blowing Device, Dust Cyclones
- ❑ **Rolling Stock & Transport Equipments :** Torpedo Ladle & Cars, Slag Car, Platform Car, Slab Car, Wagons.
- ❑ **Continuous Casting Machine :** Roller Tables, Mould Oscillators, Segments
- ❑ **Blast Furnace Equipments :** Cast House Equipments, Top Charging Equipments, Slag Granulation Plants



MINERALS

- ❑ **Raw Material Handling Systems, Stock Yard Machines & Port Machineries :** Offering in association with FAM, Magdeburg, Germany
- ❑ **Mineral Sorting Plants :** Innovative offering in association with TOMRA Sorting Solutions, Germany
- ❑ **In Pit Crushing Plants :** Mobile / Semi Mobile Feeder Breaker (Sizer) for Coal Mining Industry
- ❑ **Bucket Solutions & GET :** Offerings for Electric Rope Shovels, Hydraulic Excavators, Loaders, BWE, BWSR & Dragline
- ❑ **Rock Breakers**



RAILWAYS

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