



Coke Oven Servicing Equipments
NINL, Duburi, Orissa. INDIA

strengthening growth

BEC
BHILAI ENGINEERING
CORPORATION LIMITED



www.bec-group.com

Strengthen

Bhilai Engineering Corporation Limited



Bhilai Engineering Corporation Limited (BEC) is committed to the Delivery of Quality Castings, Equipments, Machined parts through dedication and competence. BEC has adapted the Group's vision of Ethical and Professional Business Practices and enjoys an enviable Customer Trust. Riding on the trust vested by its illustrious customers, the company has been steadily increasing its production capacity and widening its product range. We have identified Export as a powerful tool to strengthen our Technological Talents and heighten competitiveness while at the same time moving our products up the value chain.

The growth in Indian Engineering Industries has opened up big challenges for the BEC team - The steady increase in Output and Delivery, the growing stress of Incremental Quality, the compulsion of Just in Time delivery and Speedy Product Development. It offers new opportunities to compete, succeed and lead. The stresses of rapid growth coupled with rising quality standards have only reinforced BEC's resolve and its inherent ability to meet customer demands and enhance customer satisfaction.

The future of BEC is bright. In our effort to achieve sustained growth with customer satisfaction we have identified several methods. For instance BEC is currently employing recent innovations that significantly increase transparency, reduce the per unit working hours and the Project Completion Cycle. With the expertise, BEC has gained over the years, it firmly believes in repetition of exponential growth in the years to come.

Arvind Kumar Jain
Managing Director

A wide-angle photograph of a large industrial facility, likely a steel plant. The image shows a complex network of pipes, walkways, and structural steel. In the foreground, there are some potted plants and a paved area. The background features more industrial buildings and structures under a clear sky.

Pusher Car - Coke Oven Servicing Equipments

ing Growth

Introduction

BHILAI ENGINEERING CORPORATION LTD. since its inception more than 45 years ago, steadily expanded to grow both in size and diversity and stands today with an annual turnover of 50 MILLION USD. It comprises dynamic units that span a wide variety of Businesses from Manufacturing to Projects and Exports.

The Engineering and Project Division of BEC is equipped with Steel Foundry, Medium Machine shop, Heavy Fabrication and Assembly shop including advanced Design and Engineering facilities to undertake jobs from concepts to delivery.

BEC works have five units located in Raipur and Bilai cities of Chhattisgarh State. To facilitate and support various projects and maintain and develop corporate relations there are 4 full-fledged Regional Offices in Delhi, Mumbai, Kolkata and Chennai and 5 site offices at Rourkela, Ranchi, Durgapur, Bokaro and Vizag. These offices are equipped with all the modern communication system, ERP System and Infrastructure facilities.

Specialized manpower is the backbone of BEC comprising more than 1350 highly experienced workforce delivering best services for customer satisfaction and mutual business co-operation.

The aggregate capacity of fabrication and assembling are 25000 TPA, besides iron and steel castings with aggregate capacity of 10,000 TPA.

BEC undertakes total project implementation including Mechanical, Structural, Electrical and Civil jobs. The driving force in every case has been singular – the urge towards greater technical excellence and more advanced technology – to stay always a step ahead of time.

- ✦ Incorporated in the year 1960
- ✦ ISO 9001:2000 Certified Foundry
- ✦ Specialist in Engineering for the Steel, Mines, Railways, Ports, Non Conventional Energy Sources, Cement, Power Industries from intricate castings in custom-made steels to giant fabrication projects
- ✦ Diversified indigenous and overseas suppliers of critical components to mammoth system incorporating sophisticated technology
- ✦ Star Export House
- ✦ Pioneers in Coke Oven Projects
- ✦ Global Presence



Administrative Building

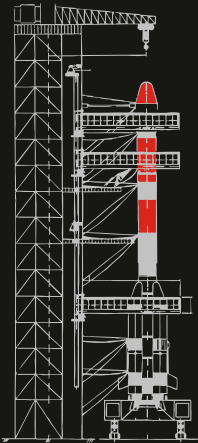


Wind Mill Tower - Under Painting

Strengthen

Indian Space Research Organization

Fabrication and erection of 4000MT of Umbilical Tower, Horizontal Sliding Door and Vehicle Assembly Building for 2nd Launch Pad at ISRO, Sriharikota, Andhra Pradesh, India.



2nd Launch Pad - ISRO Sriharikota

Landmarks

Coke Oven Servicing Machines Equipments - Mittal Steel, S.A.

BEC is one of the handful of specialist with the technological capability of manufacturing sophisticated Coke Oven Servicing Machinery and Rebuilding of Coke Ovens.

For modernization of Coke Oven Batteries BEC has collaborated with Giprokoks and KB "Koksokhimmash", the leading technology supplier and equipment designer of Ukraine.



Coke Oven Battery - Rourkela Steel Plant

ing Growth

Durgapur Steel Plant

Fabrication, supply of Blast Furnace and Sinter Plant Equipments to the tune of 22,000 MT for DSP, Durgapur, West Bengal, India.

Northern Coal Fields Limited

Site, Fabrication, erection and commissioning of 6000MT 3 nos. Walking Dragline for Northern Coal Fields Limited, Singrauli, Uttar Pradesh, India



Collaborations

- ◆ With KBK, Ukraine for modern coke oven machines such as Coke Guide Cars with Draft Hood, Land Based Pushing Emission Control System, Quenching car with combined quenching, Zero Leak Coke Oven Doors. Earlier had successful Technology Transfer from HKC, now under M/s Krupp Udhe, Germany for design of all Coke Oven Machines.
- ◆ With McKeown, USA BEC has supplied Modern Coke Oven Machines to South Africa, Mexico, etc.
 - ◆ Wire Rod Mill Modernization being the latest development in Projects, BEC is collaborating with Morgarddshammer AB, Sweden. This will increase rolling speed & quality of product.
 - ◆ For Gas Cleaning Plant of Blast Furnace, which is fully automatic, and PLC controlled BEC is working with Paul Wurth (I) Ltd. at BSP.



Coal Charging Car - Mittal Steel, South Africa

Strengthen



Planer Machine 3.5 Mtr Width

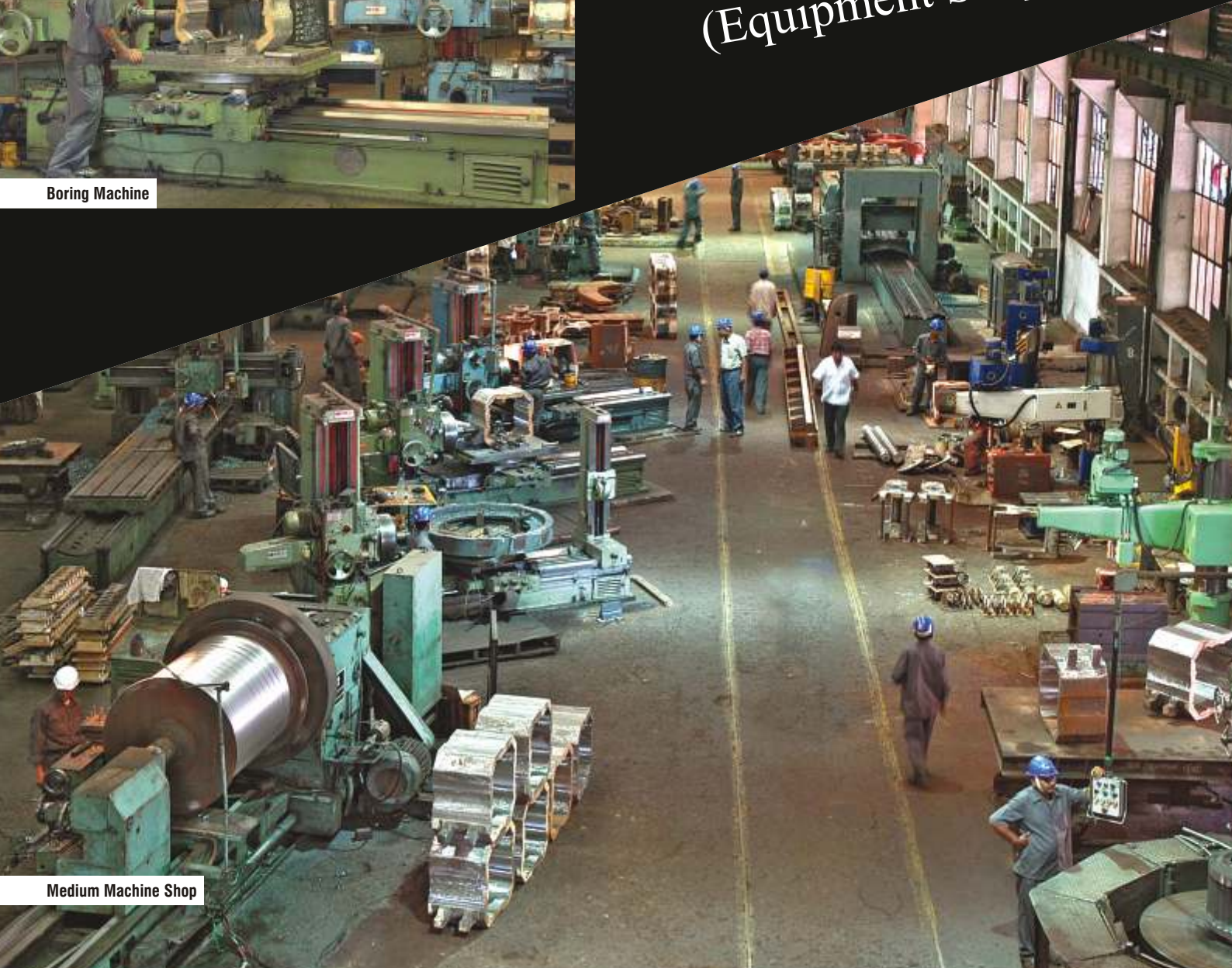


Planer Machine



Boring Machine

Infrastructure
(Equipment Shop)



Medium Machine Shop

ing Growth



Skoda Horizontal Boring Machine



Vertical Lathe 4 Mtr Dia



Fabrication Shop



Heavy Machine Shop

Strengthen



Simulation Modeling



Pattern and Method Shop



KVS Heavy Duty Jolt Squeeze Moulding Machine

Foundry Shop



Liquid Metal Pouring

ing Growth



Hardness Test



Tup Hammer Drop Testing Machine



Three Phase Direct ARC Furnace



Omega Continuous Sand Mixture (Capacity 20 tone/hr)

Strengthen



Bell and Hopper for Mini Blast Furnace



140 TON Hot Metal Ladle Car

Steel



INBA Dewatering Drum

ing Growth



Segments



Blast Furnace Shell under Assembly



Dummy Bar Top Charging System

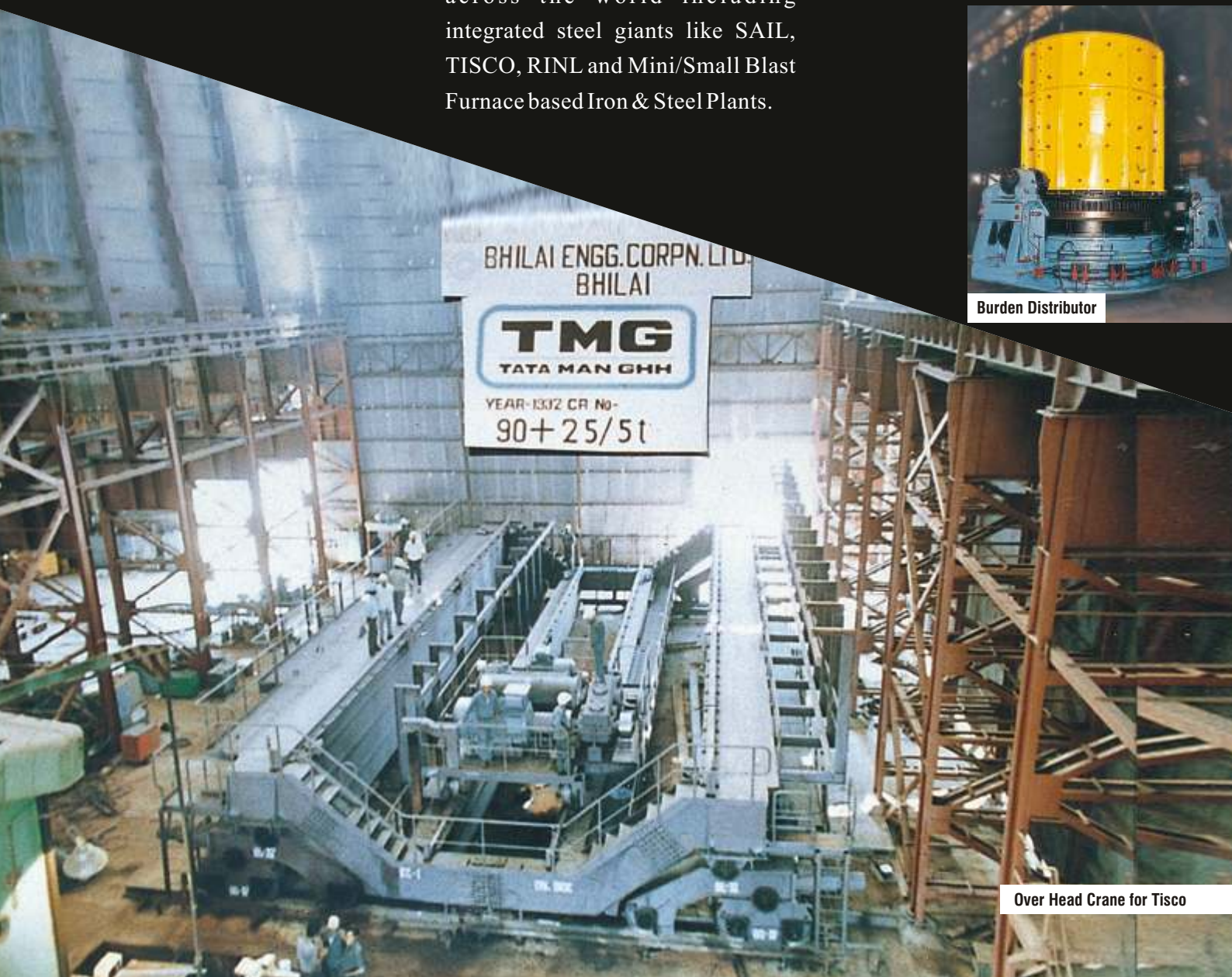
BEC is one of the foremost specialist in engineering for the steel industry with supply ranging from intricate casting in custom made steels to giant fabrication projects. BEC's engineering has won the trust of all major steelmakers in India and across the world including integrated steel giants like SAIL, TISCO, RINL and Mini/Small Blast Furnace based Iron & Steel Plants.



Hydraulic Shear



Burden Distributor



Over Head Crane for Tisco

Strengthen

A team of highly qualified professionals through which we offer good range of products for Coal, Iron and Non Ferrous mining sector backs up the present infrastructure of BEC.

In the decade old experience in computer aided design (CAD) that we have had with users through close coordination, we take pride in having developed complete range of Shovel Buckets for the Indian Mining industry with successful import substitution.

The machinery division of BEC has successfully supplied Feeder Breaker and Side Discharge Loaders.

The spares for Buckets, Track pads, Liners for Crusher have given acceptable performance in different geological situations.



Track Pad



Side Discharge Loader

Mines

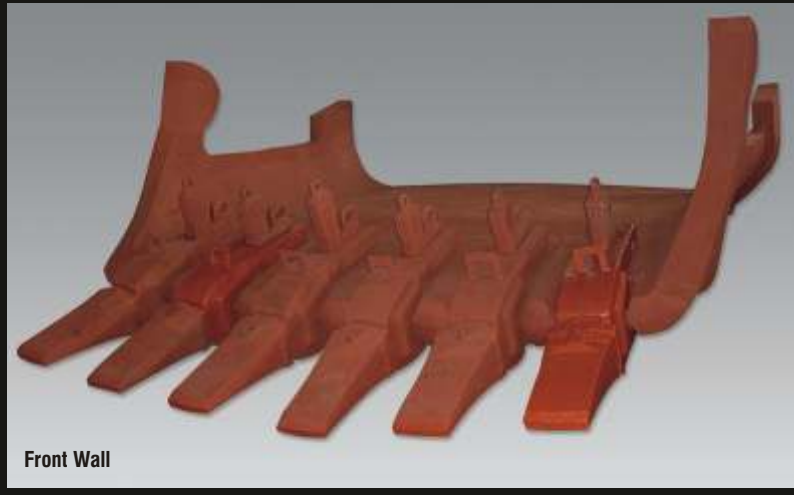


Bucket Assembly

ing Growth



Tooth Point



Front Wall



Mantle Liner



Feeder Breaker

Strengthen



Fabricated Bogie for Locomotives

BEC's product range for railway sector includes coco bogie and sub assemblies for locomotives, freight cars, under carriage assemblies, centre buffer coupler & draft gear for wagons / locomotives and cast manganese steel crossings for tracks.



Truck Frame

Railways



Cast Coco Bogie for Locomotives

ing Growth



Magnet Frame



Casnub Assembly for Freight Car



Coupler Assembly



CMS Crossing and Frogs

Strengthen

BEC has proved itself as manufacturers and suppliers of casting to various countries such as USA, Canada, Austria, Ukraine, Kenya and Brazil for Railways, Mines and Aluminum Plants.



Exports



ing Growth



Strengthen

Pusher Car with Modern Facilities

- ◆ Single spot, Hydraulic, PLC Control & VVVF Driver
- ◆ Leveller muff with air curtain
- ◆ Leveller door frame cleaning
- ◆ Door & frame cleaners
- ◆ Device for vertical compensation
- ◆ Spillage coke removal
- ◆ Counter thrust device



Coke Pusher Car - Mittal Steel, S.A.

Projects

Full Rebuilding of 4.5M Coke Oven Battery

1. Reconstruction of 2x35x4.5M coke oven battery
2. Pollution control facilities by Modern Doors, HPLA system, Spillage Coke Conveyor, AP Water Seal
3. New quenching system with pollution control
4. Instrumentation and Automation including Computerised Heat Control
5. Gas Mixing Station based on CV control
6. Oven identification and positioning system
7. Volume of work
8. Civil work : 3400 CUM
9. Structural & equipments : 3600 Tons
10. Refractory (erection): 13231 Tons

Coke Oven Battery - Rourkela Steel Plant

ing Growth



Coal Charging Car

Coal Charging Car Modern Facilities

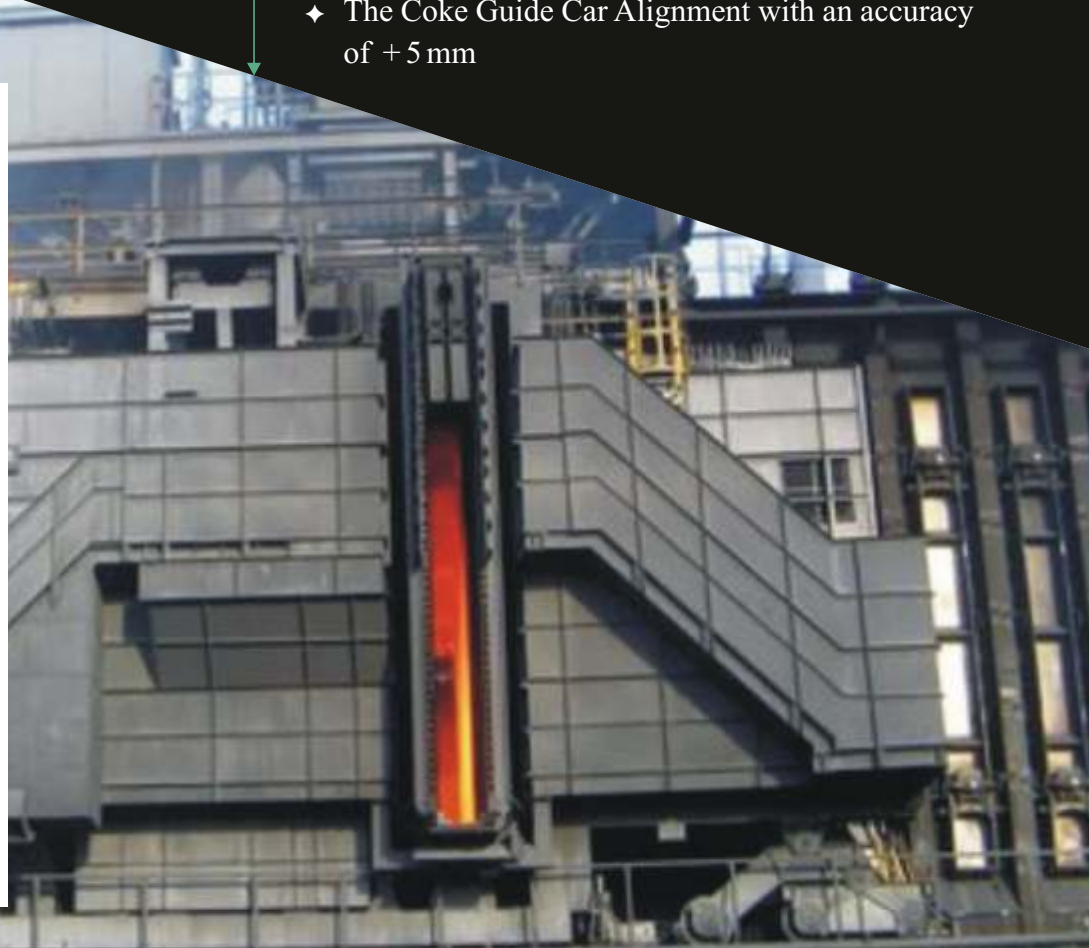
- ◆ Single spot and PLC controlled
- ◆ Screw feeder drive by VVVF drive for controlling the speed as per charging requirement
- ◆ Telescope of specially designed 3 piece unit. It helps to engage the spout with the charging hole with misalignment upto 20mm (+ 10mm) and to avoid emission of smoke during charging
- ◆ Charge lid and frame cleaners

Guide Car Modern Facilities

- ◆ Multispot and PLC controlled
- ◆ Incorporation of door and door frame cleaners
- ◆ Compatible for operation of the Pushing Emission Control System (PECS) along with the hood car
- ◆ Vertical and horizontal compensation of door extractor
- ◆ The Coke Guide Car Alignment with an accuracy of +5 mm

Improved Features in Coke Oven Battery

- ◆ Zero Leak Diaphragm Type Doors
- ◆ Stand pipes with water sealed cap
- ◆ Catenary system for power lines of charging car and guide car
- ◆ Quenching Tower Dust suppression
- ◆ Skip hoist for collection and charging of leveller coal into oven
- ◆ Gas Mixing Station Based on continuous CV control
- ◆ HPLA system for 'on-main' charging
- ◆ Computersied heat control system



Coke Guide Car - Mittal Steel S.A.

Wind Mill Towers & Other Sectors



Plate Bending Machine



Submerged Arc Welding



Paint Bay



Wind Mill Tower



Anode Stubs



Tube Bundle



Recognitions

EXPORTS



MANUFACTURING



Certificate of Export Excellence from Engineering Export Promotion Council, India

One Star Export House certified by Ministry of Commerce & Industry, Govt. of India

Railway Vehicle Product Qualification Certification from Die Bahn, Germany

QUALITY



FOUNDRY



ISO 9001:2000 Foundry Certified from Lloyd's Register Quality Assurance, India

Class A Foundry Certification by Research, Designs and Standards Organization, Ministry of Railways, India



Vishva Vishal Engineering Limited

World Class Continuous Casting Refractories

- Sub Entry Nozzle
- Tundish Nozzle
- Mono Block Stopper

Argon & Oxygen Lance

Uni Directional Porus Plug

Blast Furnace Cast House Refractories

- Tap Hole Clay (Mudgun mass)
- Trough Mix (Runner mass)
- Trough Castable

Pre-cast & Pre-fired Shapes



BEC Bhilai H.O. and Works

Nearest Airport : **Raipur** • Nearest Port (ICD) : **Nagpur** • Railway Station : **Durg**





Head Office & Bhilai Works

Hathkhoj Village, Industrial Area, Bhilai - 490 026, Dist. Durg, Chhattisgarh, India

Tel. +91-788-2285001 to 2285006 • Fax +91-788-2285499, 2381140

Email becinfo@bec-group.com • Web www.bec-group.com

Regional Offices

New Delhi

BEC House, 13, Masjid Moth, Local Shopping Centre, New Delhi - 110 048, India

Tel. +91-11-29212857, 29227142, 29227150 • Fax +91-11-29229076, 41639279

Mumbai

31, Maker Chamber-II, 3rd Floor, Nariman Point, Mumbai - 400 021, Maharashtra, India

Tel. +91-22-22883768, 22831724, 22844208 • Fax +91-22-22873611

Kolkata

4B, Little Russel Street, 2nd Floor, Kolkata - 700 071, West Bengal, India

Tel. +91-33-22823226, 22827606, 22823372 • Fax +91-33-22827061

Chennai

16 (Old 183) Anna Salai, Baid Meetha Complex, 2nd Floor, Little Mount, Saidapet, Chennai - 600015

Tel./Fax +91-44-22301703