



ISGEC HEAVY  
ENGINEERING LTD.



ENGINEERING FOR EXCELLENCE





Head Office at Noida  
(a suburb of New Delhi), India.

Isgec Plant at the port town of Dahej (Gujarat), India.  
The shop has been set up especially for the manufacture of large and heavy equipment for the overseas market.



Isgec Plant for manufacturing  
Standard Mechanical Presses at Bawal (Haryana), India.



Isgec Castings Plant  
(U.P. Steels) at  
Muzaffarnagar (U.P.), India.



A Google Earth view of the Isgec Plant  
at Yamunanagar (Haryana), India.



ISGEC HEAVY  
ENGINEERING LTD.

- Process Equipment
- EPC Power Plants
- Boilers
- Sugar Plants & Machinery
- Presses - Mechanical & Hydraulic
- Castings - Steel & Iron
- Contract Manufacturing
- Trading

# Corporate

Isgec Heavy Engineering Ltd. is a multi-product, multi-location public company that has been providing engineering solutions to customers around the world for the past 80 years. We rank 309 in the *ET 500* listing, and 329 in the *Fortune India 500* listing\*.

What drives us is our motto - Engineering for Excellence. And we use our skills as qualified and experienced engineers to achieve excellence.

Excellence in all we do, so that our clients may achieve excellence in all that they do.

With nearly 700 qualified engineers and as many technicians on board, we love the challenge of providing state-of-the-art, sustainable, sensible solutions to our vast and ever growing list of customers from around the world. Customers who have regularly placed repeat orders on us. Customers that are located in 76 Countries across 6 Continents, and include:

- Alstom, Japan
- British Petroleum, USA
- Indian Oil Corporation, India
- Foster Wheeler, North America
- GM, Mexico
- Valeo, France
- Fluor, North America
- Lurgi, Germany
- Sumitomo, Japan
- Technip, France
- Toshiba, Japan
- Toyo, Japan
- Voith, Canada
- Petrofac, UAE

In our constant endeavor to improve our offerings to our customers, we at Isgec, are always on the look out for the latest technologies and processes. Over the years we have had an array of successful technology tie-ups with the best of companies from around the world. This process of keeping pace with the best in the world continues even now, as is evident from this list of companies with whom we have on-going strategic agreements:

- Foster Wheeler, USA
- ABB Lummus Heat Transfer, USA
- Hitachi Zosen Corp., Japan
- Belleli, Italy
- Bosch Projects, South Africa

Spread over 100 hectares, our manufacturing facilities cover a shop floor area of over 120,000 square meters (143520 square yards) with world class manufacturing and testing facilities.

We also have a majority stake in Isgec Hitachi Zosen Ltd., a joint venture with Hitachi Zosen Corp. of Japan.

# Engineering for Excellence

\* as per The Economic Times bi-annual supplement of Sept. 2011, and Fortune India magazine of December 2011.





2 1/4 Cr-1 Mo Hot Separator for HMEL, Bhatinda Refinery, India.



CCR Reactor (1 1/4 Cr - 1/2 Mo) supplied to BPCL Kochi Refinery. Similar Reactors have been supplied to HPCL, Mahul Refinery and BORL, Bina Refinery.



SS Exchangers supplied to Lurgi, Germany for Hydrogen Generation unit at the Netherlands.



<<<  
Secondary Reformer supplied to Technimont, India for NFL Nangal, India.



Isgec is the world's largest manufacturer of Containers for the transport of Chlorine & other hazardous gases. We have more than 300 customers in nearly 60 countries and hold 2 US Patents for this product.



Joint Venture with Hitachi Zosen Corp., Japan for the manufacture of specialised & critical Process Equipment for Refineries, Fertiliser & Petrochemical Industries, across the world.

**Product Range:**

- Hydrocarbon Processing Reactors and Separators
- Critical Equipment for Ammonia & Urea Plants such as Ammonia Compressor, Urea Unitized Chillers, Urea Reactors, Urea Strippers and Carbamate Condensers
- Pressure Vessels, Columns & Towers
- Shell & Tube Heat Exchangers
- Power Plant Equipment such as HP & LP Feedwater Heaters and Condensers
- High, Medium & Low Pressure Boiler Drums
- Boiler Headers, Panels & Coils
- Containers for Liquefiable Gases such as Chlorine, Ammonia, Sulphur Dioxide & Refrigerants

**Materials:**

- Low Alloy Steels - Cr-Mo-V, Cr-Mo Steels
- Exotic Material - Inconel, Monel and other Alloys
- Stainless Steels including Super Duplex & Duplex
- Clad Steels - Inconel, Monel, Non-Ferrous & Stainless Steel Clad
- Non-Ferrous Material - Cupro Nickel and Brass
- Carbon Steels

Slug Catcher Vessels supplied to Petrofac, UAE for the El Merck project of Sonatrach in Algeria - each weighing 325 Tonnes.



**PROCESS EQUIPMENT**

Clients include:

- Airliquide, USA
- Sonatrach, Algeria
- Pemex Refinery, Mexico
- Braskem Idesa, Mexico
- Total, France
- Foster Wheeler - USA, China
- Linde, Germany
- Lurgi, Germany
- Technip - France, Holland, Italy, UAE
- Haldor Topsoe, Denmark
- Saipem, Italy
- Belco Technologies, USA
- Burrup Fertilizer, Australia
- SNC Lavalin, Canada
- Tecnicas, Spain
- Saudi Aramco, Saudi Arabia
- JGC Corporation, Japan
- Sumitomo Heavy Industries, Japan
- Toyo Engineering, Japan
- Daelim Engineering, Korea
- GS Engineering, Korea
- Hyundai Heavy Industries, Korea
- Petrofac, UAE
- Petroleum Development Oman, Oman
- ORPC, Oman
- Kuwait National Petroleum, Kuwait
- Qatar Petroleum, Qatar
- SABIC, Saudi Arabia
- Reliance Industries, India
- Indian Oil Corporation, India
- National Fertilizers Limited, India
- Bharat Petroleum Corp. Ltd., India
- Hindustan Petroleum Corp. Ltd., India
- Chennai Petroleum Corp. Ltd., India
- Chambal Fertilizers & Chemicals, India
- Kribhco, India
- GNFC, India
- Rashtriya Chemicals & Fertilizers, India
- Gujarat State Fertilizer Corp., India





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**PROCESS EQUIPMENT**



Coke Drums supplied to MRPL for their DCU facility through Punj Lloyd. 4 Nos. of such SS Clad Coke Drums were supplied having a diameter of 9144 mm, length of 41,600 mm and weighing 454 MT each.

Slug Catcher Vessels supplied to Petrofac, UAE for the El Merck project of Sonatrach in Algeria - each weighing 325 Tonnes.







25 MW Complete Cogeneration Plant supplied on EPC basis to Coregreen Sugar & Fuels Pvt. Ltd., India.



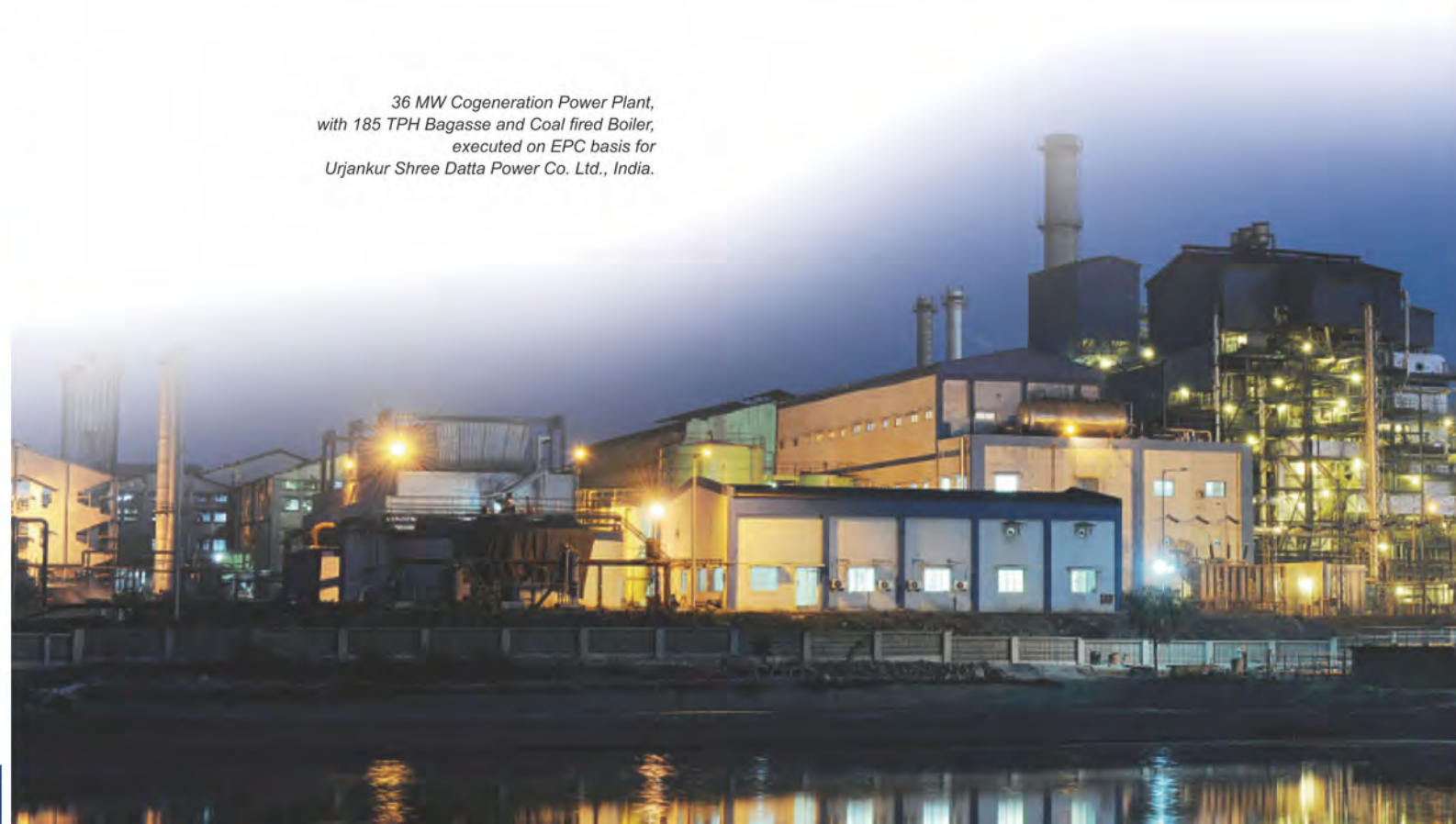
30.4 MW Complete Cogeneration Plant supplied on EPC basis to Zambia Sugar Plc. (a subsidiary of Illovo Group of South Africa) Nakambala, Zambia.



20 MW Complete Cogeneration Plant supplied on EPC basis, including Water Intake system, to HPCL Biofuels Ltd., Lauriya, India.



A Centralised Control Room for a Cogeneration Plant in Kenya.



36 MW Cogeneration Power Plant, with 185 TPH Bagasse and Coal fired Boiler, executed on EPC basis for Urjankur Shree Datta Power Co. Ltd., India.

### Engineering, Procurement, Construction & Commissioning (EPC) solutions for:

- Independent Power Plants (IPP)
- Cogeneration
- Boiler & Steam Turbine Generation
- Balance of Plants (BOP)

### In-house Capabilities:

- System Engineering
- Design - Thermal, Mechanical, Electrical
- Project Management
- Procurement
- Construction & Commissioning
- Operation and Maintenance (O&M)



## EPC POWER PLANTS

(formerly Isgec John Thompson)

### Clients include:

- HPCL Biofuels Ltd., India
- Grasim Industries Ltd., India
- Liztex S.A., Guatemala
- Kwale International Sugar Co. Ltd., Kenya
- Sugar and Allied Industries Ltd., Uganda
- Zambia Sugar Plc, Zambia (Illovo Group Company)
- Addax Bio Energy Limited, Sierra Leone
- JGC Philippines Inc., Philippines
- Waraq Paper, Saudi Arabia
- Enka De Colombia S.A., Colombia
- Urjankur Shree Datta Power Co. Ltd., India
- Daund Sugar Ltd., India
- Core Green Sugar and Fuels Pvt. Ltd., India
- NSL Sugars Ltd., India
- Shree Renuka Sugars Ltd., India
- KPR Sugars Ltd., India
- Balakrishna Industries Ltd., India
- Star Wire Vidyut (I) Ltd., India
- Tuljai SFAC Ltd., India
- Jindal Pipes Ltd., India

### Industry Specific Solutions:

- Independent Power Plants (IPPs)
- Cement
- Iron & Steel
- Sugar
- Refineries & Petrochemicals
- Paper
- Textiles
- Fertilizers, Chemical & Food Processing





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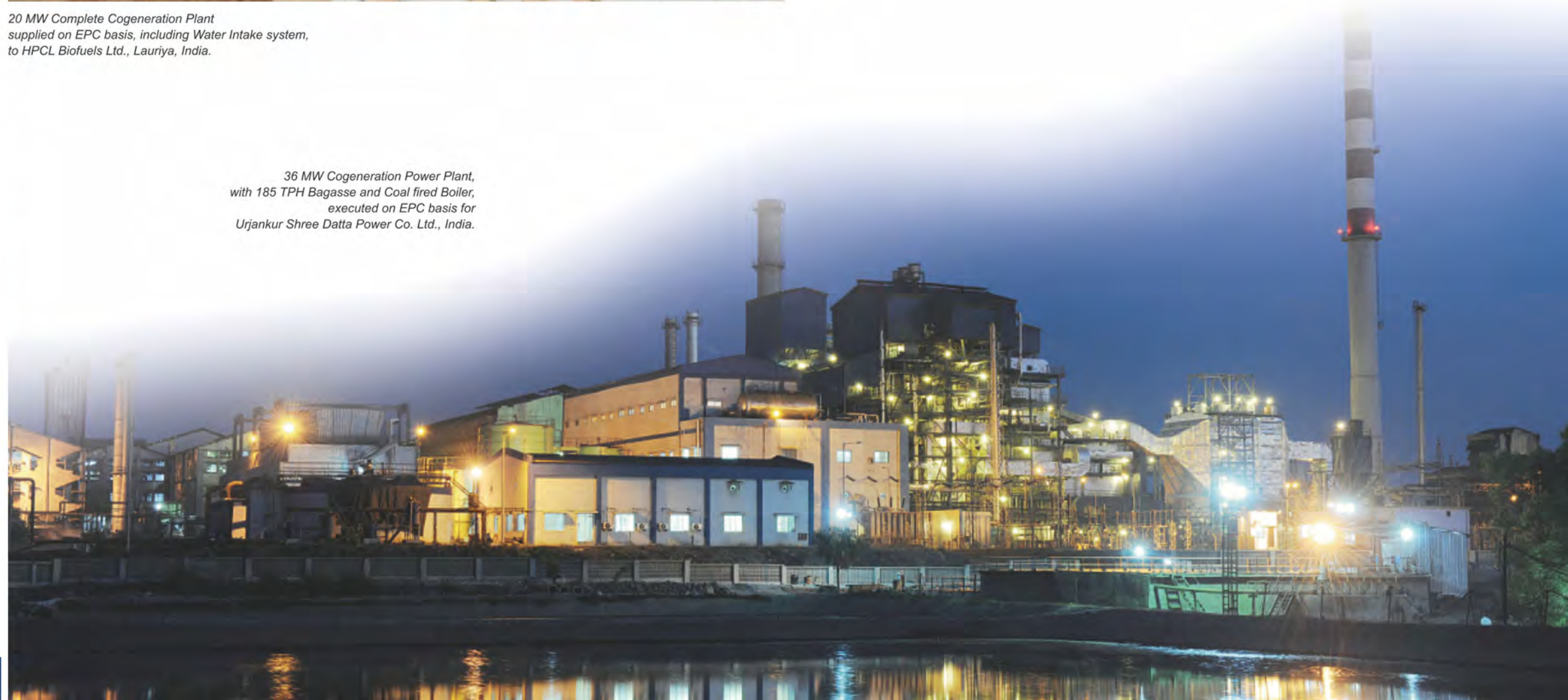
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**EPC  
POWER PLANTS**  
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<<< 100 TPH, 50 Kg/sq.cm.g, 430 Deg. C, HFO / Natural Gas fired Boiler supplied to Chennai Petroleum Corporation Ltd. Chennai, India.



77 TPH Package Boiler being dispatched for installation at Longview, Madsville, West Virginia, USA.



150 TPH CFBC Boiler with Compact Separator for Jindal Steel & Power, Raigarh, India.



Biomass Fired Boiler for a 8 MW Power Plant in Spain. We supply Biomass / Multi-fuel Fired Boilers up to 250 TPH.



<<< 4 Nos. 150 TPH, 70 kg/sq.cm. (g), 510 Deg. C, Bagasse & Biogas Fired Boilers for a Greenfield 28,000 TCD Cane Sugar Plant with 90 MW Cogeneration facility at Khon Kaen Sugar Power Plant Co. Ltd. (KSL), Thailand.



90 TPH, 67 Kg/sq.cm., 485 Deg. C Coal Fired AFBC Boiler for Gujarat Flourochemicals Ltd. India.

#### Product Range:

- Pulverised Coal Fired Boilers
- Oil & Gas Fired Boilers-Package(Shop assembled type & Field Erected type)
- Circulating Fluidised Bed Boilers
- Atmospheric Fluidised Bed Boilers
- Travelling Grate Boilers
- Dumping Grate Boilers
- Reciprocating Grate Boilers
- Pin Hole Grate Boilers
- Waste Heat Recovery Boilers
- Vinasse Fired Boilers
- Waste to Energy (MSW)

#### Fuels Fired:

- Fossil : Coal, Lignite, Oil, Natural Gas Washery Rejects, Char
- Biomass : Bagasse, Rice Husk, Wood Chips, Cotton Stalk, Cane Trash, Cane Pith & other agriculture wastes
- Process Gas : Blast Furnace Gas, CO Gas, Bio-Gas
- Low Volatile Matter : Petroleum Coke
- Others : Municipal Solid Waste (MSW), Distillery spent, Wash (Vinasse)

- Technology Transfer Agreement with Foster Wheeler, USA for PC Fired Sub-Critical & Super-Critical Boilers up to 1000 MW for Power Plants
- Technology Transfer Agreement with Foster Wheeler, USA for CFBC Boilers upto 100 MWe



170 TPH, 105 kg/sq.cm.(g), 540 Deg. C natural circulation, single drum, balanced draft, top supported, continuous ash discharge Travelling Grate Boiler. This Boiler for a 30 MW cogeneration plant at Dhampur Sugar Mills, Asmoli, India has been designed for firing bagasse, rice husk and coal. It is capable of generating up to 45 MW in condensing mode. We are supplying Boilers of larger capacity of upto 190 TPH in India and 220 TPH internationally.

Boiler Control Room at Chennai Petroleum Corp. Ltd., India.



## BOILERS

(formerly Isgec John Thompson)

#### Clients Include:

- Lamson Group, Vietnam
- Triveni Group, India
- Balrampur Group, India
- TPC Ltd., Tanzania
- Kakira Sugar Works Ltd. (Madhavni Group), Uganda
- Bajaj Hindustan Ltd., India
- Dhampur Sugar Mills Ltd., India (DSM Group)
- Dwarikesh Group, India
- Bannari Amman Sugars Ltd., India
- San Carlos Bioenergy Inc., Philippines
- Aldebaran Energia Del Gaudalquivir S.L., Spain
- Zambia Sugar Plc, Zambia (Illovo Group Company)
- While Nile Sugar Co. Ltd., Sudan
- Mitr Phol Sugar Corp. Ltd, Thailand
- Compagnie Sucriere Senegalaise, Senegal
- JGC Philippines Inc., Philippines
- Ingenio Magdalena S.A (IMSA), Guatemala
- Compania Agricola Industrial Ingenio Palo Gardo S. A, Guatemala
- Addax Bio-energy Limited, Sierra Leone
- Compania Agricola Industrial Santa Ana S.A., Guatemala
- ILFS Environment Infrastructure & Services Ltd., India
- Dalmia Cement (Bharat) Ltd., India
- Hindalco Industries Ltd., India
- Bhushan Energy Ltd, India
- Bhushan Power & Steel Ltd., India
- Nirma Ltd., India
- Ambuja Cement Limited, India
- Avantha Power & Infrastructure Ltd. (BILT Power)
- Longview Power Project, USA
- Jaypee Gujarat Cement Plant (CPP-II), India
- PetroquimicaSuape (Petrobras Group), Brazil
- BLA Power Pvt. Ltd., India
- Nestle Qingdao Ltd., China
- Adani Infra (India) Ltd., India
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- GAIL (India) Ltd., India





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- Waste Heat Recovery Boilers
- Vinasse Fired Boilers
- Waste to Energy (MSW)

#### Fuels Fired:

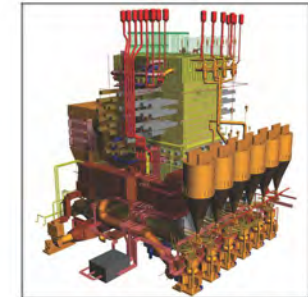
- Fossil : Coal, Lignite, Oil, Natural Gas Washery Rejects, Char
- Biomass : Bagasse, Rice Husk, Wood Chips, Cotton Stalk, Cane Trash, Cane Pith & other agriculture wastes
- Process Gas : Blast Furnace Gas, CO Gas, Bio-Gas
- Low Volatile Matter : Petroleum Coke
- Others : Municipal Solid Waste (MSW), Distillery spent, Wash (Vinasse)

## FOSTER WHEELER

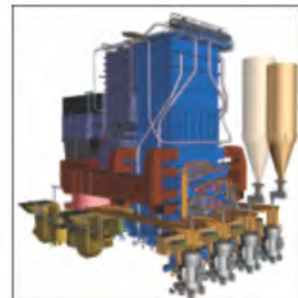
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**BOILERS**  
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Super-Critical Boiler



Sub-Critical Boiler

170 TPH, 105 kg/sq.cm.(g), 540 Deg. C natural circulation, single drum, balanced draft, top supported, continuous ash discharge Travelling Grate Boiler. This Boiler for a 30 MW cogeneration plant at Dhampur Sugar Mills, Asmoli, India has been designed for firing bagasse, rice husk and coal. It is capable of generating up to 45 MW in condensing mode. We are supplying Boilers of larger capacity of upto 190 TPH in India and 220 TPH internationally.



486 MWe PC Fired Boilers for Queson, Philippines commissioned by Foster Wheeler.



World's largest Super-Critical PC Fired Boiler (770 MWe) using Benson Vertical Tube Evaporator design commissioned by Foster Wheeler at Longview Power LCC, USA.

Boiler Control Room at Chennai Petroleum Corp. Ltd., India.







Sugar Plant set up on a turnkey basis for Kibos Sugar & Allied Industries Ltd., Kenya having a crushing capacity of 400,000 Tonnes of Cane per annum. Currently being expanded to a crushing capacity of 650,000 Tonnes of Cane per annum with Cogeneration of 110,000 MW per annum.



Licensing Agreement with Bosch Projects, South Africa for Chainless Diffusers. Isgtec has commissioned 2 Diffuser Plants (3500 TCD) for HPCL Bio-fuels Ltd., India.



Complete Cane Sugar Plant for Plantation White Sugar, supplied to Daund Sugar Ltd., India, with a crushing capacity of 3500 Tonnes per day expandable to 5000 Tonnes per day with 18 MW Cogeneration. As of date, we have set up 62 complete Cane Sugar Plant.

Process House at Consolidated Farming Ltd., Zambia to produce Plantation White / Raw Sugar. We have supplied 250 Nos. Juice Heaters, 154 Nos. Evaporator Vessels, 153 Nos. Vacuum Pans and 242 Nos. Crystallizers in India and overseas.



45" x 90" Mill for Xinavane, Mozambique, under assembly in our Works. We have supplied 350 Cane Crushing Mills of various sizes to customers around the world.



### Product Range:

- Turnkey Cane Sugar Plants and Major Expansions on EPC Basis
- Raw Syrup Plants for producing Ethanol
- Balancing & Rehabilitation of old Plants
- Juice Extraction - Mills / Diffuser option
- Process Plant - Juice Heaters / Evaporators - Roberts & Falling Film / Pans - Continuous and Batch Type / Crystallizers
- Phospho-Flotation for Syrup, Melt and Filtrate Clarification
- Complete Process House equipment for producing Raw Sugar / House White Sugar / Plantation White Sugar / Refined Sugar EU Grade
- Spares, After Sales, and Retrofitting
- Process Automation
- Steam and Energy Saving Devices

We are setting up a Sugar Plant for a customer in Africa which includes a 24,000 TCD Process House and Boilers for producing 104 MW of Cogeneration Power.



## SUGAR PLANTS & MACHINERY

(formerly Isgtec John Thompson)

### Clients Include:

- White Nile Sugar Company, Sudan
- Kwale International Sugar Co. Ltd., Kenya
- Phung Hiep Sugar Mill, Cantho, Vietnam
- Sugar and Allied Industries Ltd., Uganda
- Addax Bio Energy Inc., Sierra Leone
- Compagine Sucrierie Senegalise (CSS), Senegal
- San Carlos BioEnergy, Philippines
- BISCOP, Philippines
- Butali Sugar, Kenya
- Transmara Sugar, Kenya
- Kibos Sugar and Allied Industries, Kenya
- Consolidated Farming Ltd., Zambia
- Wonji Shoa Sugar, Ethiopia
- Sudanese Sugar Corporation, Sudan
- Kenana Sugar Company Ltd., Sudan
- Bien Duong Sugar, Vietnam
- Medine Sugars, Mauritius
- Xinavane Sugar (Tongaht Hulett Group), Mozambique
- SONEDCO, Philippines
- Barbados Agriculture Co. Ltd., Barbados
- PT Gunung Madu Plantation, Indonesia
- Balrampur Chini Mills, India
- Ramgarh Chini Mills (Dalmia Group), India
- Mawana Sugar Works (SIEL Group), India
- EID Parry, India
- Triveni Engineering and Industries Ltd., India
- Titawi Sugar (SIEL Group), India





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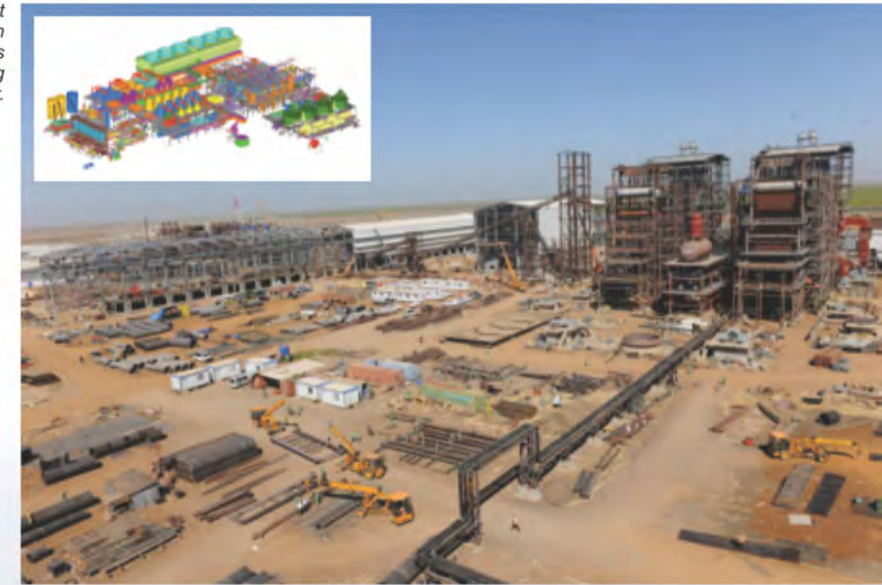
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<<<  
2500 Tonne Transfer Press supplied to CIE Automotive, Spain with Bed Size of 7000 mm x 2800 mm & equipped with 3-axes Electronic Transfer System complete with Feed Line.

>>>  
GZ & GL Series Gap Frame Presses at very economical prices. We offer standardised Presses in capacities from 40 to 250 Tonne.



**Product Range:**

**Mechanical Presses**

- Tandem Press Lines with Robotic Automation
- Transfer Presses up to 3500 Tonne capacity
- Presses for Progressive Toolings
- Blanking Press Lines
- Tryout Presses
- Double Action & Single Action Presses up to 3000 Tonne capacity
- MAX-2 Series H-Frame Presses from 160 Tonne to 500 Tonne capacity
- GAP Frame Presses from 40 Tonne to 250 Tonne capacity

**Hydraulic Presses**

- Complete solution comprising customized Hydraulic Presses along with Robotic Automation
- Double Action & Single Action Presses for sheet metal up to 12000 Tonne capacity
- Presses for the Wood & Panel industry
- Special Grade Die Spotting Presses
- Forging Presses

**International Safety Standards:**

- EN 692 conforming to CE marking
- OSHA 1910.217
- NR-12 for supplies in Brazil

**Accuracy Standards:**

- JIS B 6402 for Mechanical Presses
- JIS B 6403 for Hydraulic Presses
- DIN 8650 for Gap Frame Presses

**Industries Served:**

- Automotive
- White Goods & FMCG
- Defence
- Railways
- Dockyards & Research Ce
- Refractory Tiles & Powder
- Forging
- Plywood & Laminates



<<<  
630 Tonne Hydraulic Press supplied to Benteler, South Africa comprising customised Hydraulic Press interfaced with Robotic Automation.



<<<  
12-8-8 Automated Tandem Press Line with sound/dust proof enclosure supplied to JBM Group at their plant in India. The Press Line is equipped with Robotic Automation and is being used for producing skin component for Suzuki Maruti.

>>>  
Mechanical Servo Presses, a recent breakthrough in Press Technology, are in current manufacturing program ranging from 400 to 1600 Tonne capacity. This technology enables programmable different motion profiles to match varied pressing needs.



<<<  
12500 Tonne Hydraulic Press with large Accumulator Bank is being used for Hot & Cold Forming of High Tensile Steel Plates for Defence & Aerospace Applications.

>>>  
2000 Tonne Transfer Press supplied to Brandl, Germany with Bed Size of 6100 mm x 2800 mm & 5 station Robotics Transfer with 64 Tonne capacity die-cushion at each Station



**PRESSES**

**Clients include:**

- ThyssenKrupp, India & USA
- Willmes Umformtechnik (UTW), Germany
- CIE Automotive S.A., Spain
- LuK - India, China, Germany, South Africa & Brazil
- Brandl Maschinenbau - Germany, Czech Republic & Romania
- Lear Corporation, China
- Valeo - India, France, Mexico, China
- Benteler - India, China & South Africa
- Uliana Metallurgica, Brazil
- Ogihara, India & Thailand
- JBM Group, India
- Caparo Group, India
- Ford Motors, India
- Franke, India
- Hero Honda Group, India
- Honda Siel Cars, India
- Honda Scooter & Motorcycle, India
- Mahindra & Mahindra, India
- Tata Motors, India
- Maruti Suzuki, India
- Bellsonica, India
- Magnetto, India
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- Special Grade Die Spotting Presses
- Forging Presses



Over 3000 Presses Manufactured



<<<  
630 Tonne Hydraulic Press supplied to Benteler, South Africa comprising customised Hydraulic Press interfaced with Robotic Automation.

**International Safety Standards:**

- EN 692 conforming to CE marking
- OSHA 1910.217
- NR-12 for supplies in Brazil

**Accuracy Standards:**

- JIS B 6402 for Mechanical Presses
- JIS B 6403 for Hydraulic Presses
- DIN 8650 for Gap Frame Presses

**Industries Served:**

- Automotive
- White Goods & FMCG
- Defence
- Railways
- Dockyards & Research Centre
- Refractory Tiles & Powder Compacting
- Forging
- Plywood & Laminates
- Electrical Lamination
- Nuclear
- Turbine Power Plants
- Composites



<<<  
12-8-8 Automated Tandem Press Line with sound/dust proof enclosure supplied to JBM Group at their plant in India. The Press Line is equipped with Robotic Automation and is being used for producing skin component for Suzuki Maruti.

>>>  
Mechanical Servo Presses, a recent breakthrough in Press Technology, are in current manufacturing program ranging from 400 to 1600 Tonne capacity. This technology enables programmable different motion profiles to match varied pressing needs.



<<<  
12500 Tonne Hydraulic Press with large Accumulator Bank is being used for Hot & Cold Forming of High Tensile Steel Plates for Defence & Aerospace Applications.

>>>  
2000 Tonne Transfer Press supplied to Brandl, Germany with Bed Size of 6100 mm x 2800 mm & 5 station Robotics Transfer with 64 Tonne capacity die-cushion at each Station







Outer Casing - Steam Turbine



Inner Casing - Steam Turbine



Pelton Runner



Runner Crown



Runner Band



Francis Runner Blade



Kaplan Blade



Kaplan Hub

**Capacity:** (single piece weight)

- Stainless Steels : 35 Tonnes
- Creep Resistant Steels : 40 Tonnes
- Low Alloy / Carbon Steels : 50 Tonnes
- SG Iron : 25 Tonnes
- Grey & Alloy Iron : 30 Tonnes

**Materials:**

- Stainless Steels
- Creep Resistant Steels
- Carbon Steels
- Austenitic Ductile Iron
- SG Iron
- Ni-Hard  
(Abrasion Resistant Cast Iron)
- Grey & Alloy Iron

**Facilities:**

- Creep Rupture Test for CRMOV & P-91 Grades
- IBR Approval
- Simulation by Magmasoft & Procast
- CNC Pattern making Capability
- Vacuum Refining Capability (VD / VOD)



Wicket Gate



Valve Body



**CASTINGS**  
(U.P. Steels)

Clients include:

- ABB, Japan
- Alstom, Germany
- Alstom, India
- Andritz, USA
- Andritz, India
- Ansaldo, Italy
- Audco Valves, India
- BHEL, India
- Dresser Rand, USA
- Essar Steel, India
- Fincantieri, Italy
- Fletcher Smith, UK
- Franco Tosi, Italy
- GE Energy, USA
- GHCL, India
- Humboldt, India
- IMPSA, Argentina
- JBM Ltd., India
- Kirloskar Pumps, India
- L&T MHI, India
- Man Turbo, Germany
- Pibiviesse, Italy
- Siemens, Germany
- Siemens, Brazil
- Siemens, India
- Skoda, Czech Republic
- Tata Motors, India
- Tata Steel, India
- Toshiba, Japan
- Triveni Turbines, India
- Tyco, France
- Voith Hydro, Canada
- Voith Hydro, India
- Weir Engineering, Dubai
- Xylem Water Solutions, India





Outer Casing - Steam Turbine



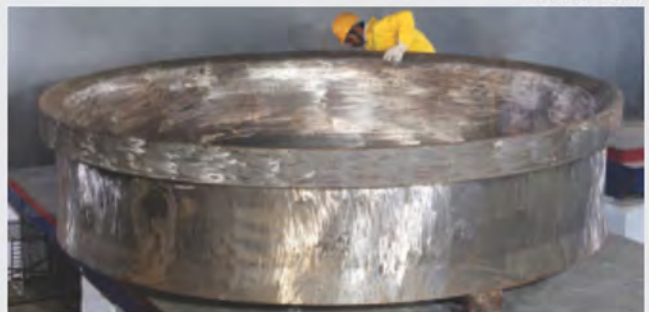
Inner Casing - Steam Turbine



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**CASTINGS**  
(U.P. Steels)



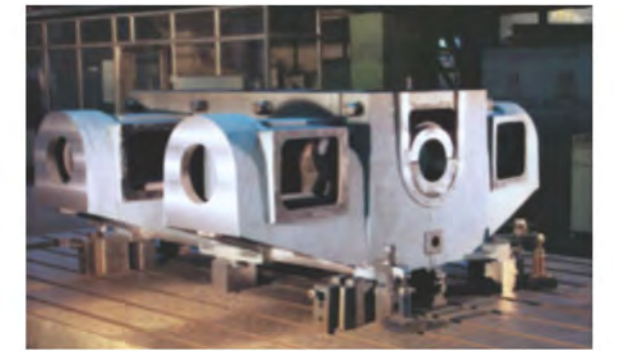
Wicket Gate



Impeller



Valve Body



4-Throw Frame Casting



Steam Turbine Outer Casing Castings under inspection.  
We manufacture Castings for a variety of applications up to 50 MT single piece.





This Fume Hood is a part of the Gas Cleaning Plant for a Blast Furnace. We have supplied Fume Hoods to the designs of Clecim, France and Davy Ashmore, UK and these are installed in all major steel plants in India. We have manufactured both tubular and plate type Fume Hoods.



Foundation Beams manufactured as per design of Rexroth-Bosch, Netherland for Goa Shipyard.



Hydraulic Tanks fabricated for GE Sweden. These tanks were ordered for a Power Project in Venezuela.

Tension Reel for a Cold Rolling Mill.



Parts of Straightening Grids.



The Strand Guide Segment shown in this picture is a part of a Continuous Caster Plant. We have supplied Mechanical Equipment for CCP to the design of SMS-Demag, Germany and Voest Alpine, Austria.



Stator Frame for 250 MW Power Plant for BHEL, Haridwar, India.



Critical equipment for Pulveriser manufactured for L&T-MHI.

>>> Mill Stands manufactured as per design of Loesche, Germany.



Nozzle Deflector Assembly manufactured as per design of Voith, Germany.



## CONTRACT MANUFACTURING

Over 25,000 Tonnes of Mechanical Equipment custom made to the designs of:

- L&T Mitsubishi Heavy Industry, India
- SMS Siemag, Germany
- Danieli, Italy
- DSD Noel, Germany
- Davy Ashmore, UK
- Mecon, India
- Vac Metals, UK
- Morgan, USA
- Mitsubishi, Japan
- IHI, Japan
- Clecim, France
- Skoda, Czech Republic
- Wean United, USA
- Siemens VAI, Austria
- Paul Wurth, Luxembourg
- Bronx, UK
- Andritz, Austria
- GE, USA
- Voith Hydro, Germany
- Rexroth Bosch, Netherland
- Hitachi Zosen Corp., Japan
- Loesche, Germany





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Stator Frame for 250 MW Power Plant for BHEL, Haridwar, India.

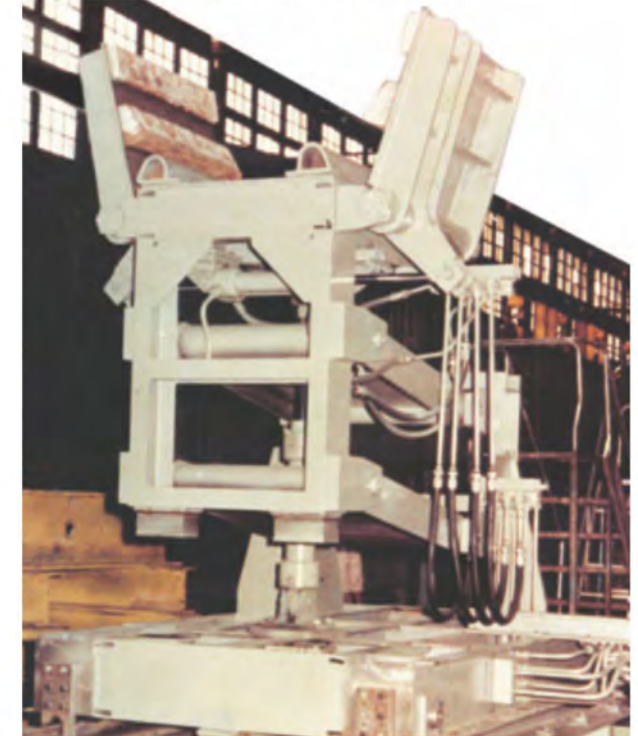


Critical equipment for Pulveriser manufactured for L&T-MHI.



**CONTRACT  
MANUFACTURING**

This Coil Transfer Car is a part of a Rolling Mill. We have supplied Mechanical Equipment for Rolling Mills to the design of SMS Demag, Germany; Wean United, USA and Mecon, India. These equipments are working in major steel plants in India.



Tension Reel for a Cold Rolling Mill.



>>> Mill Stands manufactured as per design of Loesche, Germany.



Nozzle Deflector Assembly manufactured as per design of Voith, Germany.







# Quality

### Approvals:

- CE Marking
- ASME 'N' & 'NPT' Stamps
- ASME 'S' 'U' 'U-2' & 'U-3' Stamps
- National Board, USA 'R' Symbol
- National Board, USA 'NB' Mark
- Lloyd's Approved Class-I Manufacturer of Fusion Welded Pressure Vessels up to 200 mm (8") thickness
- Lloyd's Approved Foundry from Lloyd's Register of Shipping, London
- Department of Transportation (DOT), USA approval for Liquefiable Gas Containers
- Special Equipment Licensing Organisation, China (SELO)
- Chief Inspector of Boilers (CIB)
- ISO 9001 : 2008 Approval by Lloyds Register of Quality Assurance
- ISO 14001 : 2004
- OHSAS 18001 : 2007

### Testing Facilities:

- Radiography upto 300 mm thickness
- Helium Leak Testing
- Mechanised Ultrasonic Testing
- Positive Material Identification (PMI)
- Metallurgical Microscope of 2000x with photography facility
- 39 Channel Spectroscope with Nitrogen Analyser
- Impact Testing up to -196°C (-321°F)
- Tensile Testing (at elevated temp. up to 800°C)
- IGC Testing
- Gas Analyser for Oxygen, Hydrogen & Nitrogen
- Theodolite System
- Hardness Testing
- Ultrasonic Testing
- Magnetic Particle Testing
- Dye Penetrant Testing

### External Inspection Agencies:

- Lloyd's Register
- Bureau Veritas
- Det Norske Veritas (DNV)
- TUV
- Velosi Certification Services
- SGS Inspection
- Bax Council
- Engineers India
- Chief Inspector of Boilers



Mechanised Ultrasonic Testing of a 100 mm (4") thick drum.



Radiography facility up to 300 mm (12") thickness using a 6MeV Linear Accelerator. We have 9 radiography halls and take more than 300,000 radiographs annually. We also have facility for X-Ray and Iridium Radiography.



39 Channel Spectrometer with Nitrogen Analyser.

Microstructure of Martensitic Stainless Steel ASTM A 743 Gr. CA6NM.

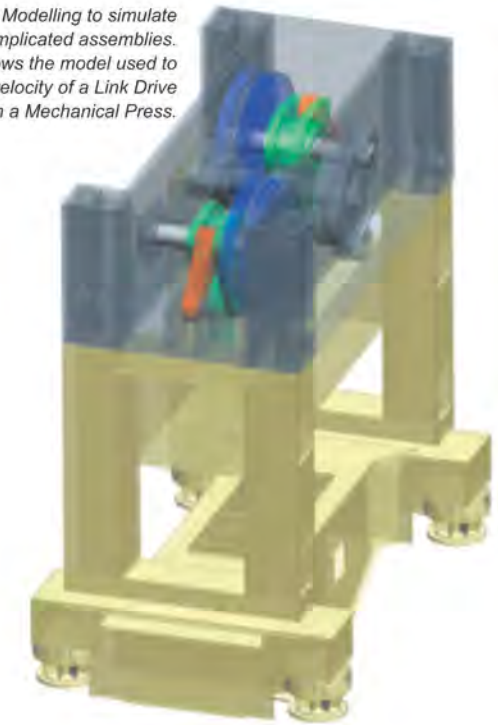


# Engineering & Technology



Isgec has been awarded two Patents by the United States Patent & Trademarks Office relating to the design & technique for manufacture of Containers used for transporting hazardous gases.

We use 3-D Modelling to simulate drives and complicated assemblies. This picture shows the model used to optimize the velocity of a Link Drive mechanism in a Mechanical Press.



Overseas technology was extensively used in the early history of the company; a number of licensing and other technology transfer arrangements were made with reputed US, British, French, Japanese and Italian companies.

However, even in the 1950s, efforts were made to develop our own engineering and technological capabilities.

Today, we have a strength of nearly 700 qualified Engineers and regular & extensive training is imparted to keep them abreast of current technological developments. Needless to say, we have similar programmes for workmen as well.

As of date (April 2012), the company has the following strategic agreements:

#### Foster Wheeler, USA:

License Agreement for PC Fired Boilers upto 1000 MW

#### Foster Wheeler, Spain:

License Agreement for HP & LP Feed Water Heaters & Condensors

#### Bosch Projects, South Africa:

Technology Transfer for Chainless Cane Diffusers

#### Foster Wheeler, USA:

Collaboration Agreement for CFBC Boilers upto 99.99 Mwe and Oil & Gas Fired Package Boiler up to 260 TPH

#### Belleli, Italy:

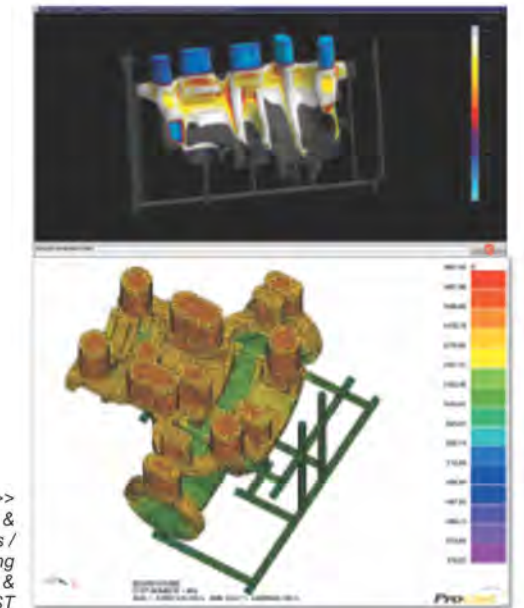
Technology Agreement for manufacture of Breech Lock Heat Exchangers

#### ABB Lummus Heat Transfer, USA:

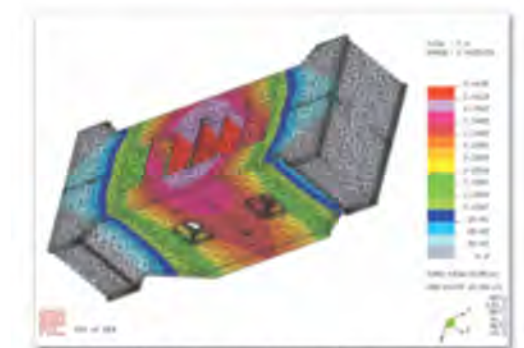
Technology License Agreement for Helix Heat Exchangers

#### Hitachi Zosen Corp., Japan:

Collaboration Agreement for Critical Heat Exchangers for the Fertilizer Industry



>>> Flow & Thermal Analysis / Simulation using MAGMASOFT & PROCAST



Finite Element Analysis is extensively used to predict the behaviour of components when they are subjected to stress under working conditions.





One of the 7 Pressure Vessel Bays. We also have 14 Bays for the manufacture of Boiler Pressure Parts.



Haeusler Bend Roll with a Cold Rolling capacity of 250 mm thickness.



VTL for machining up to 6300 mm OD and 3500 mm height.



We have 7 Foundry Bays across 3 sites.



Gun Drill for drilling tube sheets up to a thickness of 1000 mm.



We have more than 450 Designers having expertise in various functional areas - Mechanical, Hydraulic, Structural, Pneumatic, Thermal, Piping, Civil and Electrical & Electronics.

Heavy Shop at Dahej with a crane lifting capacity of 300 Tonnes and under hook height of 14 M.



# Infrastructure

**Factories:** Bawal • Dahej • Muzaffarnagar • Yamunanagar

**Design Offices:** Bawal • Chennai • Dahej • Muzaffarnagar • Noida • Pune • Yamunanagar

<b>Total Area</b>	<b>: 1,110,000 sq.m. (1,327,550 sq. yards)</b>
<b>Covered Shop Area under Crane</b>	<b>: 120,000 sq.m. (143520 sq. yards)</b>
<b>Maximum Lifting Capacity</b>	<b>: 300 T</b>
<b>Maximum Weight that can be dispatched in Single Piece</b>	<b>: 1000 MT</b>

One of the 14 Bays for building Mechanical Equipment.







# Site Activities



30 MW Cogen Power Plant on EPC basis including civil work for Shree Renuka Sugars Ltd., India.

### Experience:

- 594 Boilers
- 65 Complete Sugar Plants
- 20 Major Sugar Plant Expansions
- 15 Power Plants



>>>  
 95 TPH, 62 kg/sq.cm.(g),  
 500 Deg.C, natural circulation,  
 bi-drum, single pass, balanced  
 draft, top supported, continuous ash  
 discharge Travelling Grate Boiler  
 designed for firing bagasse at the  
 sugar plant at Mid Siam Sugar  
 Co. Ltd., Thailand.

24000 TCD Process House for White Nile Sugar Co. Ltd., Sudan

A Vacuum Column weighing 575 Tonnes and an Atmospheric Column weighing 390 Tonnes were fabricated at site and installed by us for the Crude and Vacuum Distillation Unit of the Indian Oil Panipat Refinery. The materials used were Clad Plates of Monel and Stainless Steel 410. One Column was of 10 m (33') diameter and the other had a length of 70 m (230').







*We conduct frequent training programmes for our customers on the operation and maintenance of equipment supplied by us. These are conducted at the customer's site as well as our own plants. Training programmes are also held regularly for staff and workmen.*

#### **OFFICES AND PLANTS**

**Noida** - Head Office / EPC Power Plants / Boilers / Sugar Plants & Machinery / Trading

**Dahej** - Process Equipment

**Yamunanagar** - Process Equipment / Presses / Boiler Pressure Parts / Iron Castings / Contract Manufacturing

**Muzaffarnagar** - Steel Castings

**Bawal** - Standard Mechanical Presses

#### **DESIGN OFFICES**

Bawal / Chennai / Dahej / Muzaffarnagar / Noida / Pune / Yamunanagar

#### **MARKETING OFFICES**

Noida / Yamunanagar / Chennai / Kolkata / Mumbai / Pune

California, USA / Dusseldorf, Germany



**ISGEC HEAVY  
ENGINEERING LTD.**

**Corporate Office**

A-4, Sector 24, Noida - 201 301 (U.P.) India

**[www.isgec.com](http://www.isgec.com)**