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Corporate Sustainability

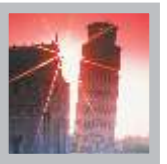


A brand of Larsen & Toubro Limited

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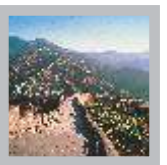
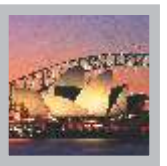
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CBMC/RDP/052014



Making A Mark in World Markets

PROCESS PLANT EQUIPMENT



The Company

Larsen & Toubro Limited is a \$ 14 billion, technology, engineering, manufacturing and construction company. A strong, customer-focused approach to business, a culture of innovation, and the resources and ability to respond positively to challenging requirements have enabled the Company to sustain leadership in its major lines of business.

L&T's operations extend across the globe. It markets plant and equipment in over 30 countries. It has manufacturing facilities in India, China and the Gulf, and a supply chain that extends to five continents. Within India, L&T has a presence in virtually every district.

L&T's businesses include Hydrocarbon, Heavy Engineering, Buildings & Factories, Infrastructure, Power, Electrical & Automation, Machinery & Industrial Products, and IT & Technology Services. Team L&T comprises over 50,000 people worldwide.

VISION

L&T shall be a professionally-managed Indian multinational, committed to total customer satisfaction and enhancing shareholder value.

L&T-ites shall be an innovative, entrepreneurial and empowered team constantly creating value and attaining global benchmarks.

L&T shall foster a culture of caring, trust and continuous learning while meeting expectations of employees, stakeholders and society.



Heavy Engineering

L&T Heavy Engineering is one of the world's leading manufacturing organisations for technology-intensive custom-made equipment, with a reputation in global markets. It manufactures and supplies critical equipment and systems for core sectors such as Refinery, Petrochemical, Fertiliser, Power (including Nuclear) as well as Defence and Aerospace. Its activities are organised under self-reliant Strategic Business Units (SBUs), each specialising in specific industry sectors. New products and manufacturing technologies are developed at three Technology Development Centres. Its state-of-the-art manufacturing facilities - which meet the challenges of technology, quality conformance and delivery and ensure cost competitiveness - are located at:

- Powai (Mumbai)
- Hazira (Surat) - a super-heavy manufacturing complex with its own waterfront 'Load On' and 'Ro-Ro' jetties
- Ranoli (Vadodara) - a facility that handles stainless steels, non-ferrous, exotic materials and advanced composite materials
- Coimbatore (in Tamil Nadu) - a precision manufacturing facility
- Talegaon (near Mumbai) - a weapon systems and sensors integration complex
- Bangalore - a strategic electronics centre for avionics
- Sohar, Oman - a joint venture with The Zubair Corporation for the fabrication of heavy equipment, catering primarily to the GCC region.

HE's significant contributions include:

- World's largest coal gasifier, for a petrochemical complex in China
- Longest product splitter for Saudi Arabia
- Largest ammonia converter for Australia
- Biggest FCC regenerator, for world's largest refinery in India
- Largest tubular reactor for Kuwait petrochemical complex
- Heavy hydro-cracker & hydro-treater reactors
- High pressure heat exchangers
- World's single largest order for reactors on a single supplier (22 Nos., valued USD 421mn), from KNPC Kuwait.

MISSION

We shall strive to become the world's best organization in engineering, manufacture and integration of custom-built, technology-intensive equipment & systems, creating significant value for customers, stakeholders and society.



Safety



Five Star rating for Health & Safety Management System by British Safety Council, U.K.

Coal Gasification Projects

L&T is the leading manufacturer of key gasification equipment. L&T has supplied 9 gasifiers to various projects in China and 2 gasifiers to Vietnam. The list of esteemed customers include Yuntianhua Group, Shenhua Group, Datang International Power Generation Co. and Hebi Coal & Electricity Co.

At present, L&T is manufacturing gasifiers as per Lurgi Design for Jindal's DRI project in Angul. L&T is also qualified for supplying gasifiers as per Phillips 66, GE, KBR, Siemens among other gasification technology providers.



A section of a coal gasifier being exported to Vietnam



The world's largest coal gasifier manufactured by L&T being erected at a project site in China

Power Plant Projects



HIGH PRESSURE & LOW PRESSURE FEED WATER HEATERS

No Supplied / under execution : Over 200 nos. (HP)
: Over 100 nos. (LP)
Power Plant Capacity : 800 MW (max.)
Types : Horizontal, Vertical (With Channel up & Channel Down)

WATER COOLED STEAM SURFACE CONDENSER

Nos. Supplied / under execution : Over 70
Power Plant Capacity : 800 MW (Max.)
Types : Rectangular & Circular (Top / Axial Entry, Twin Shell Single Pressure/ Double Shell dual Pressure)



Petrochemical Projects

EQUIPMENT SUPPLY

- Ethylene Oxide Reactors
- ACN Reactors
- Polypropylene Reactors
- Methanol Convertors
- RG Boiler for Methanol Plant
- Convection Section modules for Cracker Furnace
- PVC Polymerisers
- Oxychlorination Reactors
- HDPE Reactors
- Solution Absorbers
- Finishers
- TLX Heat Exchangers
- USX Heat Exchangers
- Catofin Reactors & Products Splitters



TUBULAR (EO/EG) REACTORS

Total No. : Over 25
 Max Diameter : Up to 10m
 Max. Unit Weight : 1500 MT

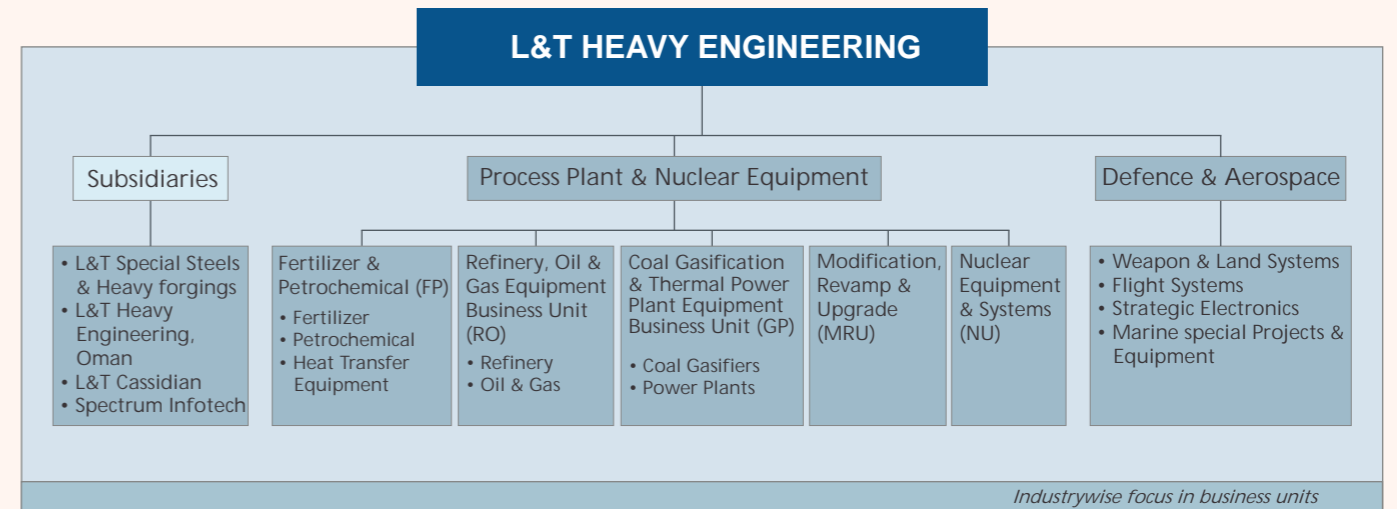
World's largest tubular reactor being supplied to Middle East

ACRYLONITRILE REACTOR

Total No. : 5
 Max. Diameter : Over 10m
 Max. Unit Weight : 750 MT



World's largest acrylonitrile reactor is being dispatched to Thailand using roll-on-roll-off jetty at Hazira Manufacturing Complex



Hazira manufacturing complex is a water-front facility with load-out quay and RO-RO jetty



Ranoli Works manufactures special equipment in SS, non-ferrous materials & advanced composites



Larsen & Toubro Heavy Engineering LLC workshop at Sohar, Oman



L&T's Powai Campus in Mumbai

Design & Engineering : Technological Excellence

L&T's engineering capabilities are geared to design equipment as per specific customer requirements, and international codes and standards. Fabrication drawings for critical equipment are generated through 3D automation which have been developed in-house.

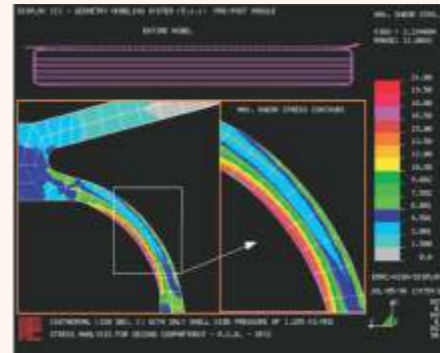
The perpetual endeavour of design engineers is to generate optimum solutions leading to lowest capital and operating costs.

Technology Solutions from a Single Source

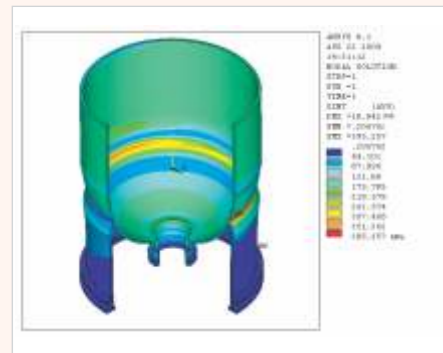
Mechanical	Thermal	Analysis	Special
<ul style="list-style-type: none"> Design to International Codes and Standards <ul style="list-style-type: none"> > ASME Sect. I, III & VIII > PD5500 - British > AS1210 - Australian > ADM - German > JIS - Japanese > Stoomwezen - The Netherlands > TEMA for heat exchangers > GB 150 - Chinese > Algerian > IBR Wind & Seismic Analysis Modeling - 2D/3D 	<ul style="list-style-type: none"> Members of HTFS & HTRI Design of Equipment <ul style="list-style-type: none"> > All types of Shell & Tube Exchangers > Helixchanger/Helitower > Waste Heat Boiler systems > Spiral Heat Exchangers > Air Cooled Exchangers > Feed Water Heaters > Surface Condensers > Embaffle Heat Exchangers Heat Transfer Systems Design & Analysis 	<ul style="list-style-type: none"> Finite Element Analysis <ul style="list-style-type: none"> > Static > Linear & Non-Linear > Dynamic > Thermal > Steady state & Transient > Fatigue & Fracture > Creep Piping Flexibility Lifting & Transportation Computational Fluid Dynamics Flow Induced Vibration analysis 	<ul style="list-style-type: none"> Experiment Stress analysis Corrosion analysis Destructive testing Failure analysis



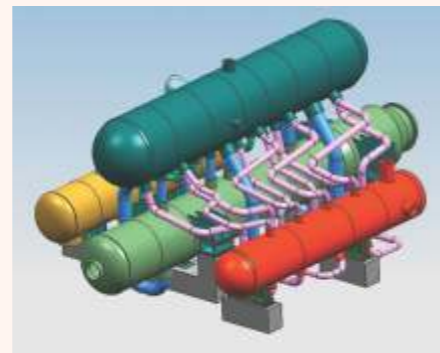
Fracture mechanics evaluation of a crack in a weld joint



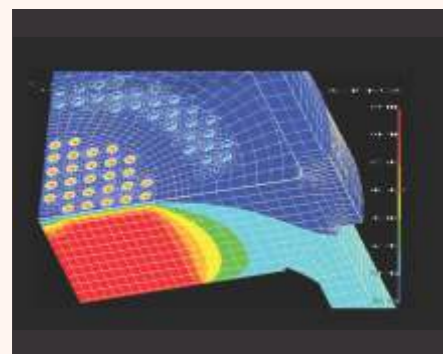
Stress Analysis of thin-knuckled tube sheet for reformed gas boiler



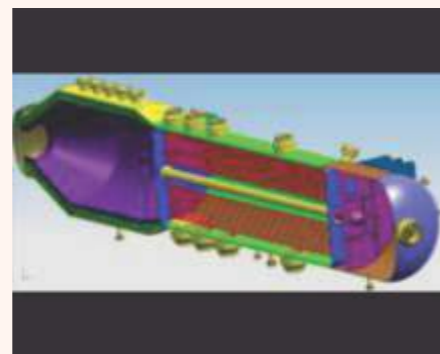
Stress Analysis of bottom-dished end, nozzle & skirt for gasifier reactor



Flexibility analysis model for waste heat recovery package



Transient thermal analysis of a critical exchanger



3D Model of waste heat boiler

UREA REACTORS

No. Supplied : Over 20
 Process : Saipem, Mitsui Toatsu Urea Casale, Toyo
 Construction : Monowall / Multiwall
 Weight : 180 - 360 MT
 Material : SS 316 LM / Titanium / 25:22:2 Cr:Ni:Mo Liner



UREA STRIPPERS

No. Supplied : Over 25
 Process : Snamprogetti / Toyo
 Tube sheet thk. : 350-460 mm
 Weight : 60-165 MT
 Tube Material : Titanium & bimetallic tubes 25:22:2Cr:Ni:Mo Zirconium, DP 28W
 No. of Tubes : 1650 - 4370

Supplied to Petronas, SAMUR, Malaysia

CARBAMATE CONDENSERS

No. Supplied : Over 50
 Process : Saipem / Toyo / Stamicarbon / Urea Casale
 Tube sheet thk. : 300-380 mm
 Heat Transfer area : 1500 to 3265 sq.m
 No. of 'U' Tubes : 960 to 2298
 Tube Material : 25:22:2 Cr:Ni:Mo/ DP12/BE.01



Supplied to SAFCO V, Saudi Arabia

Quality Assurance : Uncompromising Standards



WASTE HEAT BOILER PACKAGES

No. Supplied : Over 100
 Application : Ammonia, Hydrogen, CO, Methanol, Synthetic Natural Gas
 Process : HTAS, KBR, Technip, Davy Process Technology

Waste Heat Boiler Package including RG/CG boiler, steam drum, risers & downcomers at Sohar Fertilizer plant

SECONDARY REFORMERS

No. Supplied : Over 25
 Process : Haldor Topsøe, KBR, Krupp Uhde



A 180 MT Secondary Reformer supplied to PT Pupuk Kaltim, Indonesia



ABSORBERS / REGENERATORS

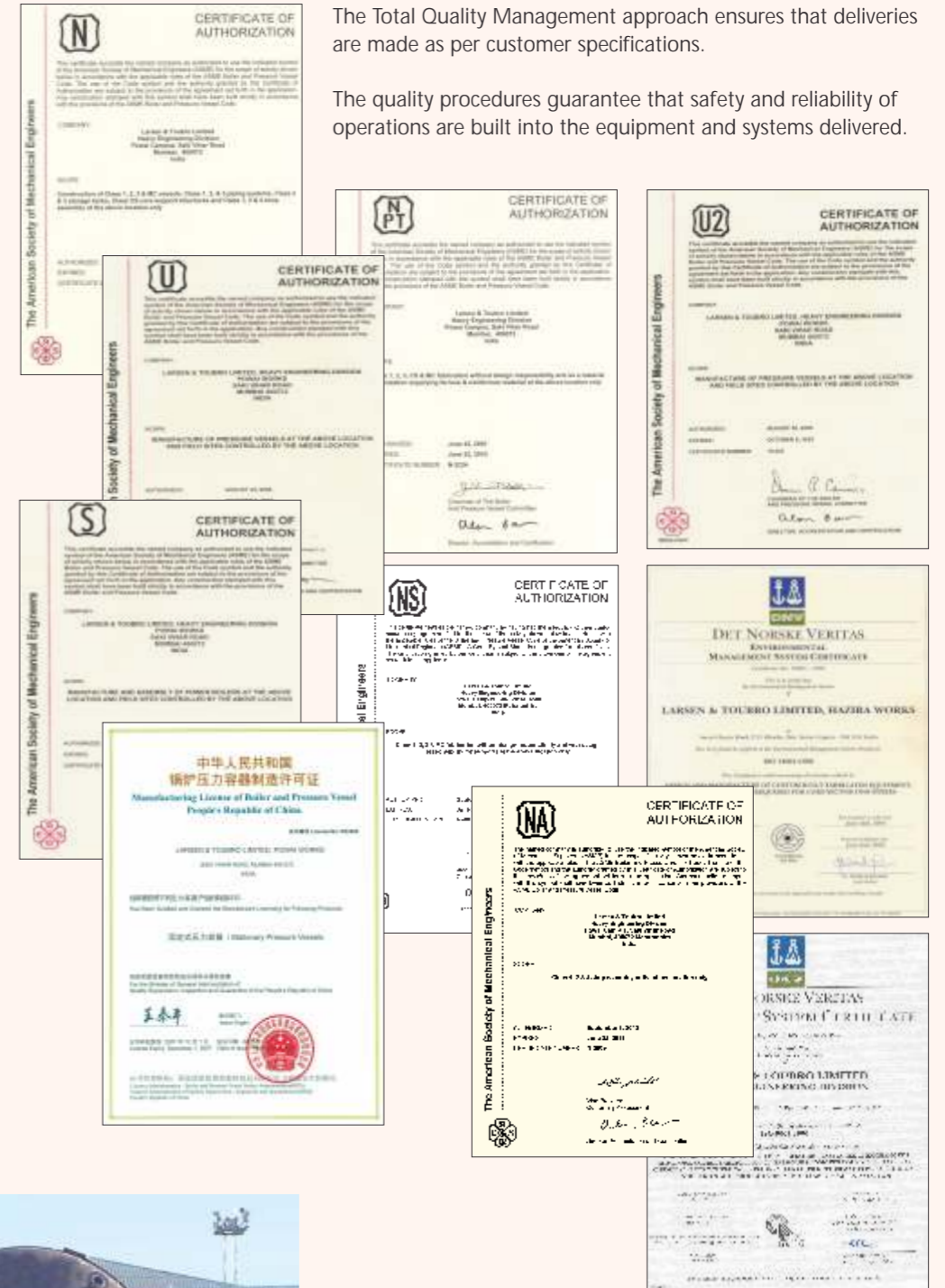
No. Supplied : Over 35
 Process : Haldor Topsøe, KBR, Krupp Uhde.
 Typical weight ranges from 200-500 MT
 Material of construction: CS/SS

3.3 m dia, 38 m-long Absorber for Burrup Peninsula, Western Australia, for Kellogg JV / Woodside Energy Limited

The workshops are certified and authorised by ASME to use U, U2, U3, S, N, NPT, NA stamps and to fabricate supports as per NS symbol.

The quality systems - right from personnel training, vendor development to final equipment commissioning - are covered under ISO 9001, ISO 14001 and OHSAS 18001 certification. The workshops have MLO registration for exports to China, and are authorised for CE-marking for exports to European countries.

The quality systems are backed by the latest facilities for radiography, including 12 MeV linear accelerator, ultrasonic, magnetic particle & liquid penetrant examination, high pressure and high vacuum testing, helium and freon leak testing.



The Total Quality Management approach ensures that deliveries are made as per customer specifications.

The quality procedures guarantee that safety and reliability of operations are built into the equipment and systems delivered.



12 MeV LINAC enclosure

Quality Assurance and Inspection Facilities include :

- X-Ray Radiography
 - Capacity : 420 kV Max. Thk. : 75 mm
- Linear Accelerator
 - Capacity : 12 MeV Max. Thk. : 500 mm
- Gamma Ray Radiography
 - IR-192 & Co-60 Camera unit
- Ultrasonic Flaw Detectors including phased array
- Helium Leak Detectors
- Magnetic Particle Testing
- Time of Flight Diffraction Technique (TOFD)
- Positive Material Identification Testing (PMI)

Fabrication : World-Class

L&T's world-class fabrication capabilities have been achieved through the perfect integration of efficient material handling and preparation, precision machining and welding processes for a range of materials in varying thickness, backed by technological excellence in design and engineering and responsive quality as well as IT systems.



CNC Flame/plasma cutting machine for cutting 450mm-thick alloy steel plates



Plate-rolling machine for hot rolling plates 250mm-thick and 4500mm-wide



Fabrication of 10 meter diameter, 444mm-thick tube sheet for tubular reactor



Welding of top-dished end for a thick-walled reactor



Narrow gap tandem SAW on a thick-walled reactor circular seam



Shrink fitting operation for multi wall construction of Cr-Mo-V reactors

Fertiliser Projects

EQUIPMENT SUPPLY

- Ammonia Convertors
- Convertor Baskets
- High Pressure Exchangers for Synthesis Loop
- Waste Heat Recovery Boiler package including RG, CG Boiler, steam super heaters, synthesis loop boiler, steam drums, and piping
- Secondary Reformer, HT/LT Convertors
- CO₂ Absorbers / Regenerators
- Chillers
- KRES Exchanger
- Ammonia Separators

- Urea Reactors
- Urea Strippers
- Carbamate Condensers
- Vacuum Separators, Urea Hydrolyzers, etc.
- Carbamate Separators

PROCESS LICENSORS DEALT (AMMONIA, UREA & METHANOL)
HALDOR TOPSOE, KBR, KRUPP UHDE, SAIPEM, TOYO,
STAMICARBON, CASALE, DAVY PROCESS TECHNOLOGY.

AMMONIA CONVERTORS

No. Supplied : Over 48
Process : Haldor Topsøe, KBR Krupp Uhde, Casale
Material : Cr-Mo-V / Cr-Mo



L&T has supplied the world's heaviest multi-wall ammonia convertor, weighing 860 MT (including 200 MT SS convertor basket) to PT Pupuk Kaltim, Indonesia

CONVERTOR BASKETS

No. Supplied : Over 35
Process : Haldor Topsøe, KBR, Uhde
Material : Stainless Steel as well as Inconel



L&T has supplied the world's heaviest convertor basket, weighing 200 MT to PT Pupuk Kaltim, Indonesia. L&T also has a dedicated facility to handle the convertor basket internals

HIGH PRESSURE HEAT EXCHANGERS FOR AMMONIA SYNTHESIS LOOP

No. Supplied : Over 100
Process : Haldor Topsøe, KBR, Linde, Krupp Uhde

Synthesis loop heat exchangers with thick tubesheet (varying from thicknesses of 200 to 350mm), fabricated from Cr-Mo steel.

L&T supplied a Unitized Chiller weighing 380 MT for a project in Indonesia



Machining



THREE PHASE SEPARATORS

Dimensions : 3660 mm dia x 57mm-thk x 14630 mm T/T
 Weight : 115 MT
 Material : SA 516-70

Supplied to Saudi Aramco Shedgum Gas Project through Black & Veatch Pritchard, U.S.A in 1999.

MOBILE HIGH PRESSURE PUMPING UNIT

These are widely used for well-killing, cementation, acid pumping and water injection applications.



REACTORS AND HEAT EXCHANGERS

Reactors & Heat Exchangers are supplied with SS & Incoloy materials for various onshore gas development projects.

SGP Reactors for the world's largest GTL Plant in Qatar.

STAINLESS STEEL AND CARBON STEEL CLAD COLUMNS

Max. Dia of Columns: 8.5 m
 Max. Length Supplied: 103 m

90mm-thick Stainless steel column for Kellogg JV / Woodside LNG Project in Australia.



The capabilities of CNC Floor-Mounted and Special Purpose machines are supported by a battery of general purpose machines, all geared to the precision machining needs of a world-class fabricator.



CNC Vertical boring machine
 Max. Diameter : 12m , Max. Job Weight : 130 MT



Three CNC floor-mounted horizontal boring machines at L&T's Hazira workshop. Spindle diameter : 200 mm & Travel : 5m x 17m



5-Axis Hass VMC



CNC Vertical multi-spindle deep-hole drilling machine.
 Drilling Depth: 900mm
 Number of Spindles: 2

Heat Treatment

The workshops are equipped with automatic control gas-fired bogie-type furnaces for heat treatment & stress relieving/post-weld heat treatment. For large equipment beyond the practical dimensions of furnaces, in situ PWHT is undertaken by internal gas heating and suitable insulation. Systematic configuration of gas burners and regulated air flow ensure uniform heat treatment.



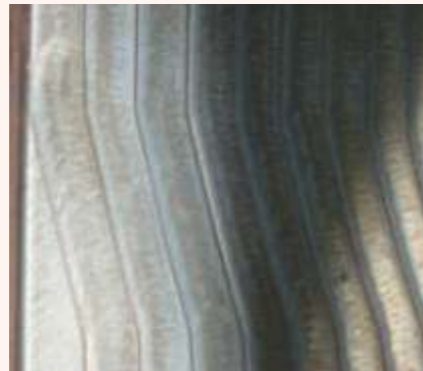
Natural gas-fired bogie hearth furnace to handle equipment of dimensions 14m long x 9.5m wide x 9m high (350 MT)

Continuous improvement in welding technology has led to the development of over 5000 welding procedures qualified as per international codes and standards - ASME, BS, EN/ISO, AS/NZ - for a variety of materials in a range of thickness (0.5 to 800mm) covering the complete spectrum of welding processes. Specialised fabrication facilities include 100,000 class dust-free enclosures with areas of 1000 sq. m. and 400 sq. m.

Welding Processes	Materials Welded	Specialised Welding Techniques
<ul style="list-style-type: none"> • SMAW • GTAW • GMAW • FCAW • SAW • PAW • ESW • Arc Stud Welding • CD Stud Welding • Electron Beam Welding • Laser Beam Welding 	<ul style="list-style-type: none"> • Carbon steels • Low alloy steels including Cr-Mo-V • Quenched & tempered steel • Austenitic stainless steels • Duplex, super duplex & hyper duplex stainless steel • Super austenitic stainless steel • Nickel based alloys (Inconel, Incoloy, Hastelloy, Monel) • Copper based alloys (Cupro-Nickel, aluminium bronze, brass) • Titanium & Titanium alloys • Aluminium & Aluminium alloys • Maraging steel • Clad steels with stainless steel, inconel, monel, cupro-nickel, titanium, etc. 	<ul style="list-style-type: none"> • Tandem/ Twin SAW • Semi-Automatic GTAW/SAW • Robotic • Hot Wire GTAW • Activated - TIG • Narrow Gap SAW/GTAW • Pulsed GTAW/GMAW • Internal Bore Tube to Tubesheet • Self-Shielded FCAW • Orbital GTAW • Strip Cladding



Automatic tube-to-tube sheet welding



150mm-wide SS weld overlay on forged shell by Electro Slag Strip Cladding (ESSC)



Water-jet cutting machine Capacity: 250mm-thick plate



800mm-thick weld joint by narrow-gap SAW



Narrow Gap Tandem SAW on 322mm-thick forged reactor circular seam



Robotic welding

EQUIPMENT SUPPLY

- Columns, vessels, heat exchangers for onshore and offshore oil & gas projects
- Modules and skid-mounted equipment such as separators and manifolds, gas dehydration packages, water treatment skids, etc.
- Skid mounted/mobile pumping systems for crude transportation
- Well servicing & wireline winches for oilfield duties

GAS-TO-LIQUID (GTL) REACTORS

L&T is qualified to take up the challenge of manufacturing GTL reactors by leading process licensors and EPC Contractors.



WASTE HEAT RECOVERY BOILERS (for sulphur recovery)

Waste heat boiler supplied to Saudi Aramco Shedgum Gas Project through Black & Veatch Pritchard, U.S.A in 1999.

SLUG CATCHERS

Dimensions : 3700 mm dia x 99 mm thk x 18288 mm T/T
 Weight : 220 MT.
 Material : SA 516-70



Supplied to Saudi Aramco Shedgum Gas Project through Black & Veatch Pritchard, U.S.A in 1999.

PRODUCTION SEPARATORS



A HP Separator weighing 200 MT with 126mm-thick with material SA537 CL II + 904L clad, supplied to Brown & Root for Shell Malampaya Platform Development project, the Philippines



SCREWPLUG CLOSURE EXCHANGERS

No. Supplied : Over 200
 Process : Chevron, UOP, AXENS, SHELL, EIL-IOCL
 Material : LAS with SS weld overlay and tubes of CS, LAS, SS321, SS347, SS410, Incoloy 825, Inconel 625
 Tubesheet : 125 to 300mm-thick.
 Weight : 25 to 100 MT

COKE DRUMS / COKER CHAMBERS

Total Nos. : 45
 Process : CB&I Lummus (ABB), Foster Wheeler, Petrobras
 Material : SA 387 Gr11 Cl2 + SS 410S Clad
 Max. Diameter : 9.8 m
 Max. Length : 43 m
 Max. Weight : 615 MT



Coke drum being supplied to Kuwait for KNPC Clean Fuels projects. Recently supplied world's largest coke drum (4 nos.) weighing 630 MT and diameter of 9.8m.

VACUUM/CRUDE COLUMNS

Total Nos. : 11
 Max. Diameter : Over 14 m
 Max. Length : Over 63 m
 Max. Unit Weight : 1100 MT



Enterprise Resources are planned (ERP) using Baan

Critical Chain Project Management (CCPM):

L&T Heavy Engineering has implemented Critical Chain Project Management, based on Dr. Eli Goldratt's 'Theory of Constraints' (TOC) using Concerto software.

Management philosophy by Dr. Eli Goldratt states:

- Only few elements (constraints) in a business, control the results of the entire organisation
 - TOC tools identify these constraints and enables the entire organisation through CCPM to focus on simple and effective solutions to problems that seemed very complex and unsolvable using 5 focusing steps.
1. Identify the constraint
 2. Exploit the constraint
 3. Subordinate everything else towards the constraints
 4. Elevate the constraint
 5. Go back to step-1

CCPM helps in proposing the best possible realistic deliveries to customer before the order. Concepts of Full-kit, Optimal Resource allocation along with Active Task Management (ATM) and Buffer Management (BM) help to manage the projects in execution and meet contractual deliveries. It provides a common view of project execution to all stakeholders across its manufacturing locations.

Product Lifecycle Management (PLM)

L&T Heavy Engineering (HE) has implemented Enovia Product Lifecycle Management from Dassault Systemes. HE has

standardised its Engineering Processes, created a central repository with role-based access for document management by project teams and adopted online workflows to improve collaboration and increase efficiency through greater visibility. HE has also implemented integrated Quality Management Systems on the PLM platform for its Marine Business. The PLM system has integrations with E-mail, Baan-ERP, Concerto-CCPM, MS-Desktop, UG-NX, CATIA and other CAD packages and with AUTOVUE viewer for viewing different file formats. PLM has improved the storage, search and re-use of data across projects for better Knowledge Management.

Customer Relationship Module (CRM)

L&T Heavy Engineering has implemented Customer Relationship Module to enable clients track the progress of jobs from their desktops thereby saving on communication and travel expenses. This module is customer and contract-specific.



Traffic & Logistics

Specialists provide traffic and logistics services for domestic and international customers. All arrangements are made for safe, low-cost and timely deliveries.

Traffic and logistics regularly carry out comprehensive route surveys from point of origin to final destination; plan and arrange the right mode of transport; obtain statutory clearances and organise inter-agency co-ordination as per the specific needs of customers.



450MT American Hoist Crane, 400 T gallow frame arrangement and heavy-duty RO-RO trailers enable loading of heavy cargo onto ocean-going vessels from L&T's Hazira waterfront facility.



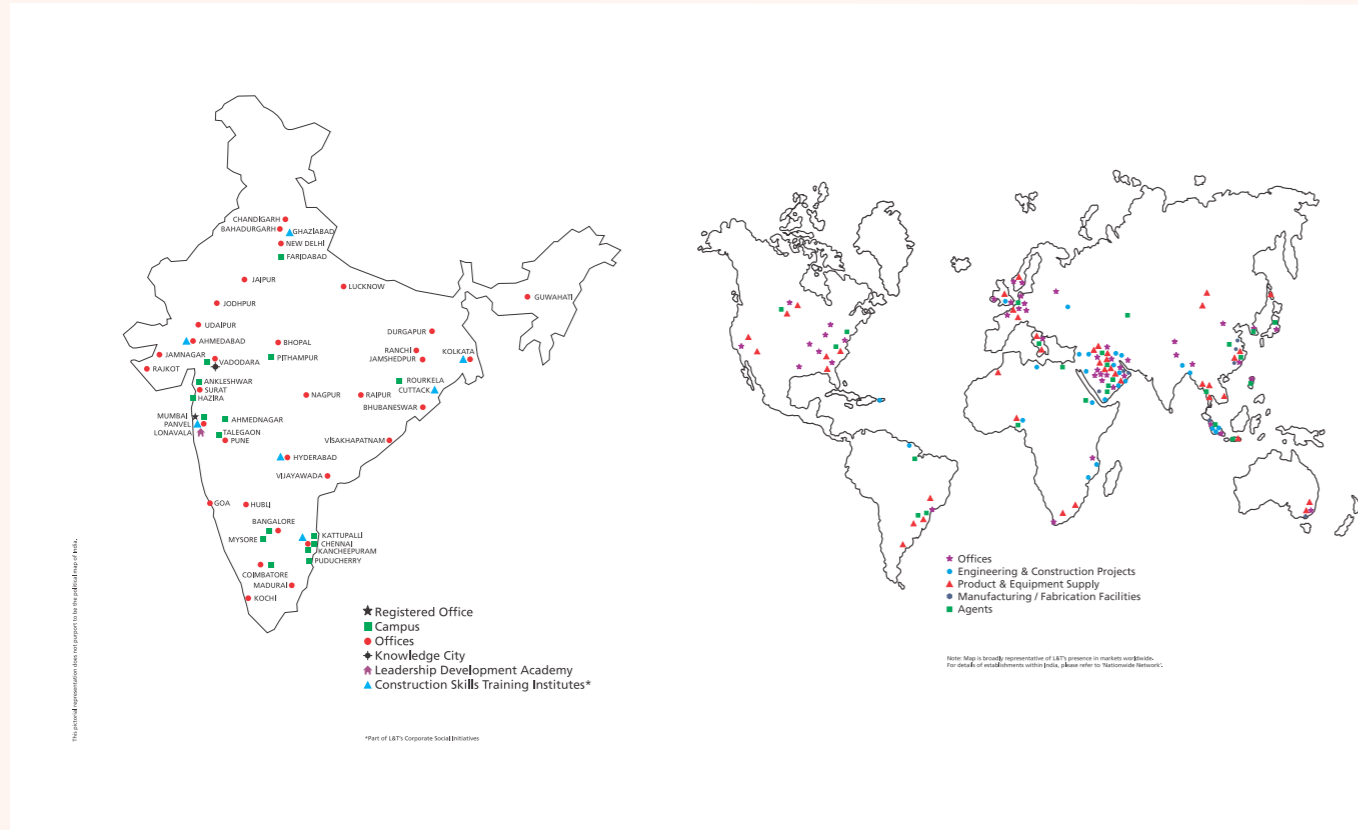
Tubular reactors for China, loaded onto the barge at the roll-on/roll-off jetty at Hazira.



ODC equipment up to 350 tonnes in weight, 7.5 metres diameter and 50 metres in length has been delivered safely over land to remote locations in India.

Global Presence

Equipment & systems are exported to more than 30 countries. Key customers acknowledge quality & on-time delivery performance by awarding prestigious orders for critical hi-tech equipment on 'Repeat Order' and 'Nomination' basis.



Refinery Projects

EQUIPMENT SUPPLY

- Hydrocracker & ARDS / VRDS reactors
- DHDS/Hydrotreater reactors
- Fluid catalytic crackers including reactors, regenerators and accessories
- High-pressure heat exchangers with threaded lock closures
- Heat exchangers in various materials of construction including 1-1/4 Cr - 0.5 Mo, 2-1/4 Cr - 0.5 Mo, cupronickel, duplex S.S

- Coke Drums
- Helixchangers/Helitowers
- High-pressure vessels (separators for hydrocracker, merox vessels, etc.)
- Columns including vacuum columns, crude columns, fractionators

ARDS & HYDROCRACKER REACTORS/SEPARATORS

Total Nos.	: Over 35
Process	: Chevron, UOP
Material	: SA336 F22 / SA336 F22V (CrMo/CrMoV Forged Construction)
Max. Thickness	: 318 mm + SS Overlay
Max. Diameter	: 5 m
Max. Weight	: 1500 MT

290mm-thick CrMoV forged ARDS reactors (with total weight of 4300 MT) sailing on single barge from the captive jetty at Hazira for Kuwait National Petroleum Corporation's (KNPC) Clean Fuel Project (CFP) 2020.



DHDS/VGO/HDT REACTORS

Total Nos.	: Over 135
Process	: Axens, Exxon Mobil, HTAS, Shell, UOP, ConocoPhillips
Material	: SA387 Gr11 / Gr22 / Gr22V (CrMo/CrMoV Plate Construction)
Max. Thickness	: 177 mm + SS Overlay
Max. Diameter	: 6.4 m
Max. Weight	: 925 MT

CrMoV Plate Reactors with max. thickness of 165 mm and total weight of 2100 MT being supplied to HPCL-Mittal Bathinda Refinery in India.



FCC REACTORS/REGENERATORS

Total Nos.	: Over 15
Process	: UOP, Exxon Mobil, Stone & Webster
Max. Diameter	: 16.5 m
Max. Unit Weight	: 1320 MT
Max. Package Weight	: 2650 MT

Experience includes supply of whole FCC R-R Package including reactor, regenerator, orifice chamber, riser / downcomers including refractory lining and erection at site.

A repeat order for one of the world's largest FCC regenerators (1200 MT) is being despatched to 1.2 mbpd refinery of Reliance Industries India. Size : 16.5 m dia x 45 m long

Clients include:



EPC Firms include:

