

Industrial Solutions

thyssenkrupp Industrial Solutions (India) Private Limited

Head Office:
Uhde House, LBS Marg,
Vikhroli (W), Mumbai 400 083,
India
P: +91 22 4047 8000
F: +91 22 2578 4327
E: tkisindia@thyssenkrupp.com

Pune Office:
6th Floor, Tower "C",
Panchshil Business Park,
Baner-Balewadi Road,
Pune 411 045,
India
P: +91 20 4621 1100
F: +91 20 4621 1300
E: tkisindiapn@thyssenkrupp.com

www.thyssenkrupp-industrial-solutions-india.com

engineering.tomorrow.together.

Industrial Solutions

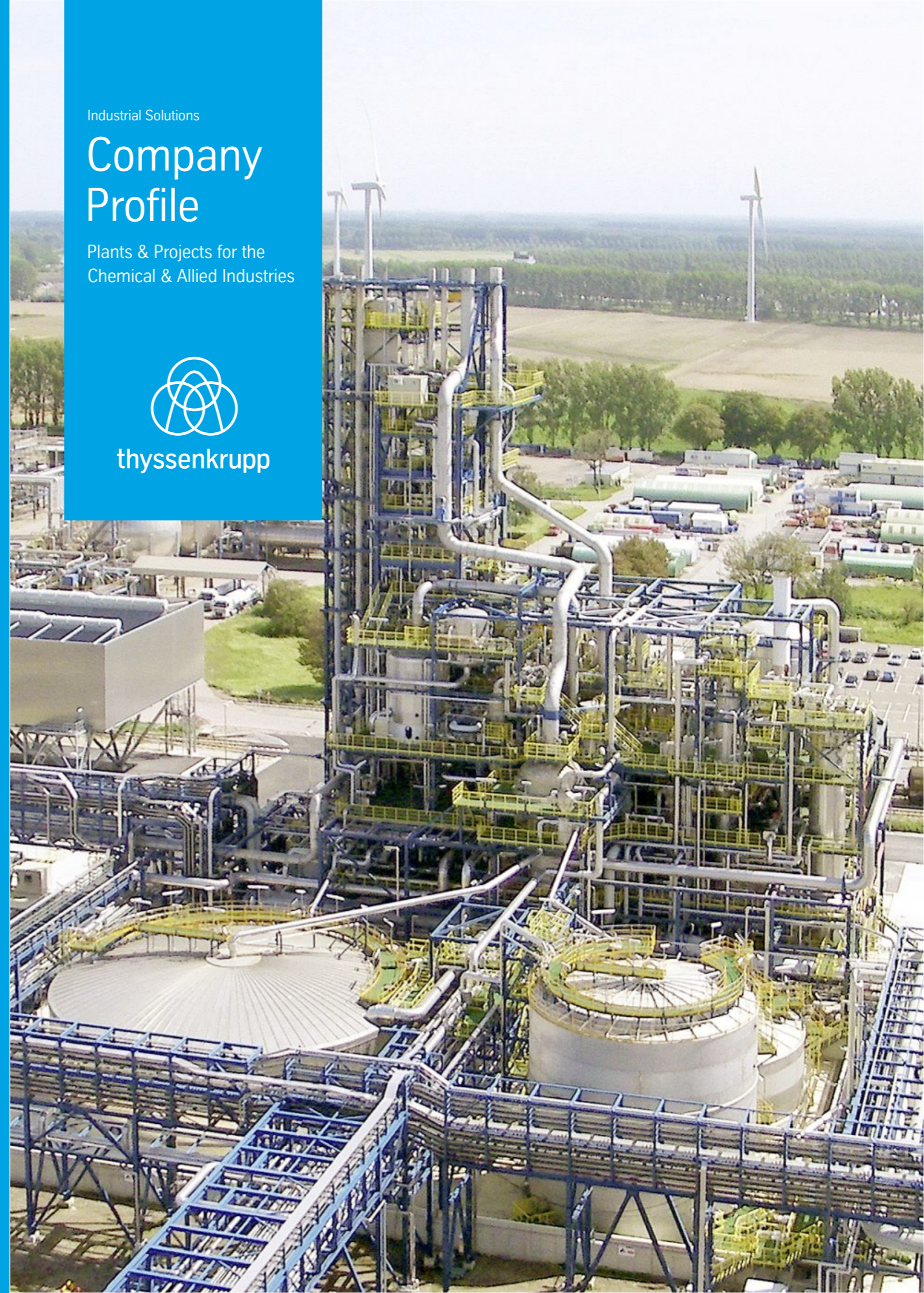
Company Profile

Plants & Projects for the
Chemical & Allied Industries



thyssenkrupp

October 31, 2020



We are present wherever our customers need us



Over
5

decades of service to the
chemical industries worldwide

Over **750**
reference projects

Contents

Our Group	04
Portrait	06
Organisation	08
End-to-end Solutions	10
Core Competencies	12
Resources	14
Technology & Licensors	16
Quality & HSE	18
Footprint	19
Experience & Projects	22
Presence	36
Awards & Corporate Citizenship	38
Contact	40

Projects
executed in
50
countries worldwide

Our Group

thyssenkrupp is one of the world's largest diversified industrial groups with a presence in approximately 60 countries worldwide and approximately 104,000 employees from 149 countries.

The group operates from its Headquarters in Essen, Germany, its group companies worldwide, approximately 90 Research & Development locations and 2,500 plus active customer sites globally.

Its Business Areas include Automotive Technology, Industrial Components, Plant Technology, Marine Systems, Materials Services & Steel Europe.

The Group's Policy is enshrined in its Mission Statement, and enunciated in its brand claim and promise - engineering. tomorrow. together.

The Group is committed to advancing its customers by:

- understanding their current and future needs
- offering competitive products, services and solutions
- developing relevant technological innovations and business models
- playing a pioneering role
- being reliable partners
- empowering and inspiring people
- building on its many years of experience

Headquarters of the thyssenkrupp group
in Essen, Germany

we are thyssenkrupp

Our Group Mission Statement

- We are thyssenkrupp.
- We meet the challenges of tomorrow with our customers.
- We hold ourselves to the highest standards.
- We share common values.

Portrait

Our Pune Office



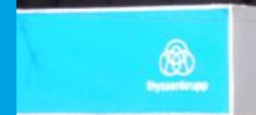
Your Complete EPC Partner

We are a progressive Engineering Consultancy company committed to bringing you the entire range of services involved in the design and construction of plants for the chemical, petrochemical, fertiliser, refinery and metallurgical industries in India and abroad. We offer Engineering, Procurement, Construction Management Services (EPCM) and Lump sum Turnkey (EPC-LSTK) plants.

We are one of the largest international group companies of thyssenkrupp Industrial Solutions AG, a Business Area of thyssenkrupp AG of Germany.

Our full-fledged modern engineering facilities in our Head Office in Mumbai and our Pune Office, with approximately 1,400 qualified and well-trained technical experts, our experience of over 750 successfully-implemented projects in India and abroad based on our own technologies or on technologies from other world-class Licensors, annual capacity of over 2 million engineering hours, unique working methods, quality and safety-certified systems, and client-conscious approach make us the ideal and complete EPC partner, across a wide range of industries and sectors.

Our Head Office in Mumbai



Organisation

In the forty years since being incorporated as an Indian company, we have come a long way in being regarded as one of the leading engineering companies for chemical plants & projects. In line with our USP of being a partner offering single-point, start-to-finish services covering both technology, engineering and plant implementation, we are organised by business functions.



PV Chepe
Chief Engineering Officer & Executive Director - Engineering is responsible for our Engineering activities

KS Rao
Chief Sales Officer & Executive Director - Business Development, Sales & Proposals is responsible for our Business Development activities, Selling of the group's proprietary & third party technologies, Proposal activities and Industrial Services

PD Samudra
Chief Executive Officer & Managing Director and Member of the Board of thyssenkrupp Industrial Solutions (India)

Dr Ulf-Steffen Baeumer
Chief Technology Officer & Executive Director - Technology Development & Digital Bidding Center is responsible for the build-up & consolidation of technology competence for international projects

PG Waray
Chief Operating Officer & Executive Director - Project Execution is responsible for the implementation of our projects

NR Chitre
Chief Financial Officer & Executive Director - Central Functions and Member of the Board of thyssenkrupp Industrial Solutions (India) is responsible for Commercial Project Management, Finance & Secretarial, Contracts Management and Information Technology Management

Our Commitment

We operate as a project-driven company for EPCM Services and LSTK contracts. Our philosophy is expressed in our Corporate Philosophy - and borne out by our technical expertise, ethical standards and commitment to clients / business associates. In keeping with our desire to continue being recognized as 'the best EPC-LSTK company', we distinguish ourselves with our:

- Innovative engineering
- Value-added technical services and solutions
- Quality-certified systems and high engineering standards
- Conformity to health, safety and environmental norms
- Flexible, customer-oriented approach
- Commitment to budgets and time schedules



Linear Alkyl Benzene plant

End-to-end Solutions

Our wide range of services and specialised services and our ability to implement projects in a variety of modes aligned to customer requirements, make us the number one address for a variety of solutions for the chemical and allied industries.

Range of Services

- Pre-project Activities
- Engineering
- Project Implementation, Procurement, Construction
- Start-up, Commissioning, Training of Client personnel
- After Sales Service

Types of Contracts

- Engineering Procurement Construction (EPC / Lump sum Turnkey)
- Engineering, Procurement, Construction Services (EPCM)
- Project Management Consultancy (PMC)
- Front End Engineering Design (FEED)

Specialised 360° Lifecycle Services

We appreciate your need for year-round service and maintenance of your prized chemical facilities, and hence provide 360° Lifecycle Services that ensure your plant is upgraded constantly, and always in the best of health.

Our Lifecycle Services:

- Asset Management
- Revamps & Restarts
- Spare Parts & Supply Management
- Field & Workshop Services

Core Competencies

Our experience covers projects for the chemical and allied industries / sectors, spans in excess of 5 decades, and comes with our trademark quality and commitment to engineering and implementation excellence.

Our plants are based on technologies from our own portfolio, or on technologies from other world-class Licensors. We also design and implement Offsites and Utilities for mainstream chemical plants.

Fertilisers



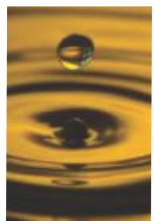
- Ammonia
- Urea
- Nitric Acid
- Ammonium Nitrate
- Ammonium Nitrophosphate
- Phosphoric Acid
- Di-Ammonium Phosphate, NPK
- Triple Super Phosphate
- Mono Ammonium Phosphate

Polymers, Petrochemicals & Organic Chemicals



- Ethylene Dichloride
- Vinyl Chloride Monomer
- Polyvinyl Chloride
- C-Polyvinyl Chloride
- Olefin Recovery
- Propylene
- Polypropylene
- Propylene Oxide / Propylene Glycol
- Propane Dehydrogenation
- Polyols
- Phenol / Cumene
- Mono Ethylene Glycol
- Ethylene Oxide / Ethylene Glycol
- High Density Polyethylene
- Low Density Polyethylene
- Linear Low Density Polyethylene
- Ethyl Benzene
- Styrene Butadiene Rubber
- Styrene Monomer
- Polystyrene
- Poly Butylene Terephthalate Resin
- Halogenated Isobutyl Isoprene Rubber
- Polyamide / Nylon / PET
- Polyesters
- Polychloroprene
- Vinyl Acetate Monomer
- Linear Alkyl Benzene
- Paraffin & Related Derivatives
- Adipic Acid
- Formaldehyde
- Caprolactam
- n-Butanol
- Detergent Alcohol
- Epichlorohydrine
- Methyl Isobutyl Ketone

Refinery Units



- Crude Distillation Unit
- Vacuum Distillation Unit
- Hydrocracker
- Diesel Hydrotreater Unit
- Naphtha Hydrotreater
- Kerosene Hydrotreater
- Continuous Catalytic Regeneration Reformer
- Indmax FCC Unit
- Fluid Catalytic Cracking Unit
- Propylene Recovery Unit
- Methyl Tertiary Butyl Ether
- Aromatics Extraction
- Diesel Hydro Desulphurisation Unit
- Gas Oil Hydro Desulphurisation Unit
- Vacuum Gas Oil Units
- Visbreaker
- Coker LPG Treatment Unit
- Sulfur Recovery Unit
- Motor Spirit Quality Upgradation Projects
- Hydrogen Plants
- Hydrogen Compression & Distribution System
- Residue Upgradation (VGO-HDT, ATF, FCC LPG Merox)

Caustic Soda - Chlorine



- Caustic Soda - Chlorine (BM and BiTAC)
- Conversion to Membrane Cell
- Caustic Potash
- NaCl ODC
- HCl Electrolysis
- Water Electrolysis
- Spare Parts & Services

Inorganic Chemicals & Metallurgy



- Chlorine Dioxide
- Bleaching Powder
- Polyaluminium Chloride
- Sodium Chlorate
- Hydrochloric Acid
- Spray Dried Silica
- Sulfuric Acid
- Zinc Smelting
- Zinc Oxide
- Alumina

Cryogenic Storages & Tank Farms



- Petrochemical Tank Farms
- Cryogenic Ammonia, LPG, Ethylene, Benzene, Propylene Tanks & Terminals
- Terminal Automation
- Refrigeration Systems

Coke Ovens



- Coke Oven Batteries
 - Top charge
 - Stamp Charge
 - Heat recovery type
- Coke-oven machinery
- Charging and Pushing mechanisms
- Quenching Towers -
 - Coke oven gas treatment
 - Condensation and tar separation
 - Removal and treatment of by-products
 - Tar Refining
- Coke Plant automation

Industrial Plants



- Air Separation Units
- Hydrogen-Nitrogen Generation Units
- Glycerine / Fatty Alcohol
- Cosmetics
- Coal Tar Filtration Filter Press plants
- Coke Oven Gas Treatment plants
- BOPP for large Power Generation Units
- Cement plants
- Gelatin plants
- Ion Resin plants
- Polyester Resin plants
- Iron Oxide Pigment plants
- Water-borne Paints plants

Resources

As preferred partner and custodian for your project, we firmly believe that your project deserves nothing but the best. Consequently, we assign our best resources to ensure it is completed on time, within budget, and with the quality you have come to expect from a world leader. Needless to say our plants are distinguished by their cutting-edge technology, innovation, high yield, longevity, optimal capex / opex costs and environmental considerations.

People

Our engineering experience and systems are perfectly complemented by people - our best assets. Our contingent of approximately 1,400 qualified employees account for an annual capacity of 2 million plus engineering hours. Augmenting their engineering skills and distinguishing abilities are a network of modern communication systems, advanced electronic tools and a working environment that is conducive to excellence.



Systems & Working Concepts

Our plants and projects reflect our unique and time-tested working concepts.

Our specialists are organised into dedicated Project Teams or Production Units, depending on the size of your project.

A Project Team is dedicated to your project over all the phases of engineering and implementation, and comprises the Project Manager / Engineering Manager, Lead Engineers and a carefully-assembled complement of engineering and commercial specialists from our central business disciplines.

For relatively smaller projects, we adopt the Production Unit concept, where lead team members working on your project, draw support from the centralised disciplines and engineering pools.

Design Tools & Communication Facilities

Your plant is designed using advanced electronic tools and systems such as ACAD, PDMS, PDS, Autoplant, IRP, Smart Plant P&ID and Microstation, and a host of other state-of-the-art design software over modern computerised set-ups.

Our facilities comprise the gamut of communication tools and dedicated communication lines that ensure high-speed / high-volume data transfer and Information Security. Our systems have been successfully put to test, while implementing a number of Indian and international engineering assignments.

Technology & Licensors

In our endeavour to bring you the best in reliable, economical, environment-friendly and modern technology, we have built up an impressive record of projects based on technologies from the world's best licensors / engineering contractors including thyssenkrupp Industrial Solutions. Our experience signifies our flexibility in handling various types of Technologies, Basic Engineering Packages and international Codes / Standards. In addition to the inhouse processes of thyssenkrupp (incl erstwhile Uhde), we have had opportunities to implement projects based on technologies of other major international licensors, such as:

Germany

BASF
Basell
Basell Poliolefine

Bayer
Caloric
Dynamit Nobel
Evonik
Henkel
LANXESS

Linde
Lurgi
Madaus
Outo Kumpu
Plinke
Uhde
Vinnolit

Belgium
Prayon

Brazil

Petrobras

Canada

Rio Tinto Alcan Int.
Nova Chemicals

China

Jingdong Jingmao

France

Atochem
Arkema
Axens
CdF Chemie
IFP

Denmark

Haldor Topsoe

Italy

Basell Poliolefine Italia
Conser
Contec SRL
Montedipe
Pressindustria
Radici

Japan

Mitsubishi Heavy Industries
Mitsubishi Chemical Corpn.
Shin-Etsu

The Netherlands

AkzoNobel
Shell
Stamicarbon (DSM)
Yara

Norway

Norsk Hydro
Sunde Plastics

Poland

Ciech Ico
PolSERVICE

Russia

JSC RI YARSINTEZ

South Africa

SASOL

Spain

Incro

Switzerland

Alesa Alusuisse
Bertrams
Enco
Uhde Inventa-Fischer

Taiwan

TSRC

United Kingdom

Fordell
Johnson Matthey Formox

United States

CB & I Lummus
Celanese
Chemithon
Chemtura
Grace Technologies
Huntsman
KBR
KSR
Merrichem®
Monsanto
Parsons
Rockwood
Scientific Design
UOP

Quality & HSE

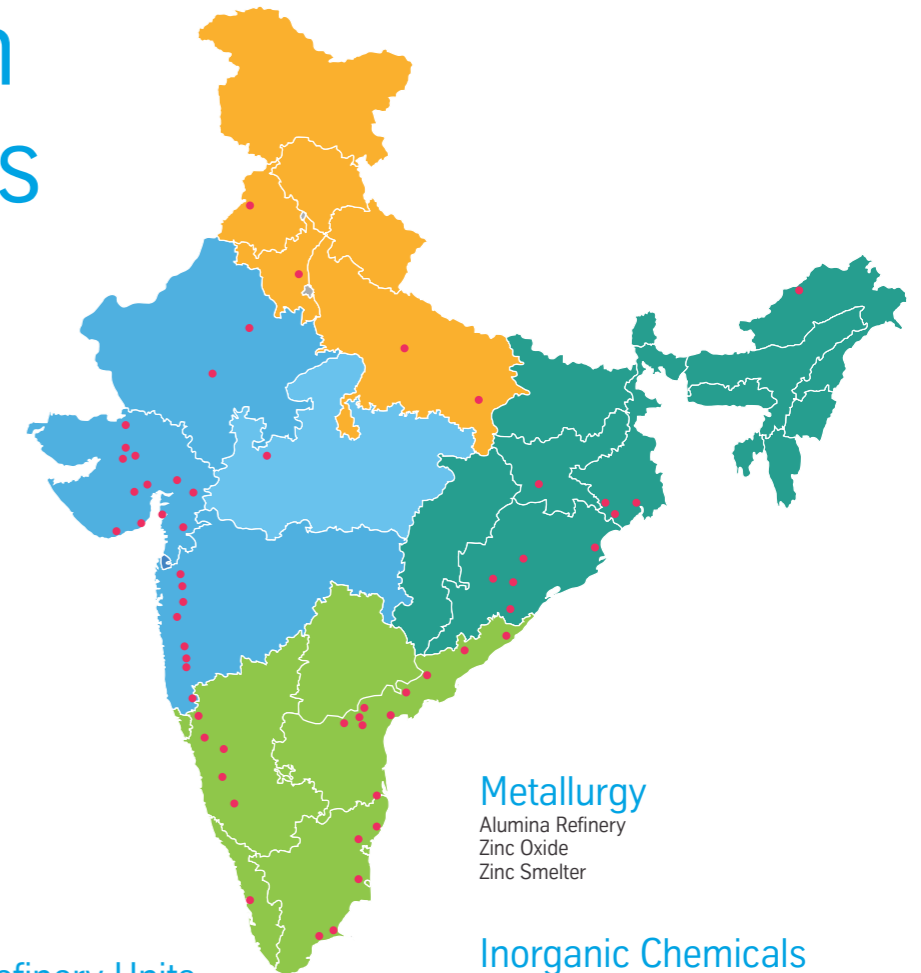
We are convinced our Clients return with repeat orders because their expectations are fully met - and because they see us as a truly quality and safety-conscious company. Quality for us, is as much a culture as it is a system - a system that critically ascertains, identifies and evaluates norms specified in our Quality Manuals. Accredited with the ISO:9001:2015 certification, our QA systems cover all aspects of plant engineering and implementation.

Our commitment to HSE finds expression in our workplaces and plants that are optimised with regard to reliability, performance, safety and environment. The BS OHSAS 18001:2007 and ISO 14001:2004 certifications reiterate our commitment to Occupational Health & Safety and the Environmental Management Systems associated with environment-friendly business practices. Simply stated, we build plants which have minimal or no adverse impact on the environment.



Our Indian References

We have been privileged to serve the Indian Chemical industries for the last several decades. Our association with the Who's Who of the Indian Chemical fraternity extends to grassroot, brownfield and revamp projects, based on inhouse processes of thyssenkrupp (incl erstwhile Uhde) and technologies of other international licensors.



Fertilisers

- Ammonium Nitrate
- NPK / NPK Granulation
- Concentrated Nitric Acid
- Urea
- Calcium / Prilled Ammonium Nitrate
- Di-Ammonium Phosphate
- Ammonium Nitrophosphate
- Weak Nitric Acid

Polymers & Petrochemicals

- C-Polyvinyl Chloride
- Caprolactam
- Chloromethanes
- Coker LPG
- Cumene
- Dimethyl Aniline
- Dyes & Dispersions
- Epichlorohydrine
- Ethyl Benzene
- Ethyl Vinyl Acetate
- Ethylene
- Ethylene Glycol / Oxide
- Formaldehyde
- HDPE
- Halogenated Isobutyl Isoprene Rubber
- Linear Alkyl Benzene
- LLDPE-HDPE Swing Unit
- Nitrotoluene
- Olefin Recovery
- Phenol
- Polyamide
- Polychloroprene
- Polyester Filament Yarn
- Polypropylene
- Propylene Glycol / Oxide
- Styrene - Polystyrene
- Synthetic Detergent
- Syrene Butadiene Rubber
- Vinyl Acetate Monomer
- Vinyl Chloride Monomer

Refinery Units

- Crude Distillation Unit
- Vacuum Distillation Unit
- Hydrocracker
- Diesel Hydrotreater Unit
- Naphtha Hydrotreater
- Kerosene Hydrotreater
- Continuous Catalytic Regeneration Reformer
- Indmax FCC Unit
- Fluid Catalytic Cracking Unit
- Propylene Recovery Unit
- Methyl Tertiary Butyl Ether
- Aromatics Extraction
- Diesel Hydro Desulphurisation Unit
- Gas Oil Hydro Desulphurisation Unit
- Vacuum Gas Oil Units
- Visbreaker
- Coker LPG Treatment Unit
- Sulfur Recovery Unit
- Motor Spirit Quality Upgradation Projects
- Hydrogen Plants
- Hydrogen Compression & Distribution System
- Residue Upgradation (VGO-HDT, ATF, FCC LPG Merox)

Caustic Soda-Chlorine

- Grassroots Caustic Soda Complexes
- Brownfield Caustic Soda Expansions
- Conversions to Membrane Cell Caustic Soda
- Caustic Potash
- Chlorine
- Spare Parts & Services

Metallurgy

- Alumina Refinery
- Zinc Oxide
- Zinc Smelter

Inorganic Chemicals

- Aluminium Fluoride
- Chlorine Dioxide
- Poly Aluminium Chloride
- Potassium Carbonate
- Potassium Hydroxide
- Sodium Chlorate

Storages & Tank Farms

- Butane Tanks
- Cryogenic Ammonia Storage Tanks
- LPG Storages
- Propane Tanks

Industrial Plants

- Balance of Power plant
- Bearings Factory
- Cellulose Nitrate
- Fatty Alcohol
- Gas Boosting Stations
- Gelatin
- Glycerine Distillation
- Hydrogen-Nitrogen Utilities
- Ion Resin
- Polyester Resin
- Resin Storage Tank Farms
- Saponification
- Spent Bleached Earth
- Synthetic Iron Oxide Pigment
- Water-borne Paints

Global Footprint

Our major overseas assignments extend to LSTK and EPCM service contracts both independently as well as together with our group companies / business associates. We have executed in excess of 150 projects globally across all our core competencies.



North America

Canada	Lube Oil Re-refining
Mexico	Caustic Soda - Chlorine; Potassium Hydroxide
USA	Ammonia / Ammonia-Urea; Caustic Potash; Ethylene Oxide / Ethylene Glycol; Lube Oil Re-refining; Nitric Acid / Weak Nitric Acid; Urea Ammonium Nitrate; Urea Synthesis, Urea Granulation

South America

Chile	Ammonium Nitrate Nitric Acid / Weak Nitric Acid
--------------	--

Africa

Algeria	Ammonia / Ammonia-Urea
Morocco	Infrastructure Project; Triple Super Phosphate, Mono Ammonium Phosphate, Di-Ammonium Phosphate, NPK
Namibia	Zinc Refinery Conversion
South Africa	Clean Fuels; Coal Tar Filtration Filter Press plant; Cryogenic Storages & Tank Farms; Detergent Alcohol, Methyl Isobutyl Ketone (MIBK); Multi-product Pipeline; n-Butanol; Polypropylene plant; Water Recovery Growth project; Wet Sulfuric Acid

Europe

Belgium	Ammonia; Aromatics Extraction; Caustic Soda - Chlorine; PET	Italy	Mild Hydrocracker
Czech Republic	Caustic Soda - Chlorine	Lithuania	Cryogenic Storages & Tank Farms
Finland	Hydrogen Plant for Refinery	Norway	Caustic Soda - Chlorine
France	Gasification	Poland	Caustic Soda - Chlorine
Germany	Adipic Acid; Caustic Soda - Chlorine; Formaldehyde; High Density Polyethylene	Spain	NaCl Caustic Soda
Greece	Nitric Acid / Weak Nitric Acid	The Netherlands	Urea Synthesis, Urea Granulation
Hungary	Cryogenic Storages & Tank Farms; Hydrogen Peroxide, Propylene Oxide; Polyols; Propylene Glycol	Turkey	Ammonium Nitrate; Calcium Nitrate Granulation; DAP-NPK Nitric / Weak Nitric Acid; Polyester Tyre Cord
		United Kingdom	PET

Asia Pacific (APAC)

Bangladesh	Urea Synthesis, Urea Granulation
Brunei	Ammonia - Urea, Urea Granulation
China	Caustic Soda - Chlorine; Hydrogen Plant for Refinery; Polyamide
Indonesia	Ethyl Benzene, Styrene Monomer; Hydrogen Peroxide
Malaysia	Ammonia / Ammonia - Urea; Aromatics Extraction; Cryogenic Storages & Tank Farms; Lube Oil Re-Refining; Spent Bleached Earth
Myanmar	Nitric Acid / Weak Nitric Acid
Philippines	Polypropylene
Taiwan	Bisphenol-A; Caustic Soda - Chlorine; Cryogenic Storages & Tank Farms
Thailand	Ammonium Nitrate; Caustic Soda - Chlorine; Cryogenic Storages & Tank Farms; Fatty Alcohol; Nitric Acid
Vietnam	NPK

Middle East

Egypt	Ammonia / Ammonia-Urea / Urea Granulated / Ammonium Nitrate / Calcium Ammonium Nitrate (Granulated) / Low Density Ammonium Nitrate; Caustic Soda - Chlorine; Cryogenic Storages & Tank Farms; Nitric Acid / Weak Nitric Acid; Propylene / Polypropylene
Israel	Hydrogen Peroxide
Jordan	Caustic Soda - Chlorine
Kuwait	Refinery Facilities
Oman	Ethylene Dichloride
Qatar	Ammonia / Ammonia-Urea; Caustic Soda - Chlorine; Cryogenic Storages & Tank Farms; Ethylene Dichloride, Vinyl Chloride Monomer; Low Density Polyethylene; Urea Formaldehyde Concentrate
Saudi Arabia	Alkylation Unit; Ammonia / Ammonia-Urea; Benzene Mitigation; Benzene Storage Tank; Caustic Soda - Chlorine; Cryogenic Storages & Tank Farms; Ethylene Dichloride, Vinyl Chloride Monomer; Formaldehyde; Fuel Additives; HTF Blending; LAB Derivatives; Linear Alkyl Benzene; n-Paraffin, Paraffin Derivatives; OCT Feed Purification; Poly Butylene Terephthalate Resin; Polyethylene; Sulfonation Unit; Urea Formaldehyde Concentrate; Urea Synthesis, Urea Granulation
UAE	Cement Plant; Urea Synthesis, Urea Granulation

CIS

Belarus	Hydrogen Plant for Refinery
Turkmenistan	Ammonia; Cryogenic Storages & Tank Farms; Hydrogen Plant for Fertiliser Complex
Ukraine	Caustic Soda - Chlorine

Our Experience & Projects

Ammonia-Urea Complex

Fertilisers

We are amongst the leading EPC companies for the design and construction of fertiliser plants, including revamp of existing units. With contracts for the major fertiliser companies in India and abroad - some covering the world's largest fertiliser complexes - and our ability to implement a wide range of Nitrogenous and Phosphatic Fertiliser projects, based on technologies from thyssenkrupp Industrial Solutions and other group companies / business partners, we are ideally placed to implement your fertiliser projects, either on LSTK or EPCM-services basis.

Some of our major Nitrogenous Fertiliser projects :

Abu Qir Fertilizer Co., Egypt	Ammonia-Urea, Nitric Acid, Ammonium Nitrate*
Asean Bintulu Fertilizer, Malaysia	Ammonia-Urea (Revamp)
BAGFAS, Turkey	Nitric Acid, Ammonium Nitrate, Calcium Nitrate Granulation, Offsites & Utilities*
BASF, Belgium	Ammonia*
Brunei Fertilizer Industries, Brunei	Ammonia-Urea*
CF Industries Holdings, USA	Ammonia, Urea, Nitric Acid, Urea Ammonium Nitrate, Urea Granulation*
El Nasr Co for Intermediate Chemicals, Egypt	Ammonia, Urea, Nitric Acid, Ammonium Nitrate, Calcium Ammonium Nitrate*
Gujarat Narmada Valley Fertilizers, India	Nitric Acid, Weak Nitric Acid, Concentrated Nitric Acid, Calcium Ammonium Nitrate, Ammonium Nitrophosphate
Orascom Construction Industries, USA	Urea Ammonium Nitrate, Urea, Nitric Acid*
QAFCO, Qatar	Ammonia-Urea*, Urea Formaldehyde Concentrate
Rashtriya Chemicals & Fertilizers, India	Weak Nitric Acid
SAFCO, Saudi Arabia	Ammonia-Urea*, Urea Formaldehyde Concentrate
SORFERT, Algeria	Ammonia-Urea*
Yara Sluiskil B. V., The Netherlands	Urea Synthesis*

Some of our major Phosphatic Fertiliser projects :

Bunge Maroc Phosphore, (Incro cooperation) Morocco	Triple Super Phosphate, Mono Ammonium Phosphate, Di-Ammonium Phosphate
Coromandel International, India	NPK Complex, Urea-grade NPK, Phosphoric Acid
Deepak Fertilisers and Petrochemicals Corporation, India	NPK Granulation, Weak Nitric Acid, Prilled Ammonium Nitrate
ETI BAKIR, Turkey (Incro cooperation)	Di-Ammonium Phosphate / NPK
Godavari Fertilisers and Chemicals, India	Di-Ammonium Phosphate (Revamp)
Gujarat State Fertilizers & Chemicals, India	Di-Ammonium Phosphate, Additional facilities for DAP-NPK plant
Petrovietnam Fertilizer and Chemicals, Vietnam	NPK plant

*Main Contractor thyssenkrupp Industrial Solutions



DAP-NPK Fertiliser Complex

Polymers, Petrochemicals & Organic Chemicals

With several major contracts dating back to the seventies and covering a wide range of chemicals, we are ideally placed to implement your Polymer, Plastic, Petrochemical and other Organic Chemical plants. Our specific experience in working with certain processes for a number of our reputed Clients, makes us the preferred partner for your Polymer and Petrochemical projects.

Low Density Polyethylene plant

Some of our major Polymer, Petrochemical & Organic Chemical projects :

Changle Highsun Synthetic Fibre Technology, China	Polyamide-6*
Deepak Phenolics, India	Phenol, Cumene
Egyptian Propylene & Polypropylene Co., Egypt	Propylene - Polypropylene*
Farabi Petrochemicals (SNC-Lavalin cooperation / direct contract), Saudi Arabia	n-Paraffin, Linear Alkyl Benzene (incl. Duplication), LAB Derivative Units
Finolex Industries, India	Vinyl Chloride Monomer, S-PVC, E-PVC
Gujarat Alkalies and Chemicals, India	Chloromethanes
Gujarat State Fertilizers & Chemicals, India	Caprolactam (Expansion)
Haldia Petrochemicals, India	Polypropylene, LLDPE - HDPE Swing Unit (Revamp)
Hoecsa, Turkey	Polyester Tyre Cord
IBN-ZAHR (Saudi European Petrochemical Co), KSA	OCT Feed Purification
Indian Oil Corporation, Gujarat, India	Linear Alkyl Benzene (PMC Services)
Indian Oil Corporation, Panipat Refinery, India	HDPE, LLDPE - HDPE Swing Unit, Olefin Recovery, Revamp of Naphtha Cracker, MEG Unit, Ethylene Recovery
Indian Oil Corporation, Paradip Refinery, India	Polypropylene Unit
Indian Petrochemicals Corporation, India	High Density Polyethylene
Indian Synthetic Rubber, India	Styrene Butadiene Rubber
JBF Industries, Belgium	PET*
Kanoria Chemicals & Industries, India	Formaldehyde
Liwa Petrochemical, Oman	Ethylene Dichloride*
Lotte Chemical UK, United Kingdom	PET*
MOL, Hungary	Hydrogen Peroxide, Propylene Oxide, Propylene Glycol*
Nayara Energy, India	Asset Development Plan for Petrochemical Units
Nirma, India	Linear Alkyl Benzene
P. T. Styrimo Mono (MHI cooperation), Indonesia	Ethyl Benzene - Styrene Monomer
Qatar Petrochemicals (QAPCO), Qatar	Low Density Polyethylene*
Qatar Vinyl Company, Qatar	Ethylene Dichloride - Vinyl Chloride Monomer*
Radici, Germany	Adipic Acid*
Reliance Industries, India	Linear Alkyl Benzene
Reliance Sibur Elastomers, India	Halogenated Isobutyl Isoprene Rubber
SABIC Polyolefine, Germany	High Density Polyethylene*
SASOL (tkIS South Africa cooperation), South Africa	n-Butanol, Detergent Alcohol, Methyl Isobutyl Ketone
Saudi International Petrochemical Co.(SIPCHEM), KSA	Poly Butylene Terephthalate (PBT) Resin*
Supreme Petrochem, India	Polystyrene
Tamilnadu Petroproducts, India	Epichlorohydrine, Linear Alkyl Benzene

*Main Contractor thyssenkrupp Industrial Solutions



Propylene Polypropylene Complex

Refinery Units

Our experience of working on the Refinery Units of some of the world's largest refineries, makes us a worthy engineering partner for specialized units in the Refinery Sector.

We have successfully partnered with India's leading oil refining majors for their refinery upgradations, capacity augmentations, refinery expansion and yield improvement programmes, which have also enabled them meet their commitment to environment and fuel emission norms.



Hydrogen plant for Refinery

Some of our major Refinery projects :

BASF, Belgium	Benzene-Toluene Extraction Unit*
Bharat Petroleum Corporation, Mumbai	Kerosene Hydrotreater, Naphtha Hydrotreater, Continuous Catalytic Regeneration Reformer
Kochi (GR Engineering Cooperation)	Continuous Catalytic Regeneration Reformer
BioNext, France	Biomass to Liquid (Gasification)*
Chennai Petroleum Corporation, Manali Refinery, India	Diesel Hydro Desulphurisation Unit (Revamp)
HPCL-Mittal Energy (HMEL), India	Fluid Catalytic Cracking Unit (Revamp)
Indian Oil Corporation, India	
Bongaigaon Refinery	Fractionation, Isomerisation Unit, Reformer Unit, Parex Unit - for Motor Spirit Quality Upgradation, Indmax Prime G Unit, Indmax Fluid Catalytic Cracking Unit, Gasoline Desulphurisation
Digboi Refinery	Naphtha & Reformate Splitter, Isomerisation Unit
Gujarat Refinery	VGO-HDT, ATF & FCC LPG Merox for Motor Spirit Quality Upgradation / Residue Upgradation, Sulfur Recovery Unit (Petrofac, Sharjah cooperation), DHDS DHDT VGO-HDT Units
Guwahati Refinery	Indmax Gasoline Splitter, Light Naphtha Splitter, Isomerisation Unit - for Motor Spirit Quality Upgradation
Panipat Refinery (L&T cooperation)	Diesel Hydro Desulphurisation Unit
Paradip Refinery	DHDT, VGO-HDT, Hydrogen Compression & Distribution System, Coker LPG Treatment Unit, BS VI Motor Spirit Quality Upgradation
Kuwait National Petroleum Corpn., Kuwait (both with International Services WLL cooperation)	Enhancement of local marketing & distribution services (Detailed Engineering), Hazop Studies
Mangalore Refinery and Petrochemicals, India	Visbreaker Unit (incl. Duplication), Crude Distillation Unit, Vacuum Distillation Unit, Gas Oil Hydro Desulphurisation Unit, PFCC Unit Wet Scrubber
Neste Oil Oyj, Finland	Hydrogen plant Reformer*
Numaligarh Refinery, India	PFCC Unit, LPG Treatment Unit, Gasoline Desulphurisation Unit, Naphtha Hydrotreating, Continuous Catalytic Reforming Unit and Isomerisation Units
Praxair India, India	Hydrogen plant (for Indian Oil Corporation, Paradip Refinery)
Saras Refinery, Italy (Parsons cooperation)	Mild Hydrocracker Unit
Titan Petrochemicals, Malaysia	Aromatics Extraction plant*

*Main Contractor thyssenkrupp Industrial Solutions



Clean Fuels & Refinery Yield Improvement Project

Caustic Soda-Chlorine

With over 40 million tonnes of Caustic Soda produced annually from plants we have built, our Group remains the world leader for Electrolytic Membrane Cell Caustic Soda plants with approximately 50% of the installed capacities worldwide, and nearly 78% of domestic capacities.

Our portfolio includes the BM and BiTAC technologies, and a variety of other technologies for the Caustic Soda-Chlorine sector.

Our state-of-the-art Generation V and VI 'zero gap' Membrane Cells offer a lower investment and operating expense outlay due to considerable energy savings, and a higher degree of reliability, safety and trouble-free operation.

Our new-generation NaCl ODC plants for the production of Caustic Soda using Oxygen Dipolarised Cathodes (ODC) technology offer as high as 30% savings in energy, a moot factor in investment considerations. Complementing our initiatives in this field, is the attractive solution we offer for the recovery of Chlorine from Hydrochloric Acid, in our HCl Electrolysis process plants.

With grassroot, capacity expansion, conversion and upgradation projects, we remain the only consultant to offer 'under-one-roof' solutions for Caustic Soda-Chlorine across the world.

Membrane Cell of Caustic Soda Plant

Some of our major Caustic Soda-Chlorine projects in India :

Andhra Sugars	Capacity Expansion
Bihar Caustic & Chemicals	Capacity Expansion
Chemplast Sanmar	Capacity Expansion
DCW	Expansion / Conversion to Membrane Cell
GACL - NALCO Alkalies & Chemicals (GNAL)	Grassroot Complex
Grasim Industries / Aditya Birla Group	Grassroot Complex, Conversion to Membrane Cell, Membrane Cell Upgradation, Capacity Expansion
Gujarat Alkalies and Chemicals	Conversion to Membrane Cell, Grassroot Complex, Capacity Expansion
Indian Rayon and Industries	Grassroot Complex, Capacity Expansion
Jayshree Chemicals	Conversion to Membrane Cell
Kutch Chemicals	Grassroot Complex
Kanoria Chemicals & Industries	Grassroot Complex, Conversion to Membrane Cell, Capacity Expansion
K. P. R. Industries (India)	Grassroot Complex
Punjab Alkalies & Chemicals	Grassroot Complex, Conversion to Membrane Cell, Capacity Expansion
Reliance Industries (IPCL)	Grassroot Complex
Search Chem Industries / United Phosphorus	Grassroot Complex / Relocation of Caustic Soda Complex
Sree Rayalaseema Alkalies & Allied Chemicals	Capacity Expansion



Membrane Cell Caustic Soda-Chlorine Complex

Inorganic Chemicals & Minerals / Metals

Our experience extends to a significant number of challenging projects covering various Inorganic Chemicals like Chlorine Dioxide, Spray Dried Silica, Polyaluminium Chloride, Potassium Hydroxide, Hydrogen Peroxide and Sodium Chlorate.

We offer Basic Engineering services for your Chlorine Dioxide plants.

We are also associated with large scale Zinc Smelting and Alumina Refining projects.



Chlorine Dioxide Plant

Some of our major Inorganic Chemical & Metallurgical projects :

Andhra Sugars, India	Polyaluminium Chloride
Brasali, Indonesia	Hydrogen Peroxide*
Gujarat Alkalies and Chemicals, India	Hydrogen Peroxide, Polyaluminium Chloride, Sodium Chlorate, Caustic Potash
Hindustan Organic Chemicals, India	Hydrogen Peroxide*
Hindustan Zinc, India	Zinc Smelter (incl. Duplication)
Insilco, India	Spray Dried Silica
Kanoria Chemicals & Industries, India	Polyaluminium Chloride (Relocation)
MCW, Israel	Hydrogen Peroxide*
Namzinc, Namibia	Zinc Refinery (Conversion)
NALCO, India	Alumina Refinery
Sirpur Paper Mills, India	Chlorine Dioxide
Utkal Alumina, India	Alumina Refinery (incl. Expansion)
Umicore Anandeya India, India	Zinc Oxide (Expansion)
West Coast Paper Mills, India	Chlorine Dioxide

*Main Contractor thyssenkrupp Industrial Solutions



Zinc Smelter



Low-Temperature Storages

Our initiatives in plant design and construction are complemented by the special attention that we pay to the storage installations in and around your chemical manufacturing facilities. Involving critical safety and design considerations to account for their low operating temperature and atmospheric pressure requirements, these chemicals very often constitute the feedstock for your chemical plants.

With over 100 Cryogenic installations and Tank Farms with associated facilities and cross-country pipelines in India and abroad, including some in the most challenging locations, and our state-of-the-art technology, we are easily one of the preferred partners for implementation of your storage requirements on LSTK basis. We have engineered and implemented Cryogenic Storages and Tank Farms for Ammonia, Benzene, LPG, Propylene, Ethylene, Propane, Butane etc. And in line with our single-point approach, we also undertake repair and restart projects.

Cryogenic LPG Storage Tanks
with refrigerated pipelines

Some of our major Cryogenic Storage & Tank Farm projects :

AB Achema, Lithuania*
 Coromandel International, India
 Deepak Fertilisers and Petrochemicals, India
 EID Parry, India
 Fertilizers & Chemicals Travancore (FACT), India
 Formosa Chemicals and Fibre Corpn., Taiwan
 Godavari Fertilisers and Chemicals, India
 Gujarat State Fertilizers & Chemicals, India
 Indian Farmers' Fertilizer Cooperative (IFFCO), India
 Indo Gulf Corporation, India
 Krishak Bharati Coop. (KRIBHCO), India
 MATIX Fertilisers & Chemicals (Essar Projects [India]), India
 Mangalore Chemicals & Fertilizers, India
 National Fertilizers, India
 OMNIA Fertilizers, South Africa
 Paradeep Phosphates, India (largest Indian installation in single location)
 QAFCO, Qatar*
 Rashtriya Chemicals & Fertilizers, India
 Reliance Industries, India
 SHV Energy, India (Propane & Butane Tanks)
 Sanjana Cryogenics (for Hindustan Lever Chemicals), India
 Shiraz Petrochemicals, Iran
 Tata Chemicals, India
 Zuari Agro Chemicals, India
 Dialog Holdings SDN BHD, Malaysia (Propylene Storage Tank)*
 Tiszai Vegyi Kombinat RT., Hungary (Ethylene Storage Tank)*
 Bharat Petroleum Corporation, India (LPG Storages with Refrigerated Pipelines)
 Farabi Petrochemicals, Saudi Arabia (Benzene Storage Tank)

*Main Contractor thyssenkrupp Industrial Solutions



Cryogenic Ammonia Storage Tanks with associated facilities



Industrial Plants

In addition to our integrated design approach featuring specialised engineering services with appropriate validation for your Pharmaceutical projects, we also regularly undertake assignments for a variety of Industrial plants and Offsites / Utilities. Our experience covers such diverse assignments as Captive Power plants, Air Separation units and plants for Fatty Alcohol, Glycerine Distillation, Hydrogen - Nitrogen, Cement, Cosmetics, Ion and Polyester Resins, Water-borne Paints etc., as well as Offsites & Utilities for all mainstream chemical plants.

Fatty Alcohol Complex

Some of our major Pharmaceutical projects :

Agrevo India, India	Agrochemical plant
Colorcon Asia, India	Excipients facility
Madaus Pharmaceuticals, India	Agiolax Formulation plant
Torrent Gujarat Biotech, India	Penicillin G Formulation plant
US Vitamins, India	Bulk Drug plant

Some of our major Industrial plants :

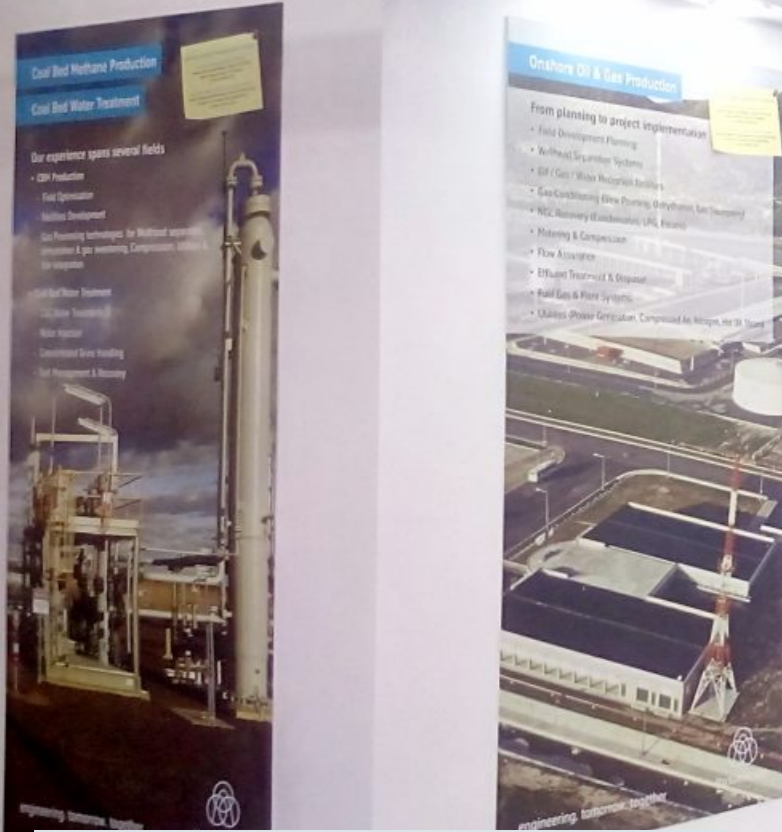
AkzoNobel India, India	Water-borne Paints
Bombay Oxygen, India	Air Separation Unit
DCW, India	Synthetic Iron Oxide Pigment plant
Dresser-Rand India, India (for PPN Power Company)	Gas Boosting Station
Eco Oils SDN BHD, Malaysia	Spent Bleached Earth
Fujairah Cement Industries (Polysius AG cooperation), UAE	Cement plant
LANXESS India, India	Ion Resin plant
L'Oreal India, India	Cosmetics plant (Expansion)
Maroc Phosphore, Morocco	Infrastructure project, Electrical Engineering Services
Reichhold India, India	Polyester Resin plant, Resin Storage Tanks
Rothe Erde, India	Gear / Bearings factory
Siemens (for Gujarat Torrent Energy Corpn.), India	Balance of Plant facilities for Power plant
Thai Oleochemicals, Thailand	Fatty Alcohol*
thyssenkrupp Electrical Steel, India	Hydrogen - Nitrogen plant
Umicore Autocat India, India	Automotive Catalyst plant
VVF Limited, India	Hydrogen, Fatty Alcohol, Saponification, Glycerine Distillation

*Main Contractor thyssenkrupp Industrial Solutions



Hydrogen-Nitrogen Utilities for Steel Plant

engineering. tomorrow. together



Presence

Our presence at leading Chemical and allied industry trade fairs gives us the opportunity to showcase our capabilities to our customers and business associates. Our website www.thyssenkrupp-industrial-solutions-india.com is updated regularly for organisational developments and our press releases. We are a member of a number of key industry associations.



Giving back to the Industry

Our technology symposiums and our company literature update you with regard to developments in our technology, plant experiences and our organisation. Our experts are widely sought out by the industry and academia for their views and experiences. In keeping with our commitment to the industry, we support events and meets of note.

Awards

A Star Export House, our progress has been acknowledged with a number of export and other awards from nodal trade associations.

We continue to contribute significantly to our group, where our performances have received recognition through group awards and citations.

The ultimate measure of our success however, lies in the satisfaction of our esteemed customers. It is epitomized by their continued support, compliments and the trust that they place in us, when awarding us contracts for their plants and projects, that we are privileged to implement.



Industry Recognition

It is a matter of pride to recount the praise and recognition we have received at the industry level, with awards from the Engineering Export Promotion Council of India (EEPC), the Federation of Import Export Organisations (FIEO) and the Indo German Chamber of Commerce (IGCC).

We have been feted for our performances at the group level as well, with Best Company and Best Subsidiary awards.

We are also the proud recipient of a Sustainability award (IGCC) and a number of Communication awards.



Export Awards from the Federation of Import Export Organisations (FIEO) & the Engineering Export Promotion Council of India (EEPC)

Corporate Citizenship

We take our responsibility as a Corporate Citizen very seriously. The Corporate Social Responsibility (CSR) initiative mandated by the Government of India allows us to give full expression to this responsibility. Our CSR projects are steered by a Core CSR Team and driven with voluntary employee engagement. We have been honoured to extend donations to leading state-owned hospitals and academic institutions, which serve society.



Giving Back to Society

Our CSR initiatives have extended help to some of the country's most deserving hospitals, through the donation of critical-care medical equipment.

We have also been privileged to further the cause of education and health amongst the underprivileged and the girl child.

We are supported in our philanthropic endeavours by the Rotary Clubs and like-minded individuals.



Our CSR activities benefit a number of hospitals and schools in the social sectors of India