



Expertise with Passion.

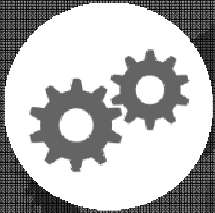
Citec and our operations in India

Martin Strand, CEO

February 21, 2017



Our know-how in a nutshell



- Citec provides **consulting and multi-discipline engineering services**



- Citec delivers a complete range of **documentation and information management services**



- Citec is a trusted partner within industry projects. Our **IPMA certified project managers** ensure high quality in complex engineering projects

Citec in brief



30+
years of
experience



Offices in
11
countries



1300
specialists



Projects to
more than
120
countries

Every country offers the complete service portfolio



**Global network delivery model
Local services, global teams**



Citec in India – key facts

- **Established in 2004**
- **500+ Specialists and Engineers under a multidiscipline resource base**
- **Offices in Mumbai, Pune and Chennai**
- **Operates in both domestic and international markets**
- **ISO 9001 and 14001 quality system certification**

Talented and modern organisation



We have full-fledged modern facilities in all our offices across Mumbai, Pune and Chennai



Video conferencing facility: Inter-office, cross country meetings

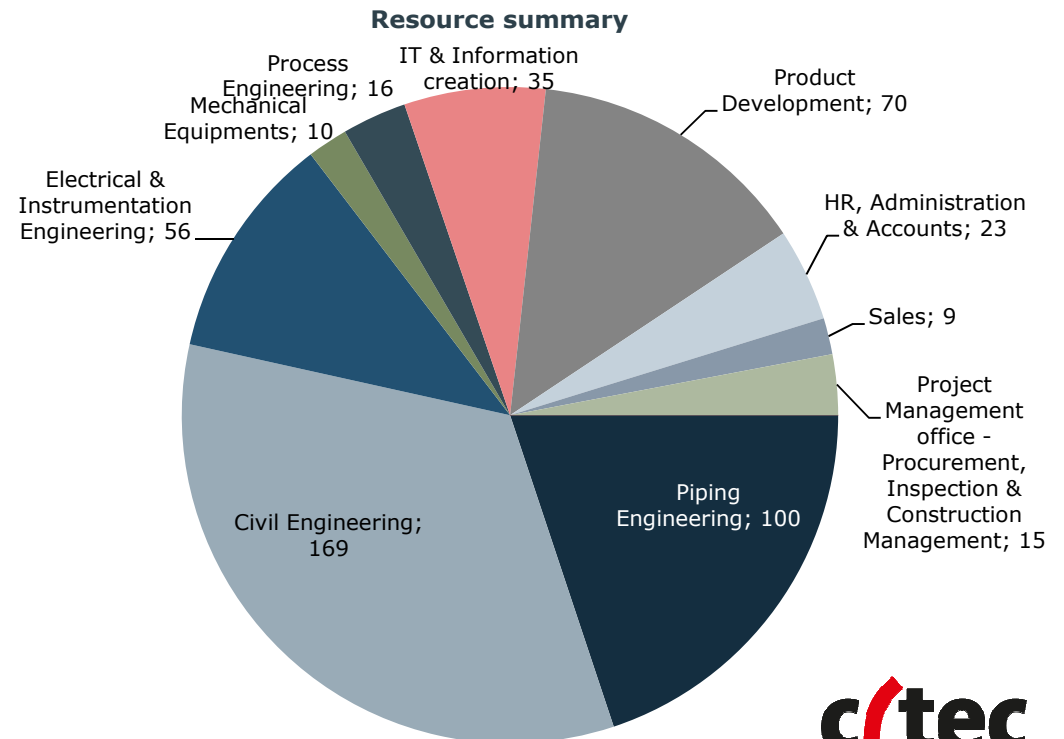
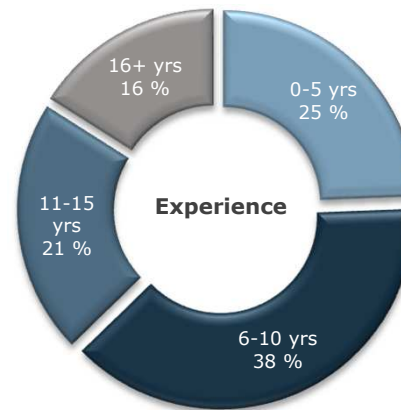
Skype communicator: All Citec group employees and customers are connected with Skype communicators

Microsoft Live meeting: Meetings with external participants, Internal virtual meetings

Citec dot: All project documents are stored in Pro-Arc which is a centralized documents management system

VoIP: All experts and coordinators are connected with desk phones globally

Our people make the difference!
We offer a unique combination of technical expertise, communication know-how and skilled people inspired by quality, reliability and team spirit.



Our presence in selected industry areas

Energy & Civil	Oil & Gas	Process	Manufacturing
<p>Thermal Power Boiler and Gas turbine plants running on gas, bio-fuels (bio-power) & coal (single cycle, combined cycle, cogeneration applications)</p> <p>Engine Power Fuel types (HFO, LFO, gas) in various configurations (single cycle, combined cycle, cogeneration applications)</p> <p>Renewable Power Solar, Waste to Energy and Bio-mass</p>	<p>Offshore Fixed & floating platforms, FPSO, FSU, FLNG</p> <p>Onshore Oil field and refinery applications Pipe Lines, LNG Receiving /Export Terminals</p>	<p>Fertilizers Ammonia, Urea</p> <p>Cement</p> <p>Steel</p> <p>Pulp & Paper</p> <p>Speciality Chemicals</p> <p>Water Treatment Effluent treatment, Desalination, Denim water plant</p>	<p>Automotive On/off Highway vehicles, Fork Lift, Reach Stacker, Container trucks/ Trailors, Truck Mounted Cranes, Military Vehicles</p> <p>Material Handling Harbour Cranes, Container lifting equipments and Cranes, Bulk Handling equipments & solutions, Construction equipments, Conveying equipments</p> <p>Marine Deck mounted equipments & machinery, Offshore Cranes, Dry Cargo segment, Ramps – Stern and Quarter ramps, Mooring and loading systems</p>

Europe & India delivery model

- **Jointly understood and well-defined global way of working for global projects;** with common procedures, company standards and work instructions, defined minimum acceptable requirements, aligned and agreed cooperation principles and common tools.
- **Skilled, experienced and motivated projects teams** capable of managing multicultural interdisciplinary engineering projects.



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SUCCESSFULLY DELIVERED PROJECT EXAMPLES – EUROPE & INDIA DELIVERY MODEL



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Project cases – examples

Ethylene cracker plant

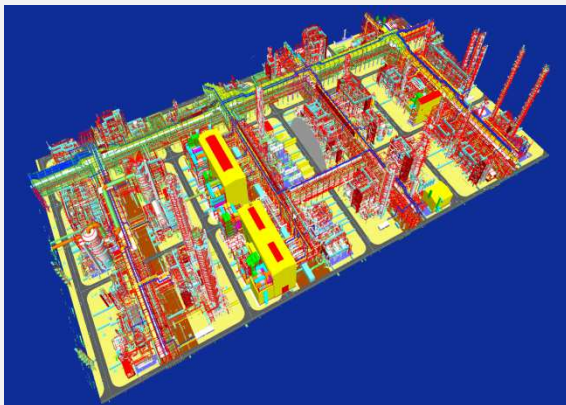
Citec Customer: Linde engineering India

End Customer: Sibur, Russia

Project location: Tobolsk, Russia

Capacity: 1.5 million tonnes of Ethylene

Total Project Cost: \$9.5 billion



SCOPE OF WORK:

Detail engineering for plant design disciplines (piping layout & design, pipe stress analysis, civil engineering, steel structures), E&I layout & design for areas:

- Process area
- Utility area
- Cooling water area
- Flare area
- Storage area

Alstom Narva

Citec Customer: Alstom, France

End Customer: Eesti Energia

Project location: Narva, Estonia

Capacity: 2x300 MW CFB Power Plant

Total Project Cost: €950 million



SCOPE OF WORK:

Detail engineering for:

- Mechanical
- Piping
- Electrical
- Automation

Valmet Tissue paper machine

Citec Customer: Valmet Sweden

End Customer: İpek Kağıt

Project location: Manila, Turkey



SCOPE OF WORK:

Multi-discipline engineering design. The scope activities includes,

- Equipment modeling
- Layout, piping
- MTO
- Isometric
- Civil input documents
- Cable routing
- Inst. Hook ups
- Circuit diagrams
- I/O lists

Project cases - examples

Waste to Energy power plant

Customer: Ramboll

End customer: Westenergy

Project Location: Mustasaari, Finland

Project description: The plant extracts energy from the source-separated combustible waste, provided by the company's stakeholders, for electricity and district heat production.



SCOPE OF WORK:

- Complete civil engineering; structural concrete design, structural steel design, architectural and envelope design
- Building electrical design, public procurement, HVAC/plumbing design, geotechnical design and fire case simulation (CFD). All local authority coordination with permitting departments and the fire department.
- Site supervision, construction management and overall 3D-model coordination

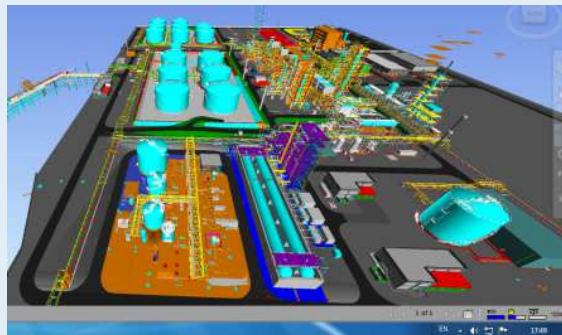
Bio-propane facility

Customer: Confidential

End Customer: Confidential

Project Location: Rotterdam

Project description: Brown field project for adding Bio-propane facility in existing plant



SCOPE OF WORK:

- Detailed Design of Piping for 411 lines (UG & AG) including equipment Modeling
- Pipe stress calculations

Sapphire

Customer: Confidential

End customer: Confidential

Project Location: Piteå, Sweden

Project Description: Brown field project for updating existing facility in Sweden for production of rosin as a new product



SCOPE OF WORK:

- Conceptual and Detailed Design of Piping for 320 lines including new equipment Modeling and updatation of existing equipments
- Tie point location and Tie point Isometrics
- Pipe stress calculations

Project case - LNG terminal in Tornio, Finland



Location:

Tornio, Finland

Customer:

MANGA/ Wärtsilä Finland & Norway

Project

LNG receiving terminal

Citec scope:

- Engineering management
- Layout design
- Interface management
- 3D model management
- Piping design
- Fire fighting system design
- Civil structures (LNG tank excluded)
- Terminal electrification design





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KEY PROJECTS – CITEC INDIA



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Project cases

Yanbu Pipeline Project

Citec Customer: HANWAH engineering and construction company

End Customer: MARAFIQ

Project Location: Saudi Arabia

Specifications: 20" ALCO and 24" HFO fuel pipelines from Yanbu crude oil terminal to Yanbu 2 Power Plant, length 19 KM

Total Project Cost: \$1.05 billion



SCOPE OF WORK:

Complete Multidiscipline engineering services for:

- Design of process, piping, electrical, instrumentation and fire fighting
- Preparation of Design basis scoping paper (DBSP) for each pipeline with Saudi Aramco standards & getting them approved from Saudi Aramco
- Production of all detail engineering and IFC deliverables

Shah Gas development project

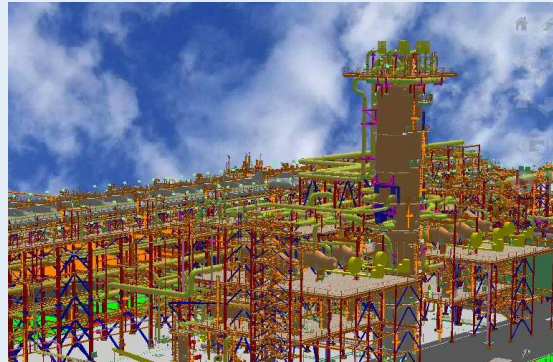
Citec Customer: Saipem India Projects LTD

End Customer: Al Hosn Gas

Project Location: Abu Dhabi

Capacity: 1,000 MMSCFD of feed gas

Total Project Cost: \$10b



SCOPE OF WORK:

Complete Multi-discipline Engineering Services for Unit 731-734 Solvent Regeneration Piping, Electrical, Civil & Instrumentation Engineering

Nabinagar Thermal power plant

Customer: Alstom Bharat Forge Power Limited, India

End Client: Nabinagar Power Generating Company Private Limited

Project Location: Bihar, India

Fuel Type: Coal

Capacity: 3 x 660 MW

Total Project Cost: €1.8bn



SCOPE OF WORK:

Description : Detailed piping & Support design incl Stress analysis for Turbine building Piping & Supports within ABFPL scope

Batches Included : A1 (partly), A2, A3, B1, B2, B3, C1, D1, K1, K2, B4, C2, P1

Total no of Pipes : approx 1524 for Unit 1 of 660 MW

Project cases

Ammonia plant, Donaldsonville US

Citec Customer: ThyssenKrupp India

End Customer: Classified

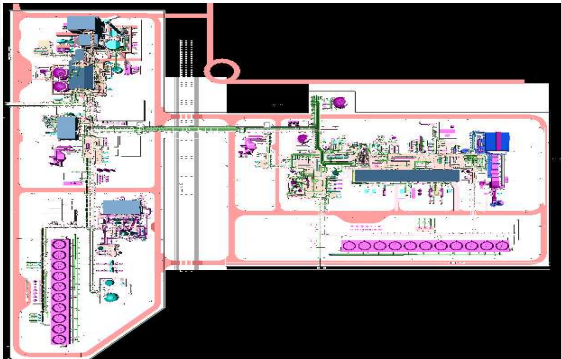
Project Location: Donaldsonville, US

Annual Capacity:

Ammonia: 1274000 tons

Urea: 1348000 tons

Total Project cost: \$2.1 billion



SCOPE OF WORK:

Multi-discipline detail engineering for units mentioned below:

- Desulphurization area
- Ammonia recovery and HrU area
- Methanation Dearator area (Boiler feed water)
- Compression area,
- Waste Heat recovery & CO conversion area
- Ammonia synthesis & refrigeration area
- Boiler package area
- Steam generation area
- Urea synthesis area
- Urea granulation & refrigeration area
- Pipe rack 0503

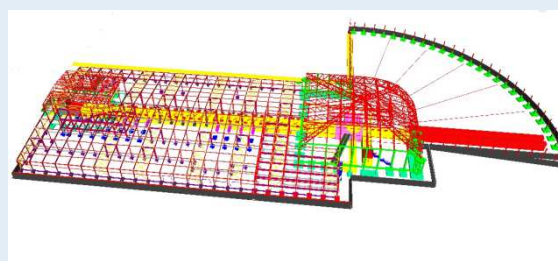
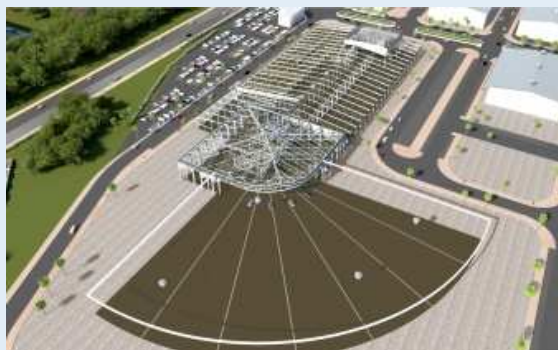
NATRIP APSL building

Customer: National Automotive Testing and R&D Infrastructure Project (NATRIP), Chennai

Project Location: Chennai, India

Specifications: Advanced Passive Safety Lab Building of Area - 15,000 Sqm (Approx).

Total Project Cost: € 197 million



SCOPE OF WORK:

EPCM Consultancy Services i.e FEED, Detail engineering, procurement assistance & construction management consultancy for PEB & related civil works for APSL building

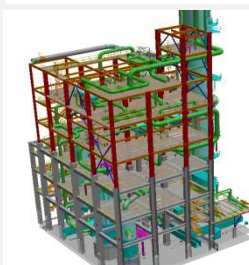
AGR & SRU plants

Citec Customer: Linde engineering India. Pvt. Ltd

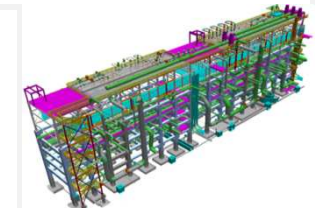
End Customer: Reliance

Project Location: Jamnagar, India

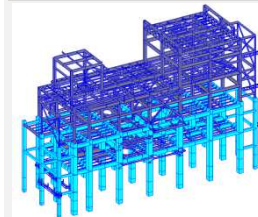
Total Project Cost: € 5.6 million



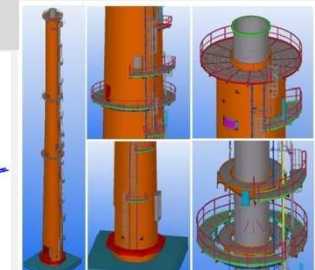
Technological Structure
Size : 34 x 22 x 40 m
Concrete : 2700 cu.m
Structural Steel : 670 MT



Pipe Rack Structure
2 pcs of Size: 48x11x29m
Concrete : 1570 cu.m
Structural Steel : 250 MT



Technological Structure
Size : 52 x 16 x 40.3 m
Concrete : 1570 cu.m
Structural Steel : 650MT



RCC Chimney
Size : OD 8.1m, H=117m
Concrete : 1400 cu.m
Structural Steel : 150 MT

SCOPE OF WORK:

Engineering services for civil & structural detail engineering work of Acid Gas Removal (AGR) plants (2 trains, DTA & SEZ) & for Sulphur Recovery Unit (SRU) plants - total = 4 trains (2 each in DTA & SEZ)

India is in Citec's DNA

- 
- **Some fail with operations in India whereas we have succeeded** - this is one of our key competitive advantages on the global market.
 - **More than 1/3 of Citec's personnel comes from India. We aim to expand this to 2/3.**
 - **50% of Citec's workload is executed from India. We see India as a cost-efficient, high-quality and competent operation.**

Key regional success factors – Citec India

- **Strong recruitment base.** Impressive growth – from 12 employees to 500+
- **Local knowledge and expertise** – constant development
- **Strong local management and leadership culture** – low attrition rates
- **Active sales efforts. Strong customer base. International footprints.**
- **Global project delivery with other Citec countries** – together we win on the global market

“Head office headaches”



- Salary and cost levels are increasing in India – how to stay competitive on the global market when the price pressure is huge?
- Small or midsize European companies have a hard time to be recognized among global Fortune 500 companies in India





THANK YOU!

