



AKSHA
Engineering & Consultancy

Services Industries:

- Oil & Gas
- Petrochemicals
- Refinery
- Metals & Mines
- Pharmaceuticals
- Power
- Fertilizer
- Polymers & synthetic Fibers
- Food Products
- Beauty & Personal Products

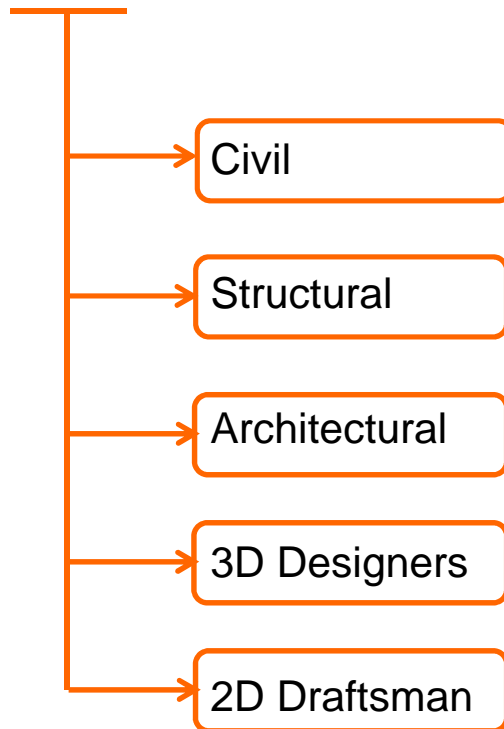


Services:

- Feasibility Study
- Feed Engineering
- Basic Engineering
- Detail Engineering
- Maintenance & Modification



Disciplines:



Key Strengths:

- Experienced staff - upstream and downstream (min. 10 yrs.)
- Engineers – Min. qualification M.Tech (Structural Engineering)
- Ability to handle projects of 2500 man-hours / month
- Software Competency:
 - Staad.Pro
 - RCDC
 - Sacs
 - Tekla
 - Auto Cad

Office Facility:

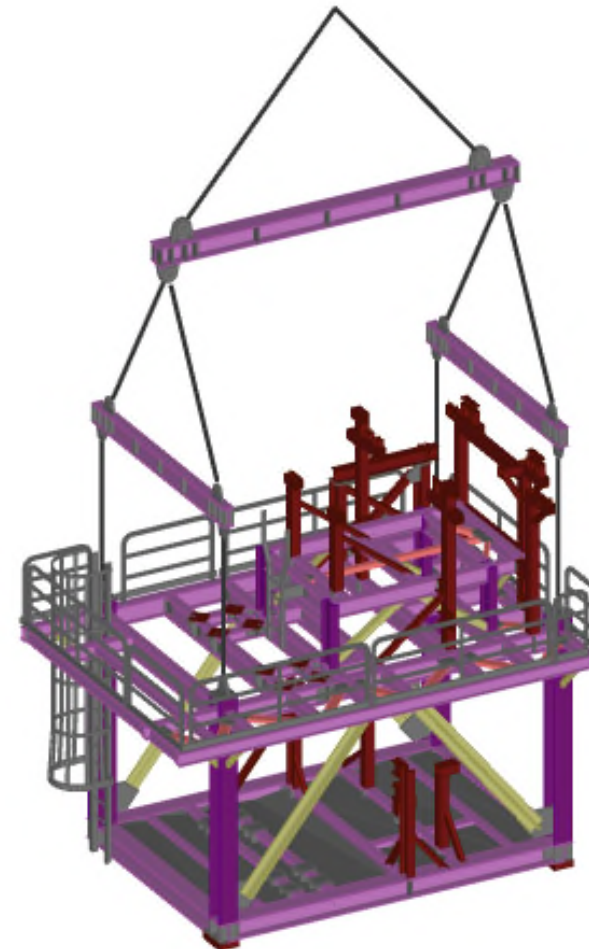
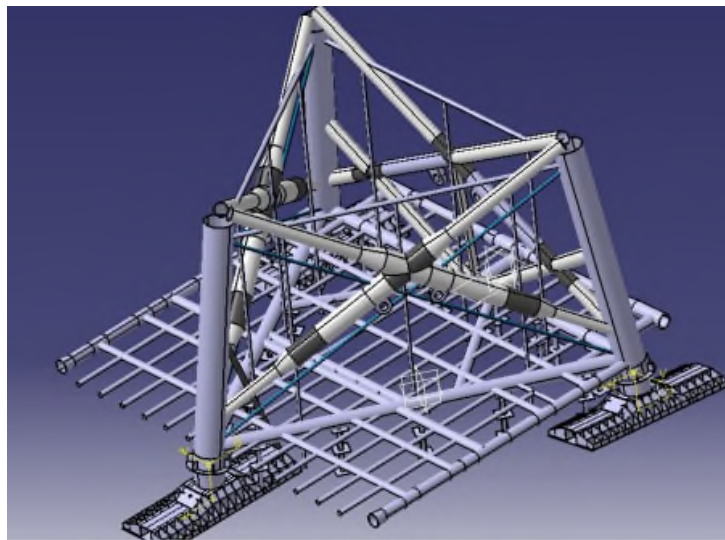
- Equipped with all modern facilities for office, workstations, conference room
- Workstations with individual VC facility
- Dedicated server
- All workstation connected to server with LAN
- Data security implemented. Outside company login restriction.
- Data backup facility
- Power backup facility



Experience and Capabilities

Offshore

- MEG module, Sand accumulator skid
- DNV, ABS, Nobel Denton, API, Norsok, Euro codes, American Codes
- Equipment Skids, Modular structures

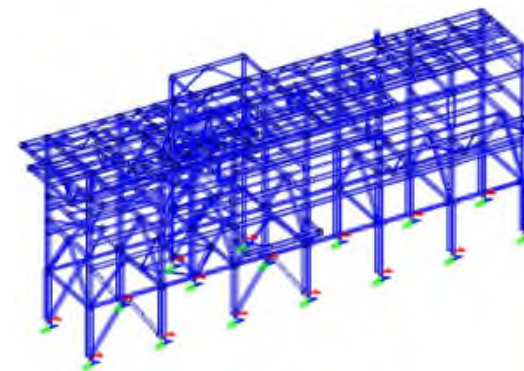
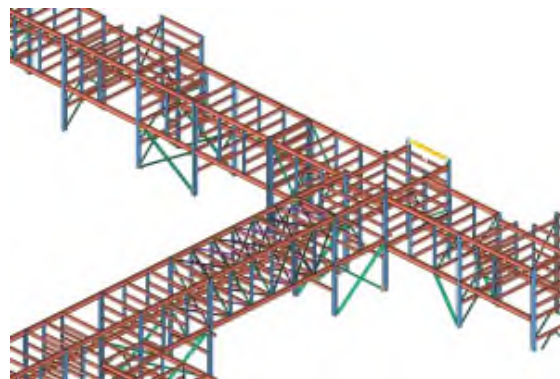
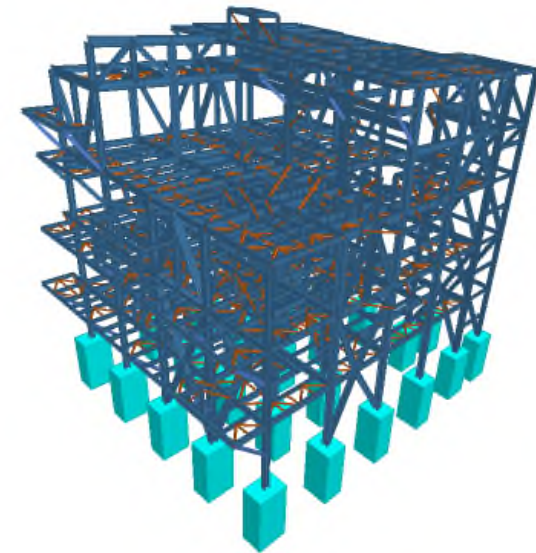




Experience and Capabilities (Cont..)

Onshore

- Central Control Room (Blast resistant structure)
- Substation
- Process Structures
- Pipe racks
- Stack
- Workshops, Ware House

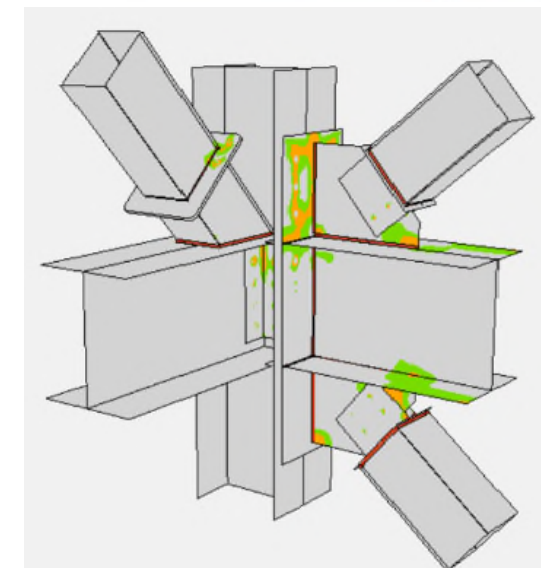
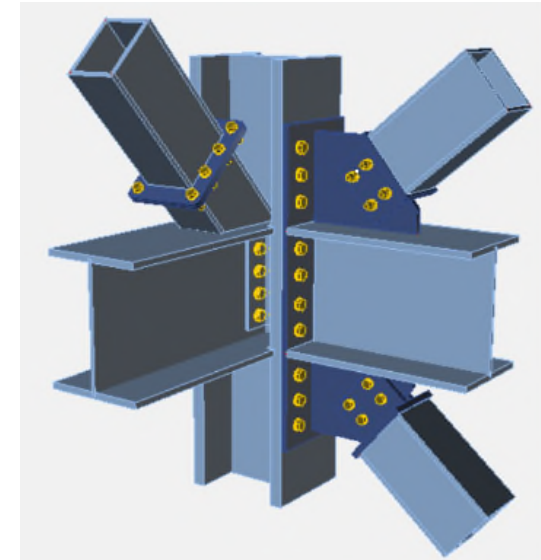
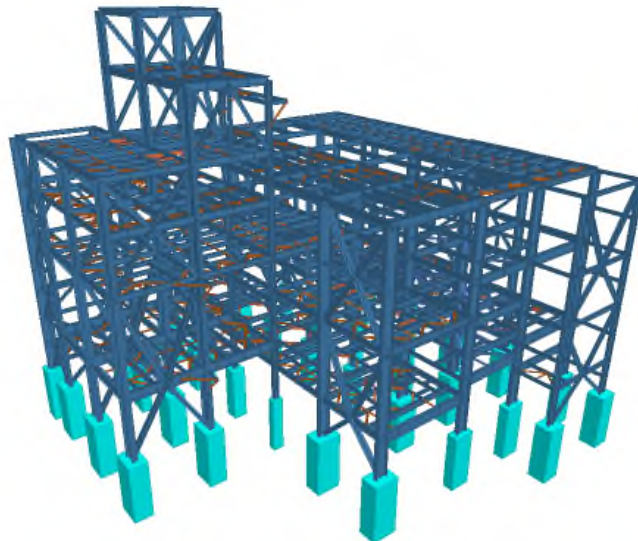




Experience and Capabilities (Cont..)

Onshore

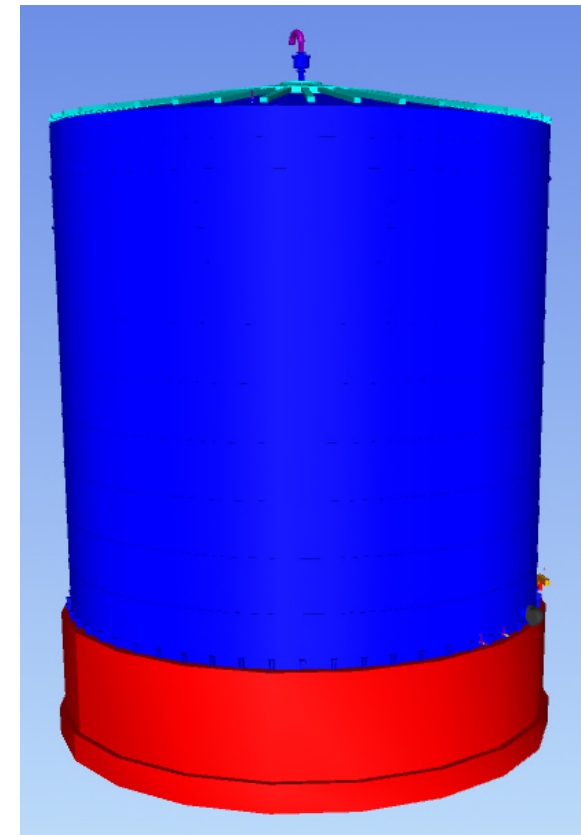
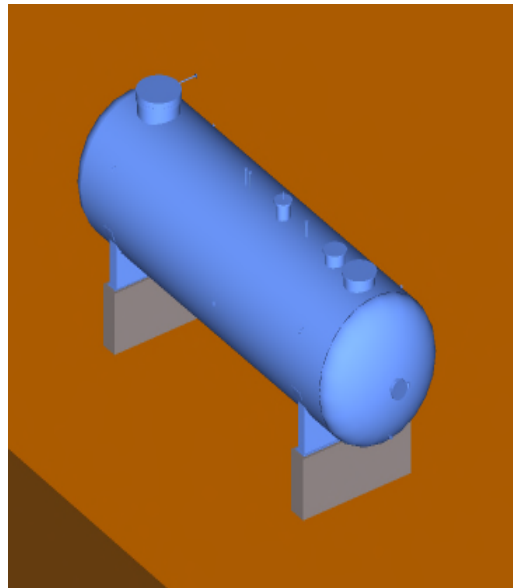
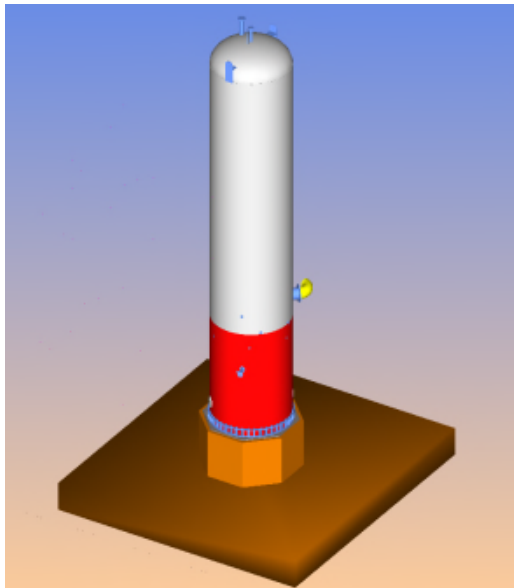
- Equipment supporting structure
- Connection design – American Codes ,
EuroCode, Indian codes
- Pipe Supports



Experience and Capabilities (Cont..)

Onshore

- Heavy equipment foundation
- Pump & compressor foundation
- Dynamic machine foundation
- Tank foundation
- Piles and rafts foundations





Experience and Capabilities (Cont..)

Structural Analysis

- Non-Linear Analysis
- Finite Element Analysis
- Seismic / Dynamic Analysis
- Vibration Analysis
- Blast Analysis
- Wave Load Analysis
- Sea Transportation
- Road Transportation
- Load-Out Analysis
- Lifting Analysis
- Fatigue Analysis

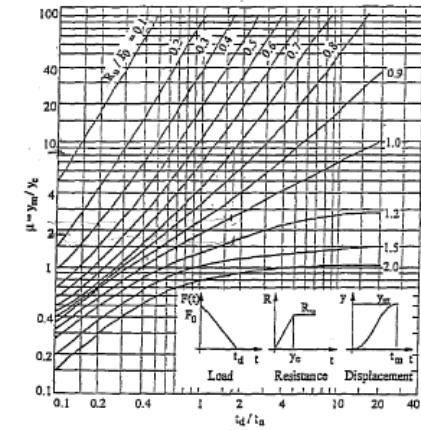
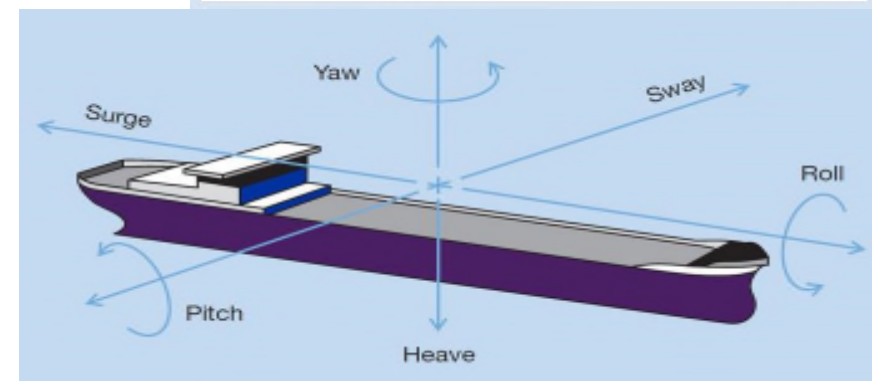
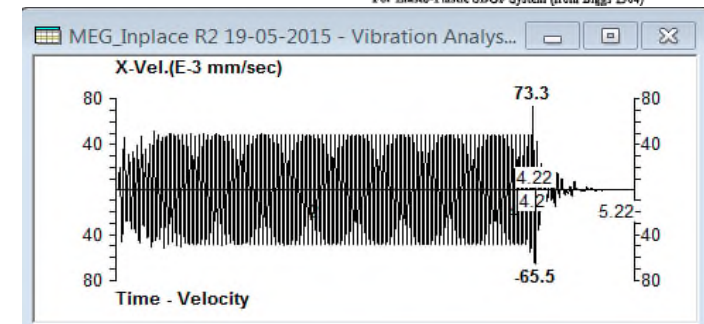


FIGURE 6.6: Typical Graphical Solution Chart
For Elasto-Plastic SDOF System (from Biggs 1964)



Key Projects Executed:

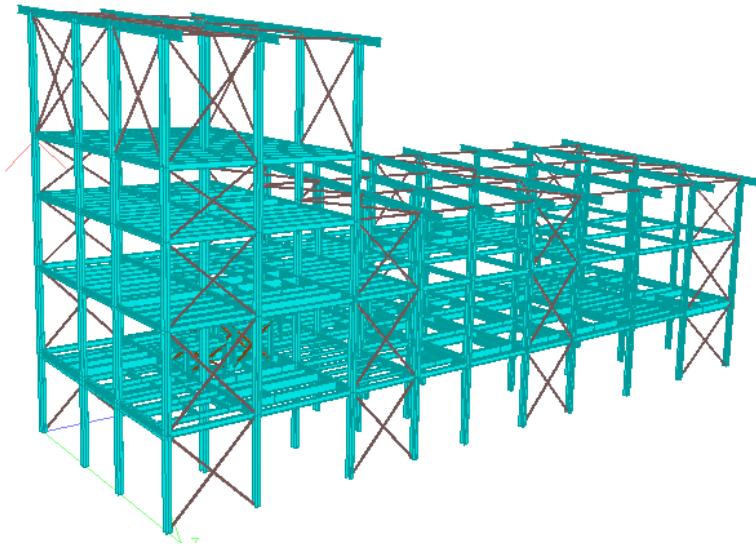
Hyderabad Fuel Farm Expansion- Ongoing



- 21m dia. X 18 m high tanks (3 No.s)
- Highly flammable Jet fuel content
- Multidisciplinary project
- IIT approval of design
- Indian Codes

Key Projects Executed: (Cont..)

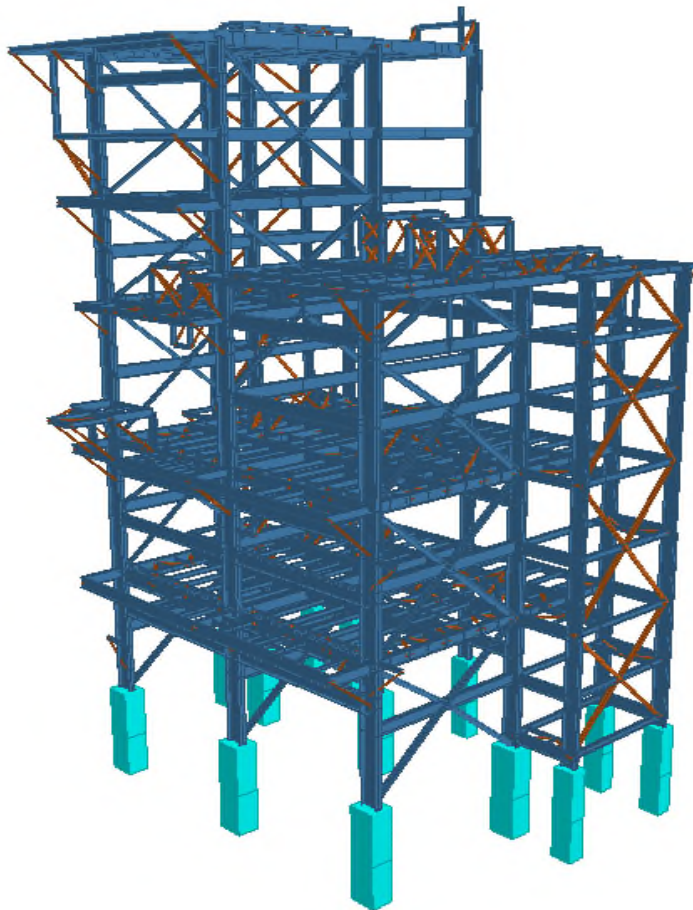
Bio Diesel Production Plant



- Structure: Main Production Plant
- Dimensions: 40 m X 16 m X 25 m
high, 4 decks
- Design codes: BS 5950:2000
- Analysis: In-place, wind and seismic
- Design Tool: Staad.Pro
- Structural steel Quantity: 580 Tons

Key Projects Executed: (Cont..)

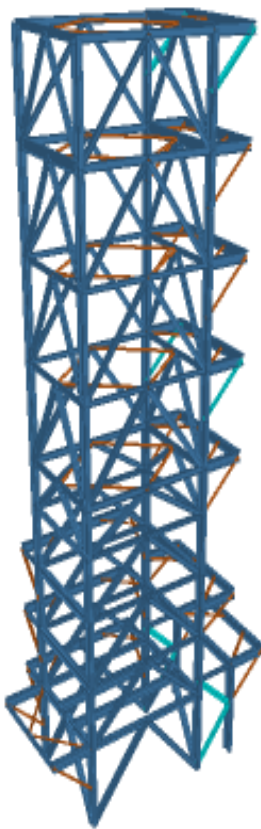
Sulphate Removal structure



- Structure: SRU Main Plant Structure
- Dimensions: 18 m X 12 m X 35 m high, 7 decks
- Design codes: IS800:2007
- Analysis: In-place, wind and seismic
- Design Tool: Staad.Pro
- Structural steel Quantity: 325 Tons

Key Projects Executed: (Cont..)

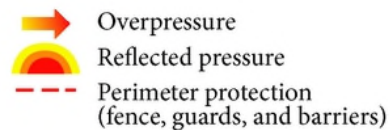
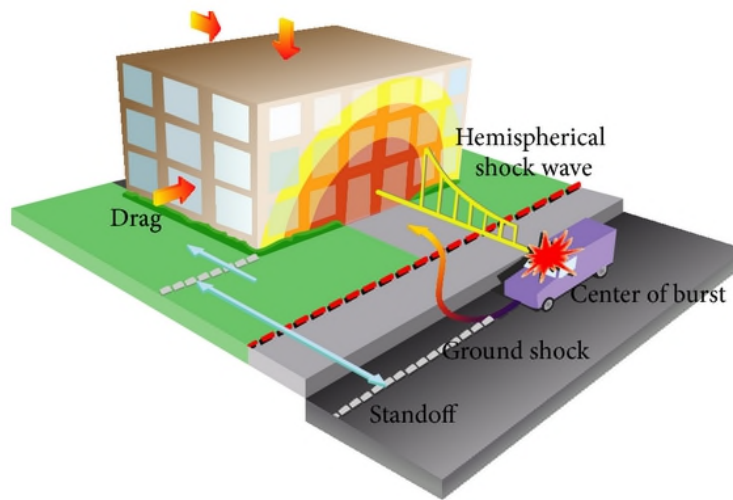
Heater Structure



- Cast Air Pre-Heater – 216 tons
- Duct dia. - 2.650m
- Structure – 7m X 9 m X 45 m tall
- Slender structure with heavy ducting
- BS-EN 1993 – Euro code 3

Key Projects Executed:

G + 1 Blast Resistant Building



- 10 m x 21 m x 10 m high
- G+1 Structure
- Blast load – 3 psi for 0.06 sec duration, low damage category design
- ASCE - Design of Blast Resistant Buildings in Petrochemical Facilities
- ACI 318-11, "Building Code Requirements for Structural Concrete"

Key Projects Executed: (Cont..)

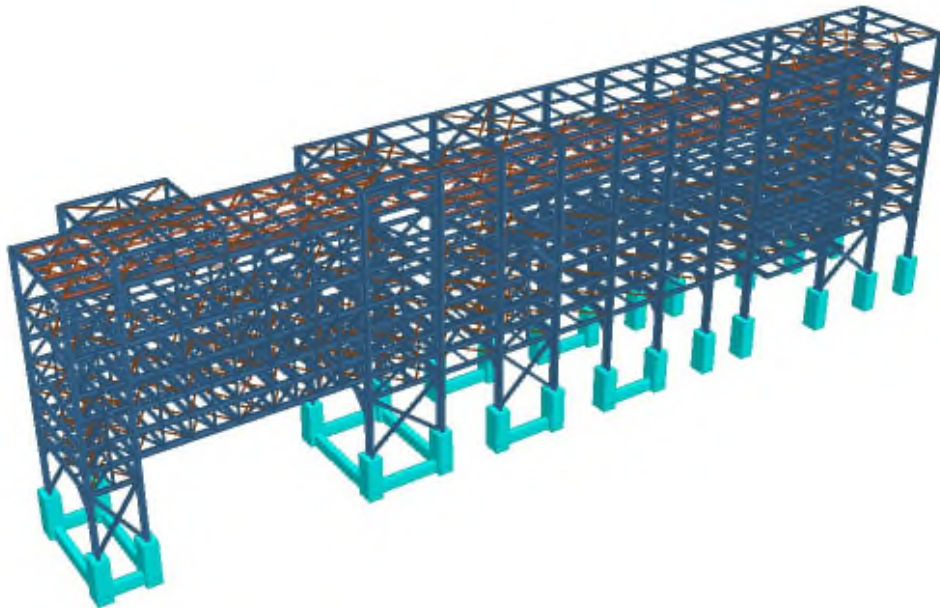
Offshore MEG module / Skid



- Structure :MEG Module (MRU Package)
- Dimensions :13.0 m x 11.5 m , 14 m High, 4 decks
- Design codes: Eurocodes, ISO codes
- Analysis Types: In-place, load-out, sea transportation, lifting, fatigue, vibration
- Design Tools: STAAD. Pro
- Module dry weight : 350 Tons
- Structural Steel Qty : 185 Tons

Key Projects Executed: (Cont..)

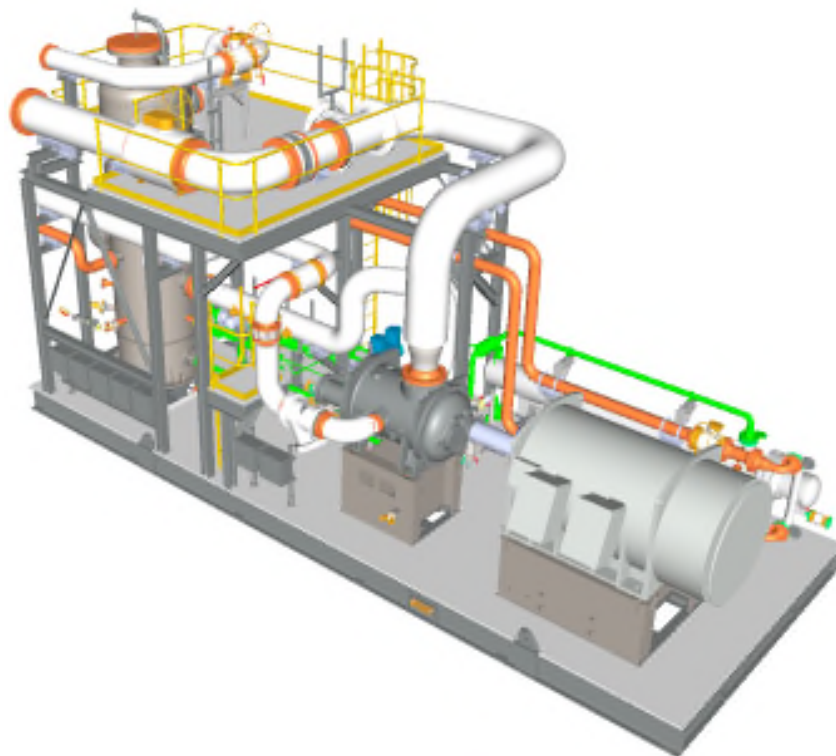
Main Piperack



- Structure: Main Piperack
- Dimensions: 410 m X 10 m X 24 m high, 7 tiers
- Design codes: IS800:2007
- Analysis: In-place, wind and seismic
- Design Tool: Staad.Pro
- Structural steel Quantity: 2500 Tons
- Foundation Quantity: 725 piles

Key Projects Executed: (Cont..)

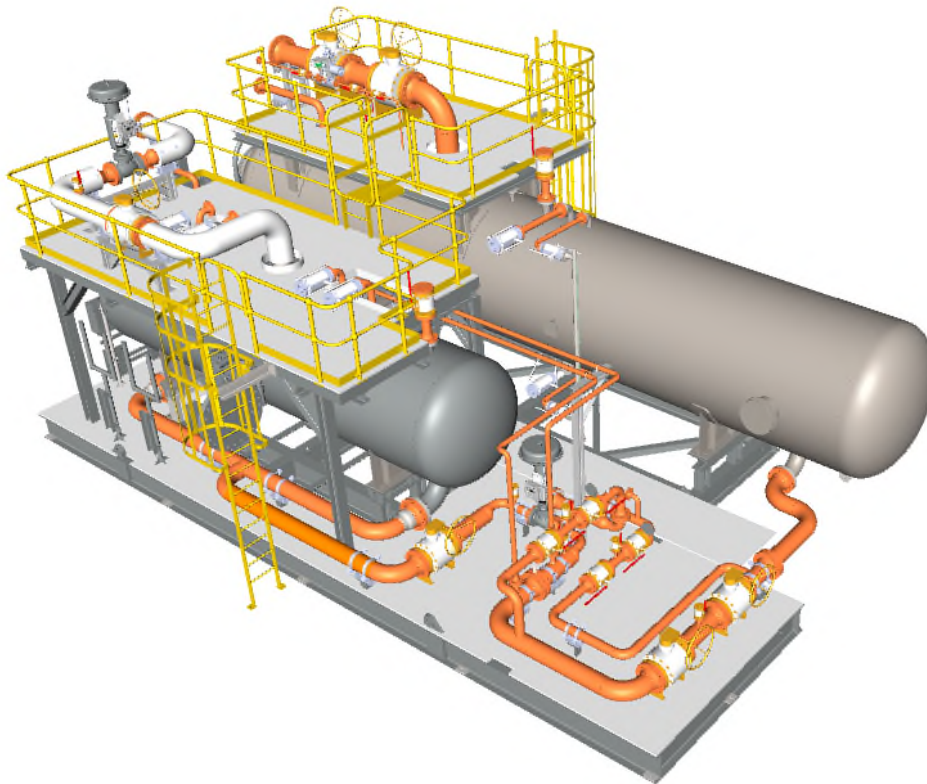
Compressor Skid



- Structure :Compressor Skid
- Dimensions :11.5 m x 4.5 m , 4.0 m High
- Design codes: American
- Analysis Types: In-place, load-out, sea transportation, lifting, vibration
- Design Tools: STAAD. Pro
- Module dry weight : 55 Tons
- Structural Steel Qty : 18 Tons

Key Projects Executed: (Cont..)

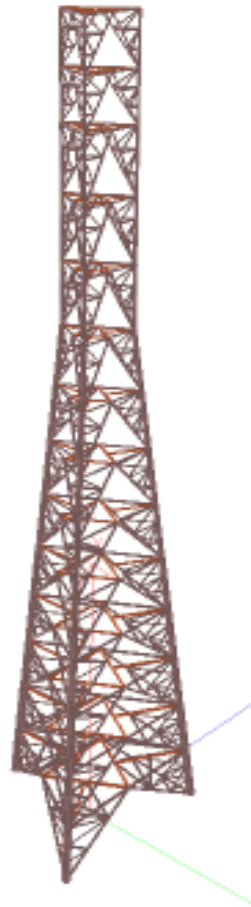
Oil Water Separator Skid



- Structure :Oil Water Separator Skid
- Dimensions :11.5 m x 4.5 m , 4.0 m High
- Design codes: American
- Analysis Types: In-place, load-out, sea transportation, lifting
- Design Tools: STAAD. Pro
- Module dry weight : 46 Tons
- Structural Steel Qty : 20 Tons

Key Projects Executed: (Cont..)

Flare Stack : Dynamic Wind



- Stack Structure – 55 m high
- Structure – 8m equal side triangle
- Three leg skeletal structure
- Dynamic wind load
- Indian codes (IS 800:2007)

Major Clients:

- L&T Hydrocarbon Engineering Limited
- Toyo Engineering India Private Limited
- Tecnimont ICB Pvt Ltd, Mumbai, India
- WorleyParsons Pvt. Ltd., Thane, India
- Tata Consulting Engineers Limited (TCE), India
- Prosernat Petrochem, Paris, France
- Heurtey Petrochem India Private Ltd, Mumbai, India
- Frames Process And Energy Systems India



Major Clients:(Cont..)

- Dangote Oil Refining Company Limited, West Africa
- Artson Engineering Limited (AEL)
- Gardner Denver Nash LLC
- Sulzer India Private Limited
- Praj Industries Limited



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