

# DeeEss Group

(Medium & Larger projects)



## **Corporate Office (Chennai)**

No. 237/1, Rohini Flats, 100 Ft road, Anna Nagar  
West Exn, Chennai - 600 101 Tamil Nadu, India

Tel: 044 65555898 & 7810942412

[sales@deeessengineers.com](mailto:sales@deeessengineers.com)

[www.deeessgroup.com](http://www.deeessgroup.com)

Regional Offices across Global

Canada | Qatar | Chennai | Bangalore | New Delhi | Mumbai

- ❖ DeeEss Group having cumulative Industrial experience of 20+ years with annual average turnover of INR 480 Million, this amalgamation of these companies is to bring the expertise of these Professional experience under one umbrella & leverage their strength to deliver complex Projects on time.
- ❖ DeeEss having vast experience in Design, Engineering, Procurement, Manufacturing / Construction, Erection / Installation, Testing, Commissioning and handing over of All kind of Mechanical Electrical civil and construction solutions like MEP works, Civil & Structural works, construction of Factory Buildings / Water Supply Projects as well as Electro Mechanical Works, piping & Pipeline related works, Sewage Treatment Plants.
- ❖ Further, extensive experience in construction of Over Head Tanks, Water Supply Projects, Housing Projects as well as Civil Works. Its earlier avatar had executed several Long Distance Oil and gas Pipelines and allied civil works for ICOL, HPCL, and CPCL. One major project executed by them in the year 2008 for revamping of CDU/VDU units of CPCL
- ❖ DeeEss Delivering quality control panels / Automation systems the best electrical engineering practices and provides service support to ensure high productivity.
- ❖ In addition, DeeEss Offers green engineering solutions in the ELV domain. It is our belief that Smart and Efficient systems are those where all individual entities work with synchronistic harmony, to achieve an overall function. This principle we apply not just to the products and services that we take to the market but also to the way we work as an organization.
- ❖ one stop solution for all kinds of EPC solutions, Storage Racking & Warehouse solutions, Material Handling and Industrial Packaging solutions.

## MEET OUR EXPERTS



**M. T. Manikandan, B.E., Mech. Engg.**

Graduate Mechanical Engineer with excellent exposure in POWER SECTOR EPC (Super / Sub-critical Power plants, BTG, Boilers & STF, Captive Cogeneration Plants & Industrial plants), OIL & GAS (all downstream & Upstream ), Storage solution, Industrial packaging, Material handling & EPC Project Management , Commercial & Contract Management & is having one stop solution for all kinds of Storage Racking & Warehouse solutions, civil & structural works, Stock Yards and Factory Buildings, all kind of Fabrication works. Worked in Alstom, Saipem & Cethar Vessels. Handled projects with NTPC, GAIL, Reliance, IOCL &etc.,  
***Experience: 23+Years***



**M. Ravichander, B.Tech., AMIE (E), MBA (Power Management System)**

Having 35 years' experience to design and execute mechanical, Electrical & PHE projects in following sectors like Infrastructure marine port projects, Cogeneration power plant (Container terminals and Bulk cargo terminals), Construction of Commercial Buildings, Residential projects, Office Buildings and Hospital Projects. Worked with Multinational Company (10 years), Design consultant firms (15 years) and project management international consultancy firms (10 years) in India. Worked in areas like Project Management, Design Management, and Construction Management, Planning, Procurement, QHSE management & Project Coordination.

***Experience: 34+Years***



**R. Govindaraj, B.E., Mech Engg.**

Mechanical Engineers expert in Project Management , Commercial & Contract Management/ Legal Support, Project Finance / Budgeting /cash flow schedule for Projects, Techno- commercial /project review meeting with client. Also worked in Alstom Power Projects, Cethar Vessels and Veasons Energy systems.

***Experience: 31+Years***



**K. Jothikumar, M.E.,**

Post graduate In Thermal Engineering with 27+ Years of Experience in Indian and International Power Plant Projects/Oil & Gas, Design and Engineering/Proposal and Estimation/Project Engineering/Piping Engineering/Ducting Engineering, Erection, Operation,Testing/Commissioning.

Academic/Research & Design, Drafting, Modeling and Analysis software like, AutoCAD, Piping Engineering software, SteamPRO and GTpro and GUI, MS Projects etc., and Familiar with ASME, API, and NFPA and international design codes/standards. Worked in PT Atmindo, GE Power system, Resurgent Power and KTA Tenaga Sdn. Bhd

**Experience: 27+Years**



**TR Anbuselvam, M.Tech.,**

Post Graduate Industrial Engineer with rich Leadership experience across Oil & Gas, Petroleum, Power Generation and Infrastructure verticals in various Global geographies like Saipem projects, GEA Energy system, Blackstone Group, Deutsche Babcock & Eversendai. Also worked major projects with SAUDI ARAMCO, KNPC, KOC Kuwait, New Doha International Airport, CCPP up to 600MW, Industrial Plants & etc.

**Experience: 25+Years**



**Balaji Manivasagan, B.E., Mech**

Experienced in OIL & GAS, Power and Pharma industry. Major streams served and knowledge gained in Projects execution, Quality, Vendor Development, Management and Contracts. Reached career height of Oil & GAS Giant SAUDI ARAMCO employment and handled major International EPC contractors such as Technicas-Reunidas, SAIPEM, Dragados-Gulf, SNC-Lavalin, Technip-Chiyoda, McDermott, Worley-Parsons, Daelim, Samsung Engineering, Woods, KBR, Bonatti, Thyssen Krupp, IHI, Bechtel, JGC, Petrofac, Sinopec and L&T Gulf. Exposed and worked with major international codes, standards and industry practices such as ASME, ASTM, API, TEMA, AWS, DIN, IS and Saudi Aramco, SATORP and SADARA Standards.

Active CSWIP senior welding inspector

**Experience: 22+Years**



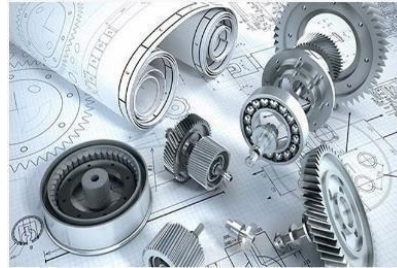
Worked as a Financial consultant in M/s AGP City Gas Private Ltd/AGP CGD (INDIA) Private Limited  
Worked as a Chartered Accountant in K. Baskar, Chartered Accountant and assisted in filing GST returns, taxation and audit of clients .  
Worked as Head of Finance, International Brass Industries SDN BHD Malaysia in their group MKTRON Holding SDN BHD  
Worked as Chief Financial Officer of M/s Ramsays Corporation Private Limited  
Worked as Senior Internal Auditor in Al Turki Enterprises LLC(ATE)  
Worked as Manager Accounts at Al Tasnim Cement Products LLC. Muscat  
Worked as a Chief Compliance Officer in United Finance Company SAOG  
Worked as an Internal Auditor in M/s V Sankar Aiyar & Co a leading Chartered Accountant firm in India  
Worked as an Internal Auditor in Securities & Investment Company BSC © one of the Investment Banks in Bahrain focusing primarily in the GCC region

**Srinivasan AR – Bsc MathS - FCA**

# OUR SERVICES



**EPC  
Division**



**Engineering /  
PMC services**



**Warehouse**

## Product and Services

### EPC Division

**.Engineering, Procurement, Construction (EPC) –**

- ❖ **Mechanical**
- ❖ **Civil**
- ❖ **Electrical**
- ❖ **I&C**
- **MEP Works**
- **Pipeline & Piping**
- **Structural Works**
- **ETP/STP/WTP**
- **Warehouse Construction**
- **Solar Power plant**
- **storage tank forming**
- **E & I works**
- **Insulations**

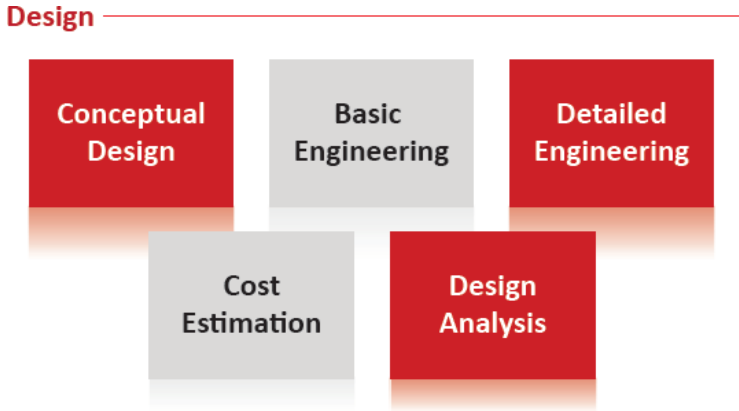
### Engineering/ PMC Services

- **DBR (Design Basis Report) / Concept design / Basic Design**
- **Design Analysis, Cost Optimization**
- **Detailed Engineering**
- **Layout, P&IDs**
- **Preparation of RFQ (Request for Quote) / Bidder list**
- **Complete support for each Bid evaluation**
- **Commercial negotiation**
- **Contract / PO Preparation & Placement**
- **Expediting**
- **As-Built documentation**
- **Preparing of O&M manual**
- **Preparation of Bid evaluation**
- **Vendor document review**
- **Project management service**
- **Support during Construction / Commissioning**
- **Site service**

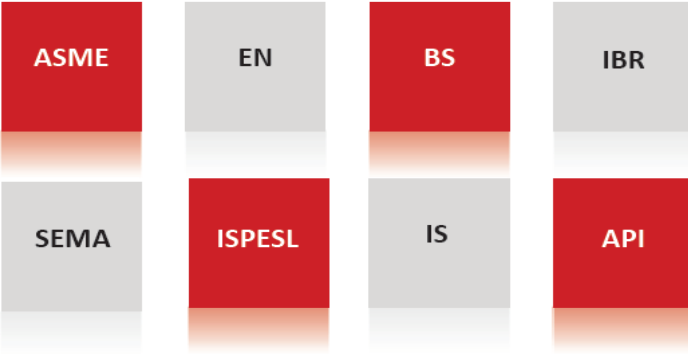
### Warehouse

- **Warehouse, Packaging & Logistics Cost & Process Optimization & Automation**
- **Value Chain design**
- **Inplant Layout and Material Handling**
- **IT enabled business process solutions**
- **Business Sustainability Assessment**
- **Real time Dash Boards of Key Performance Indicator (KPIs)**
- **Selective Pallet Racking**
- **Push Back Racking**
- **Mobile Racking**
- **Cantilever Racking**
- **Gravity Flow Racking**
- **Rivet Shelving Rack**
- **Mezzanine Racks**
- **ESD racks**
- **Cold Storage Systems**
- **FIFO rack**
- **Almirah**
- **Platforms**
- **Mezzanine floors**
- **Decking panels**
- **Catwalks**
- **Pigeon Racks**
- **Wire Shelving**

# DeeEss – Way of Designing



## Design Standards



## DeeEss Design Expertise

# PSU CUSTOMERS- PARTIAL



# CORPORATE CUSTOMERS- PARTIAL



**Flipkart**



**HunterDouglas**



TATA CHEMICALS LIMITED



Antelec Ltd

**FOXCONN**



**apollo**

**ALSTOM**



# Overseas Customers - Partial



# DeeEss Focused Domains

- Civil & Infra Industries
- PEB
- MEP
- Electrical
- Warehouse constructions
- FMCG & E-commerce
- 3PL,4PLAND 5PL
- Oil & Gas
- Heavy Engineering
- Automobile &Auto ancillary
- Food & Pharma
- Power
- Aviation
- Tank Forming

## WHY DeeEss?

Two decades of experience and expertise, working standards towards innovative cutting edge techniques, diversity in various business activities, upto date knowledge in domestic and international requirements, energetic team,  
in brief

**“ all solutions under one umbrella “ !**

# CIVIL & CONSTRUCTIONS

# BROWN FIELD PROJECT, CIVIL & CONSTRUCTIONS, PILING PHOTO GRAPHS

Engineers India



Shot on vivo Z1x  
Vivo AI camera

**BROWN FIELD PROJECT, CIVIL & CONSTRUCTIONS, PILING PHOTO GRAPHS**



# BROWN FIELD PROJECT, CIVIL & CONSTRUCTIONS, PILING PHOTO GRAPHS



DeeEss

# PHOTO GRAPHS OF CHENNAI INTERNATIONAL AIRPORT WORK AT 88m ELEVATION



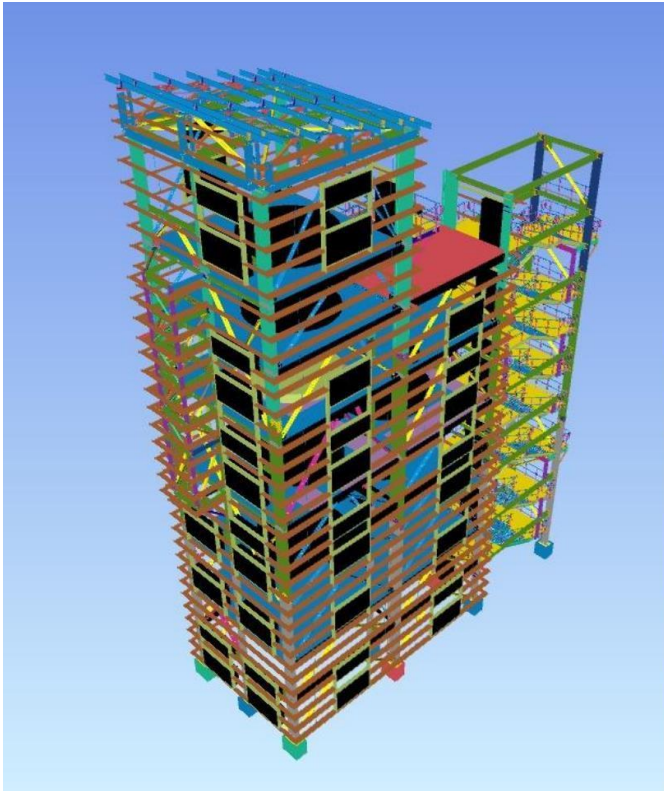
# PHOTO GRAPHS OF CHENNAI INTERNATIONAL AIRPORT WORK AT 88m ELEVATION



# PHOTO GRAPHS OF TATA CHEMICALS LTD – CUDDALORE CIVIL & STRUCTURAL Work



# PHOTO GRAPHS OF TATA CHEMICALS LTD – CUDDALORE CIVIL & STRUCTURAL Work



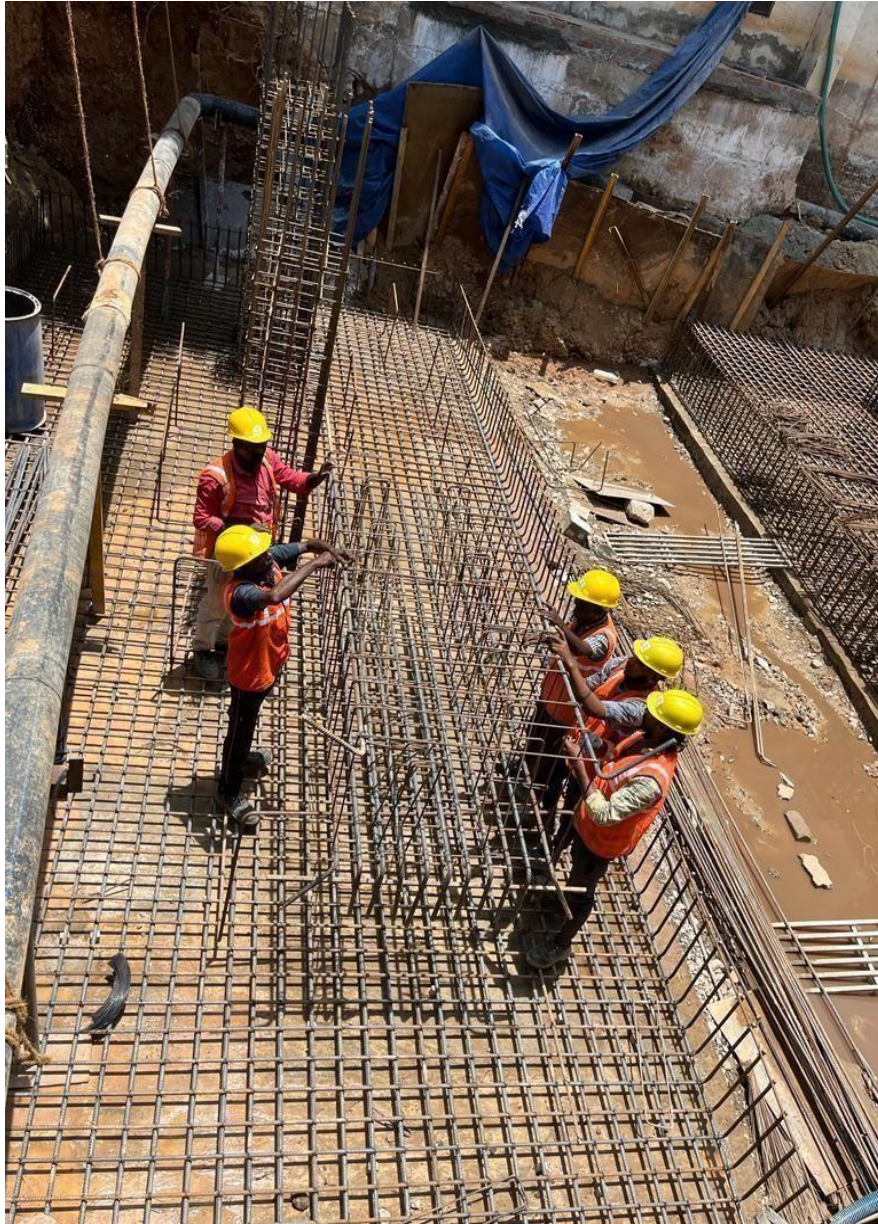
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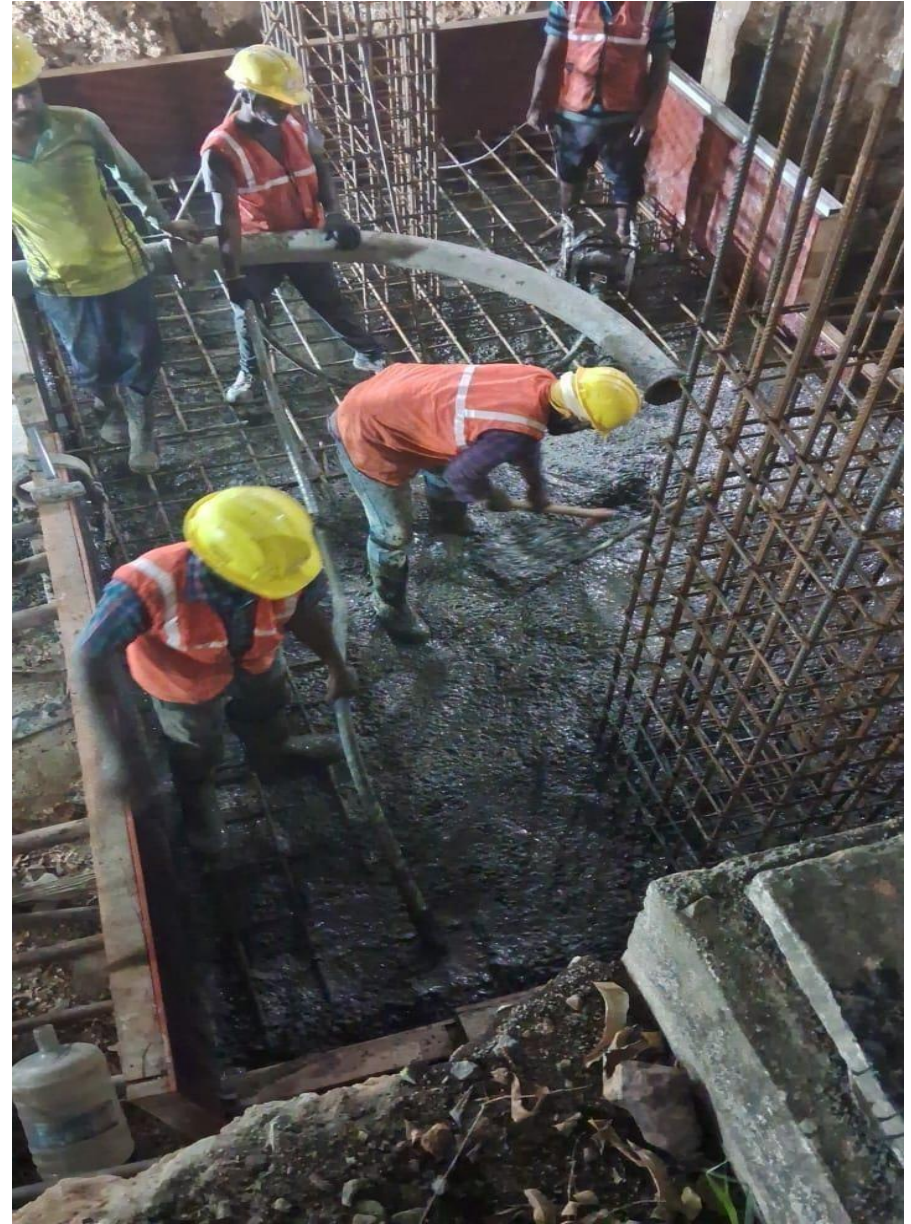
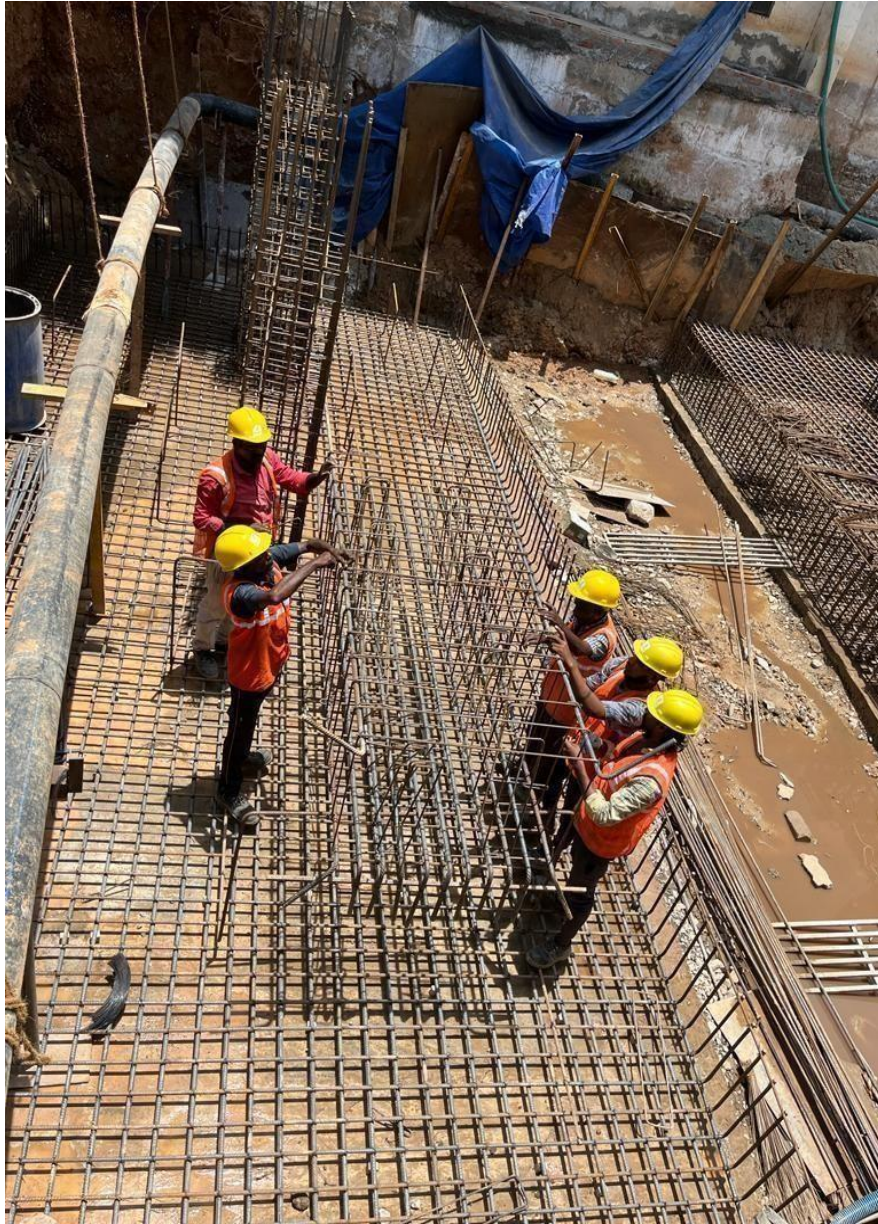
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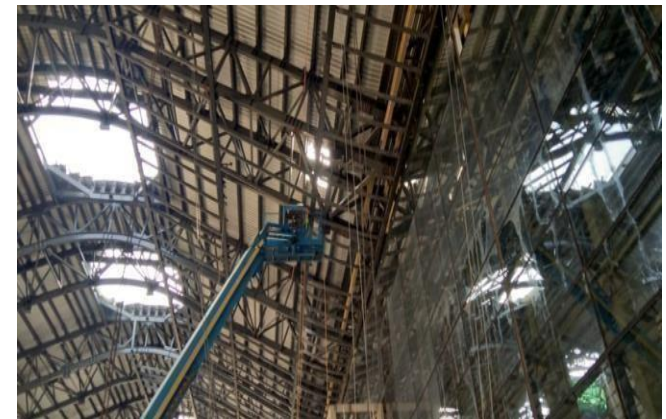


# PHOTO GRAPHS OF TATA CHEMICALS LTD – CUDDALORE CIVIL & STRUCTURAL Work



# Mechanical

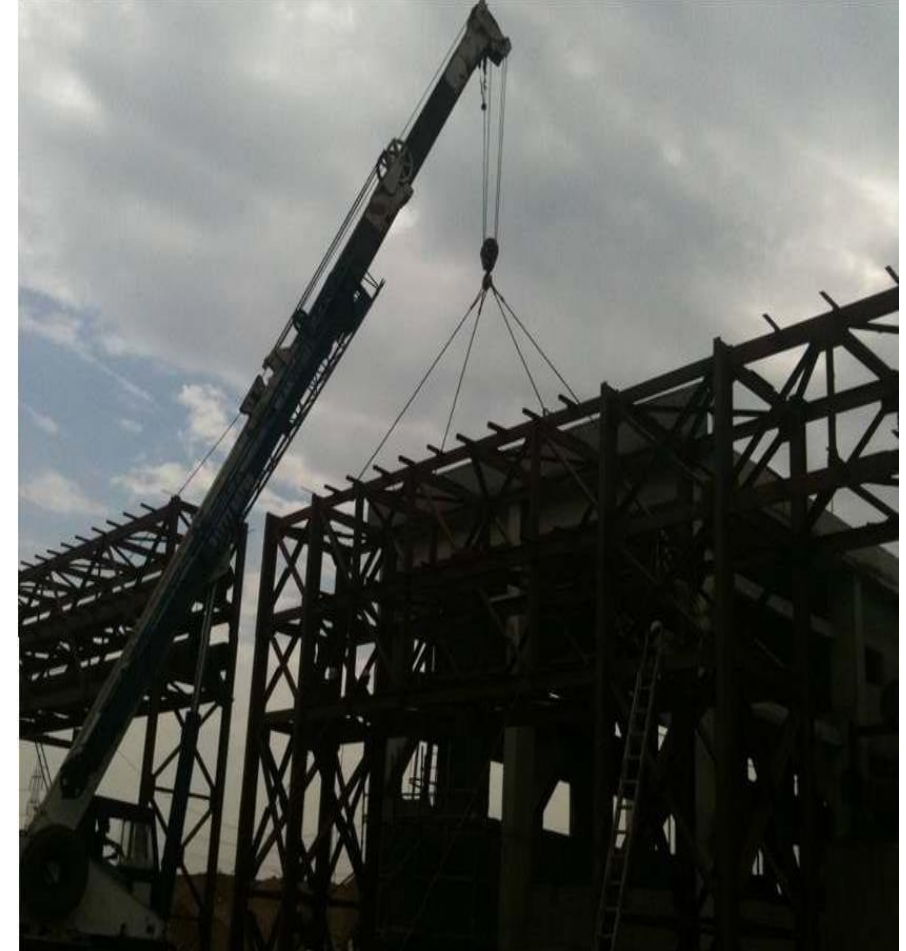
# Structural Steel fabrication & canopy Structure at Chennai airport International terminals, work @ 33 mtr height







## PEB SHED FOR COM PRESSOR STATION



# PIPELINE, UTILITY & PIPING

# MS PIPE LINE WORKS



MS PIPE LINE WORKS FOR TPL - VEIAG STEEL PLANT



MS PIPE LINE UNLOADING - VEIAG STEEL PLANT



SI PLANT STRUCTURE FOR TPL VEIAG STEEL PLANT



MS PIPE LINE INSPECTION FOR TPL DWARAKA SITE - VEIAG STEEL PLANT



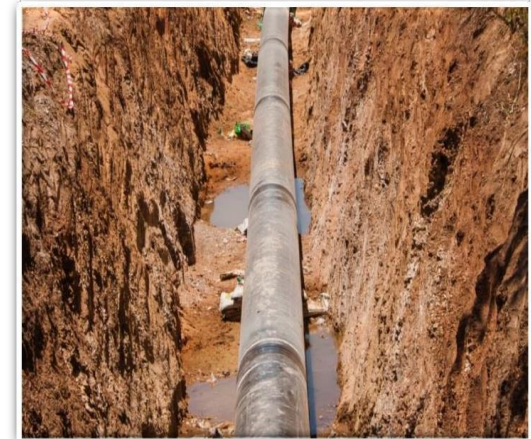
MS PLAT SHEDDING FOR TANK FABRICATION



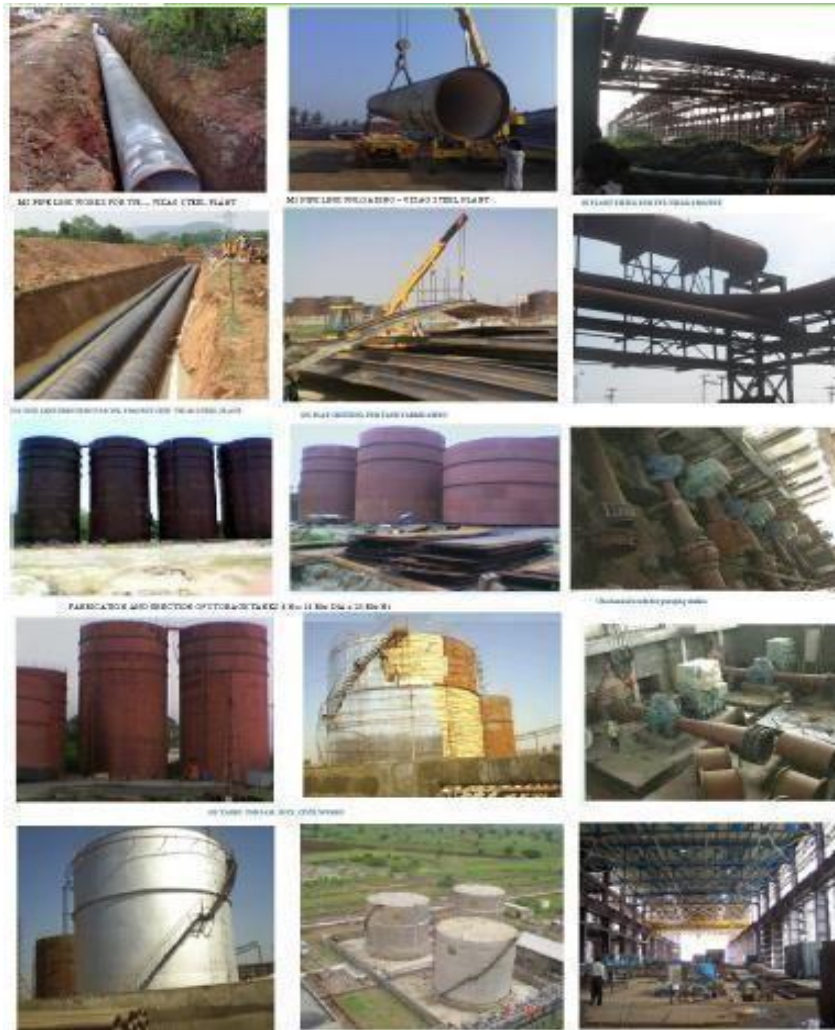
# RO PLANT



# Pipe Line Laying Works

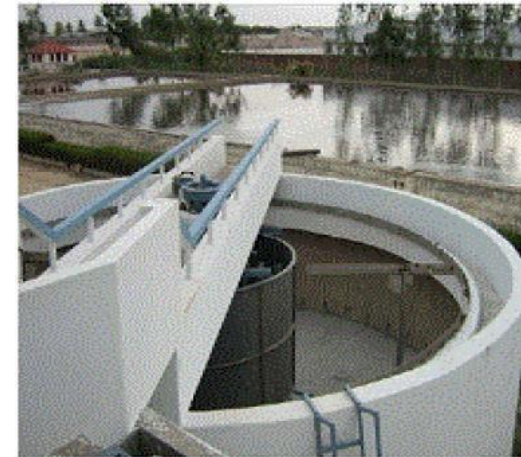
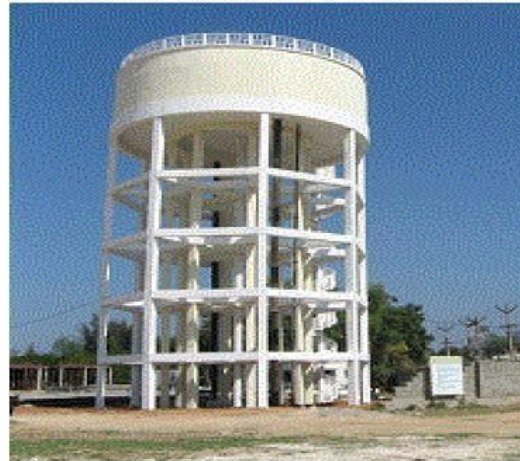
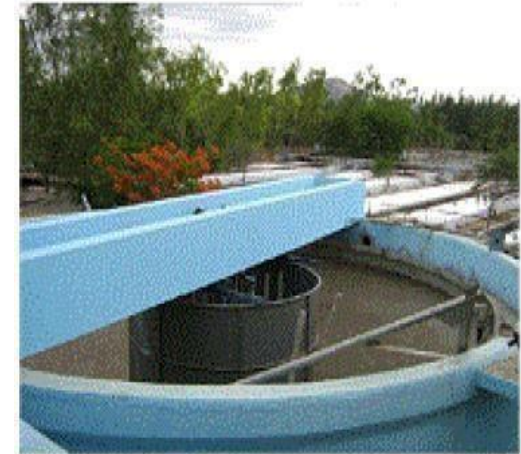


# Tanks & Pipe Line Erection works





# Tertiary Treatment & Ultra-filtration system



# PEB CONSTRUCTIONS



# PEB CONSTRUCTIONS



# PEB CONSTRUCTIONS



# Warehouse Construction Location at Pappampakkam (12000 SFT 23'clear height)



# Warehouse Location at Pappampakkam



# Warehouse at Mannur, Sriperumbudur Taluk

**Image**



**Actual**



# Warehouse at Mannur, Sriperumbudur Taluk

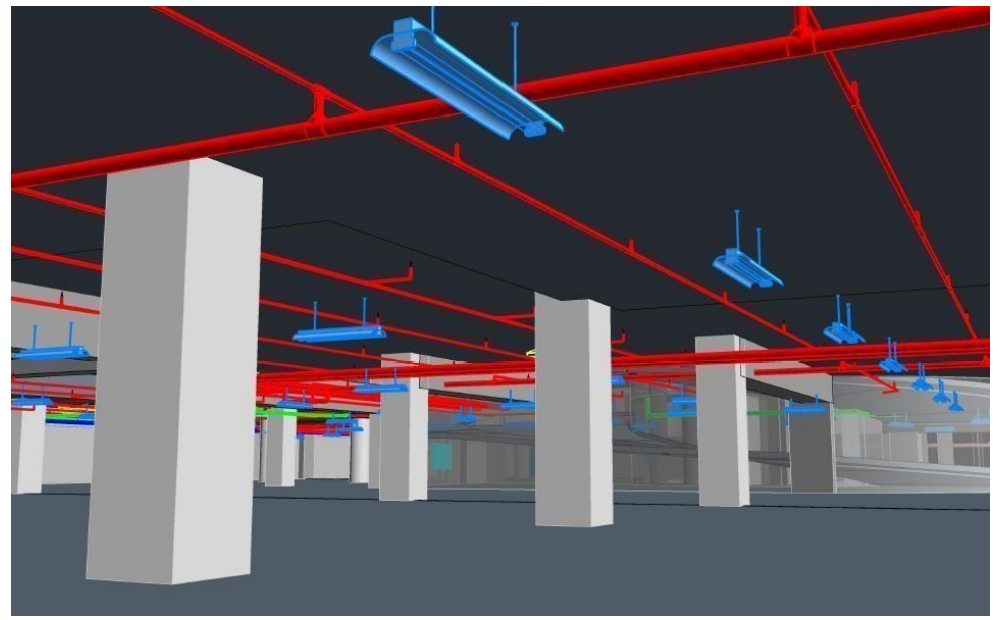
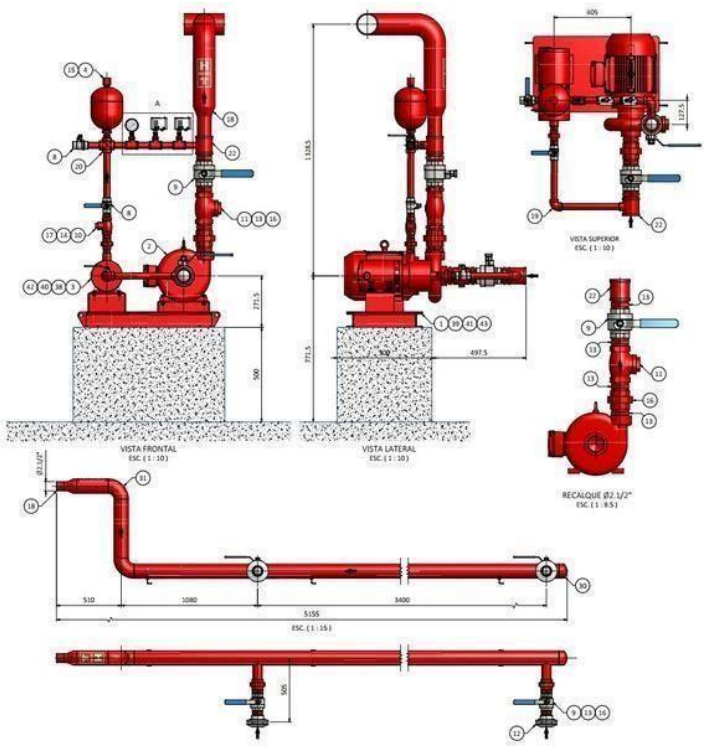
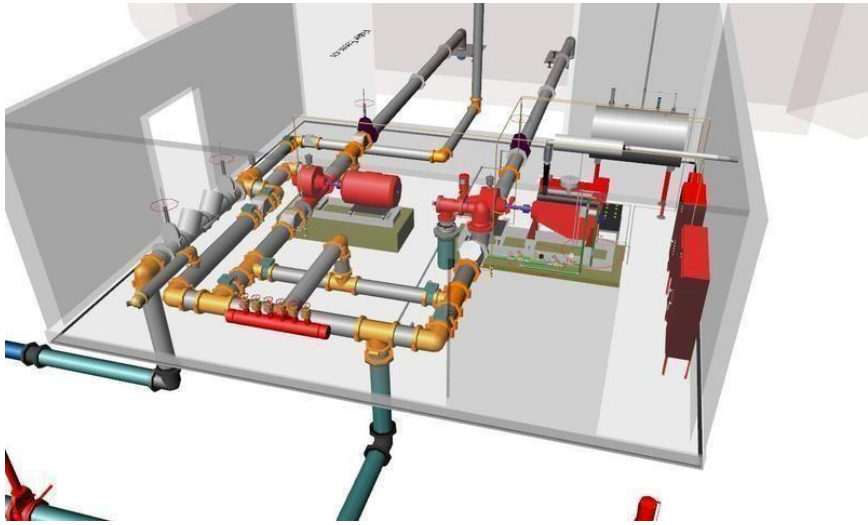


# PIPING & UTILITY WORKS



# Fire fighting supply & erection works





# HVAC & Insulation works



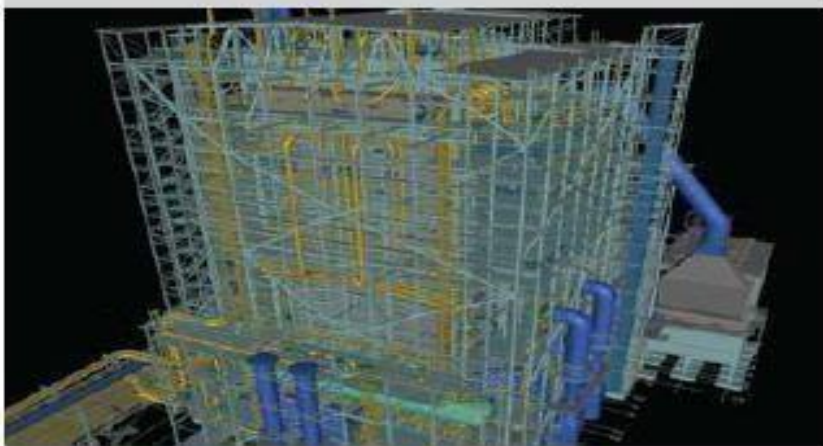
# ELECTRICAL

# Transformers Supply, Erection & Commissioning

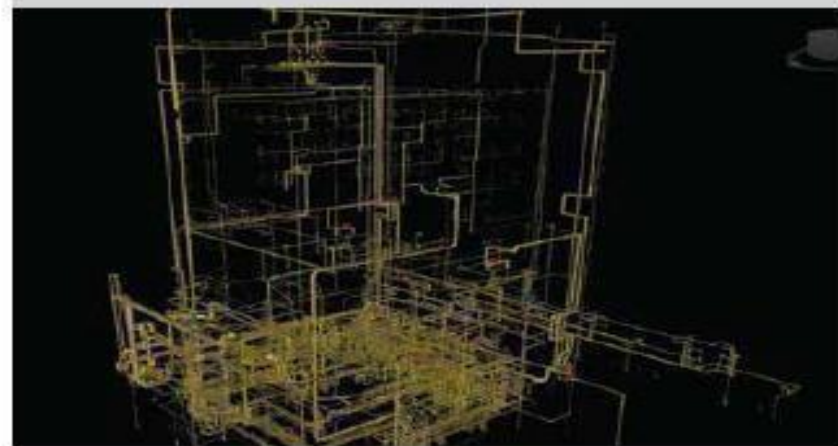


# ENGINEERING SERVICES

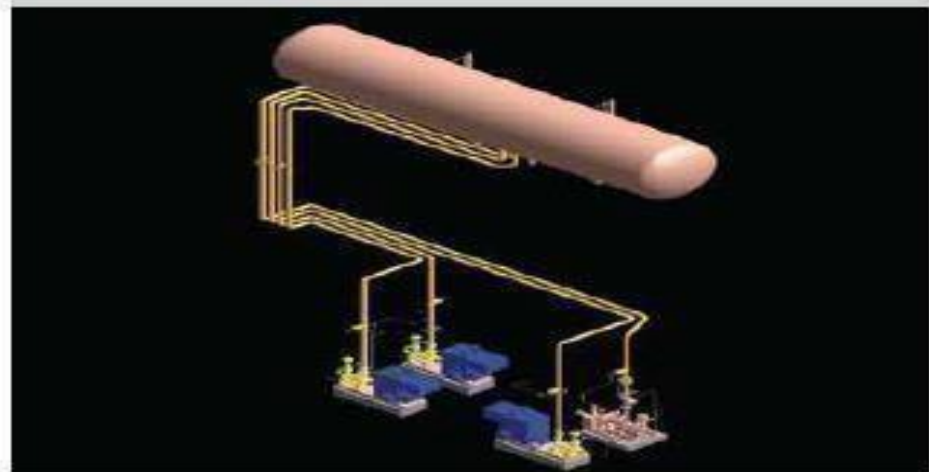
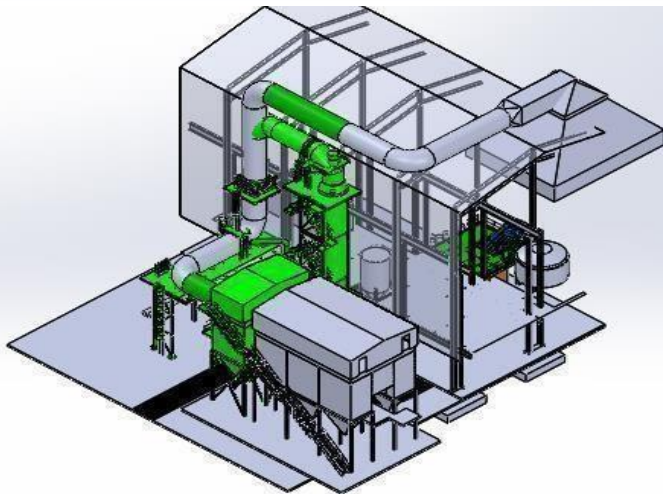




**Structural Design**



**Piping Design**



**Piping Routing**

# Case Study

## Thickness of Shell under Internal Pressure

**THICKNESS OF SHELL UNDER INTERNAL PRESSURE**

INPUTS	
Outside Diameter (D)	118 mm
Nominal thickness (t <sub>nom</sub> )	18 mm
Joint efficiency for Long Stress (E <sub>1</sub> )	0.85
Joint efficiency for Cir. Stress (E <sub>2</sub> )	0.85
Design Temperature (T)	120 °C
Internal Design Pressure (P)	2 N/mm <sup>2</sup>
Length of the Shell (L)	900 mm
Max Allowable Stress (σ)	15 N/mm <sup>2</sup>
Corrosion Allowance	0 mm
Fluid height (H)	0 mm
Fluid density (ρ)	1000 kg/m <sup>3</sup>
Min Under Tolerance (MT)	0 mm



Calculation	
Design Pressure (P)	2 N/mm <sup>2</sup>
Effective Thickness (t <sub>e</sub> ) = t <sub>nom</sub> - Cor - MT >=	18.2 mm
Inner Radius (R)	733.3 mm

Required thickness		
Assumed thickness (t1)	$(P \times R) / (t \times E_1 - 0.6 \times P)$	$(2 \times 733.3) / (15 \times 0.85 - 0.6 \times 2) = 14.7992 \text{ mm}$
Assumed thickness (t2)	$(P \times R) / (2 \times t \times E_2 - 0.4 \times P)$	$(2 \times 733.3) / (2 \times 15 \times 0.85 - 0.4 \times 2) = 7.3096 \text{ mm}$
Required thickness (t <sub>req</sub> )	Max(t1, t2) + corr	Max(14.7992, 7.3096) + 0 = 15.7992 mm

**Result:**  
Here t<sub>req</sub> is taken considering the corrosion allowance.  
**As the t<sub>req</sub>(15.7992) is lesser than t<sub>nom</sub>(18.2) Our Design is Safe. Acceptable.**

Max Pressure		
P longitudinal = $(t \times E_1 \times \sigma) / (R + 0.6 \times t)$	$(18 \times 0.85 \times 15) / (733.3 + 0.6 \times 18.2)$	2.02 N/mm <sup>2</sup>
P circumferential = $(2 \times t \times E_2 \times \sigma) / (R + 0.4 \times t)$	$(2 \times 18 \times 0.85 \times 15) / (733.3 + 0.4 \times 18.2)$	5.0287 N/mm <sup>2</sup>
P <sub>max</sub> = Min(P <sub>1</sub> , P <sub>2</sub> )	Min(2.01994087267755, 5.0287089195126)	2.02 N/mm <sup>2</sup>

**Result:**  
**Checking for pressure**  
**As the P<sub>max</sub>(2.02) is greater than P(2) Our Design is Safe. Acceptable.**

Max	15 N/mm <sup>2</sup>	15
Min	2 N/mm <sup>2</sup>	2

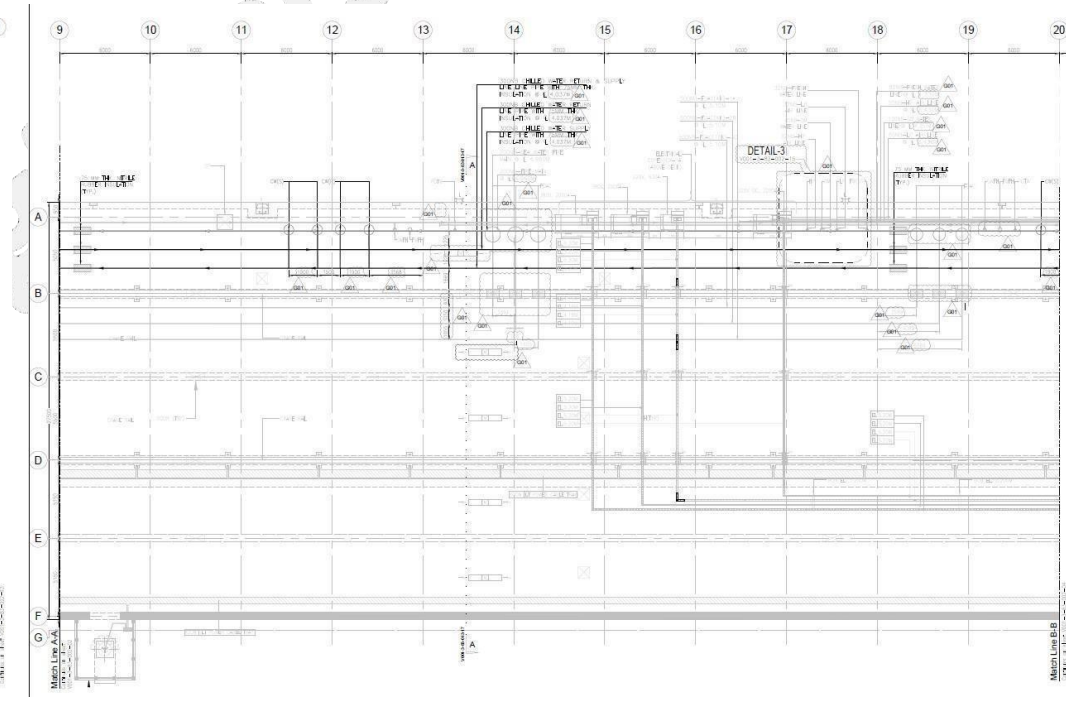
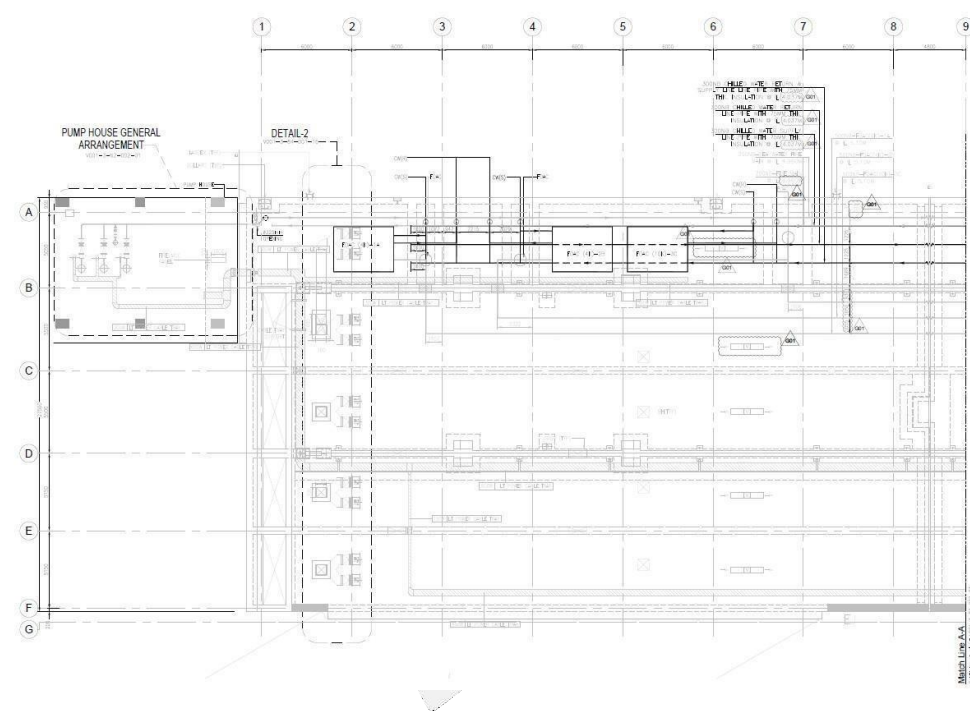
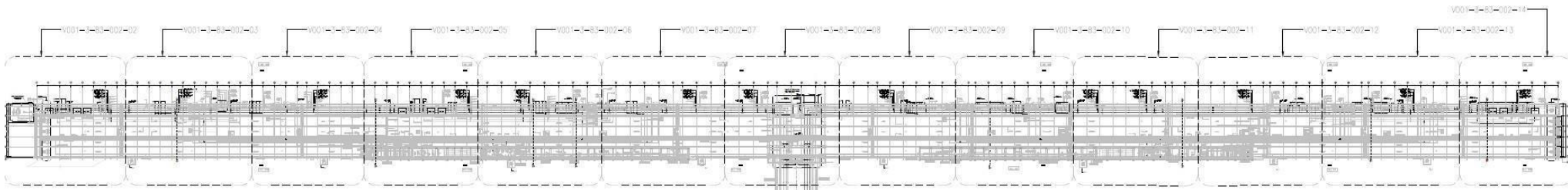
Note:  
Max Allowable stress value to be taken w.r.t Design Temp

- Legend:
- 1) t1 - Assumed thickness for longitudinal stress
  - 2) t2 - Assumed thickness for circumferential stress
  - 3) t<sub>req</sub> should be lesser than t<sub>nom</sub>
- Input

Convert in to

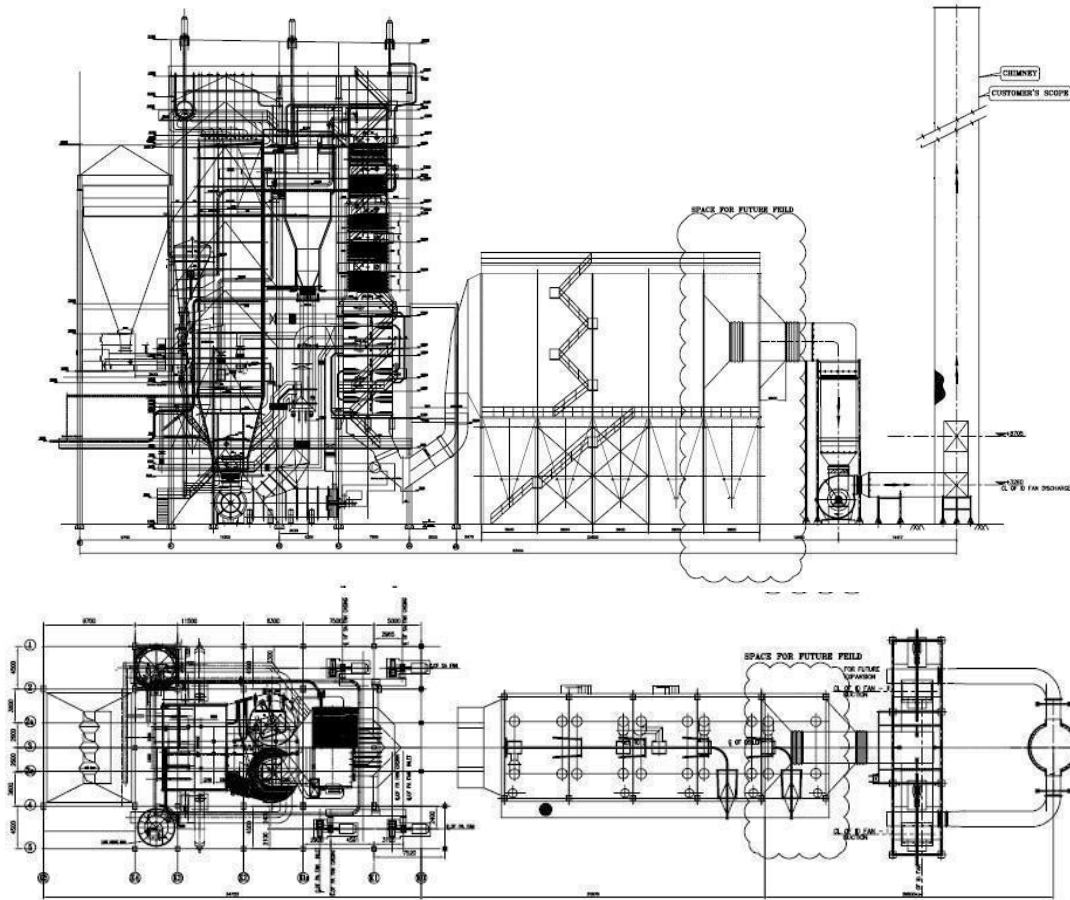
100 kPa	kPa
MPa	MPa
N/mm <sup>2</sup>	N/mm <sup>2</sup>
bar	bar
Pa	Pa

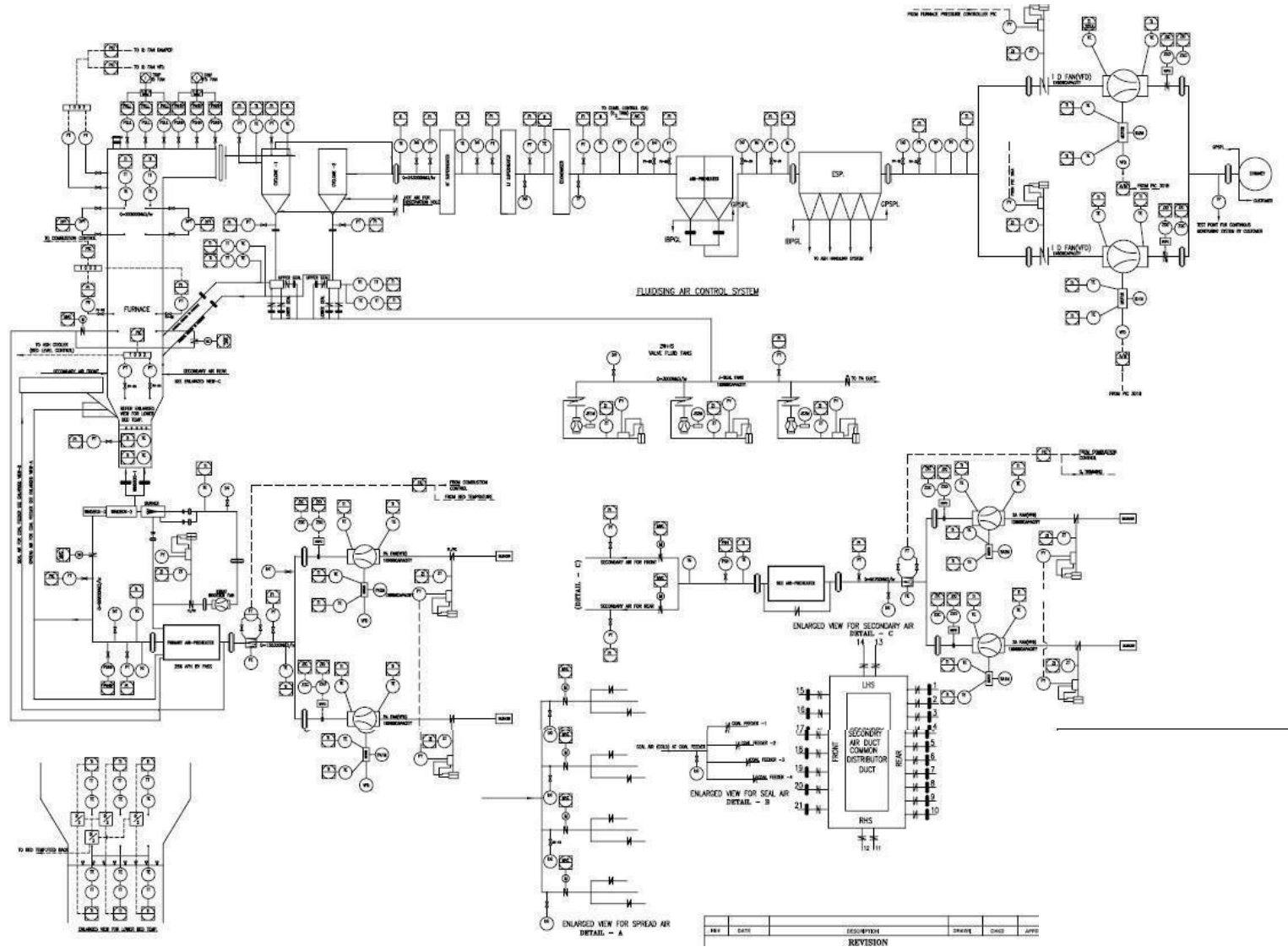
# Piping Layout





# Boiler Layout

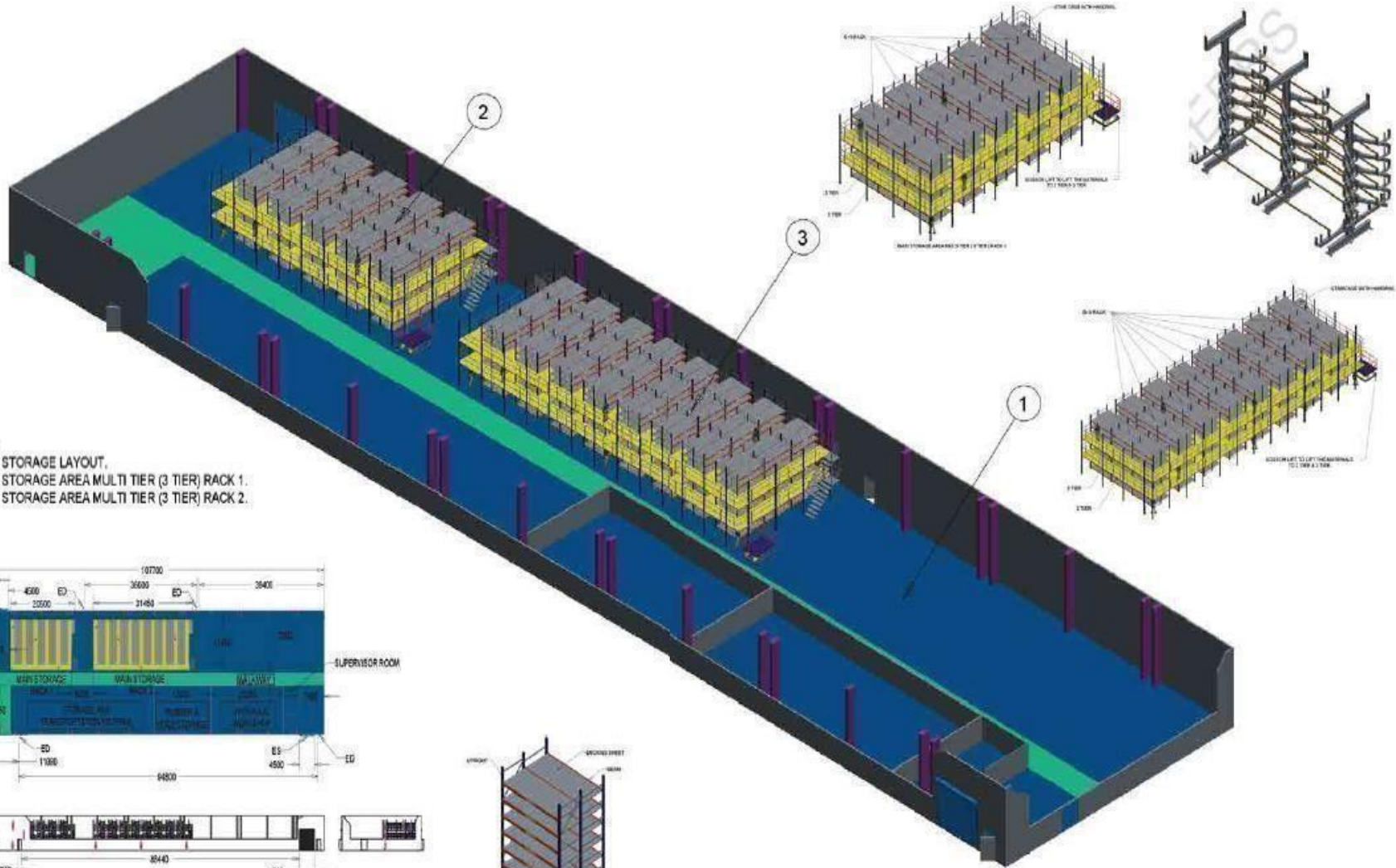




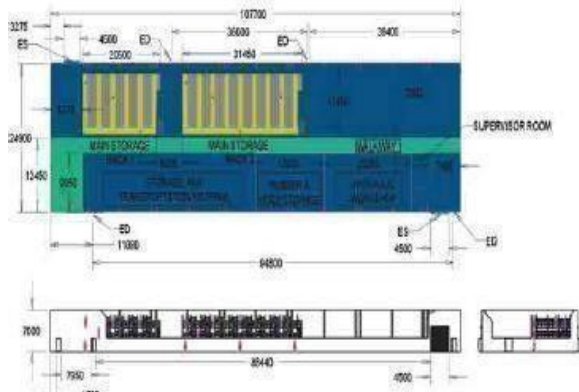
# STORAGE SOLUTIONS

# DeeEss Storage Rack and Accessories



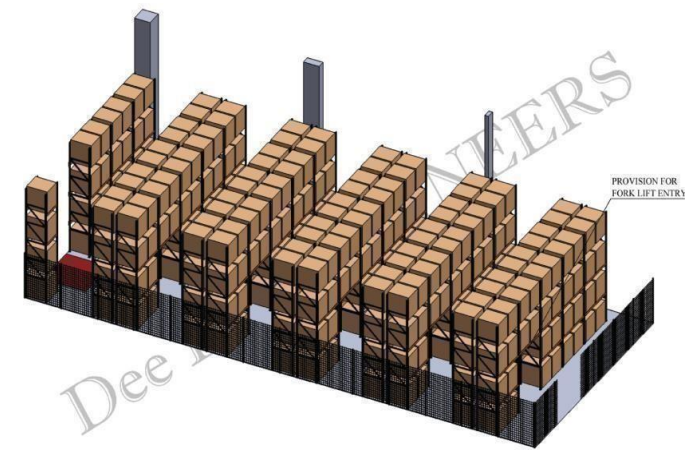
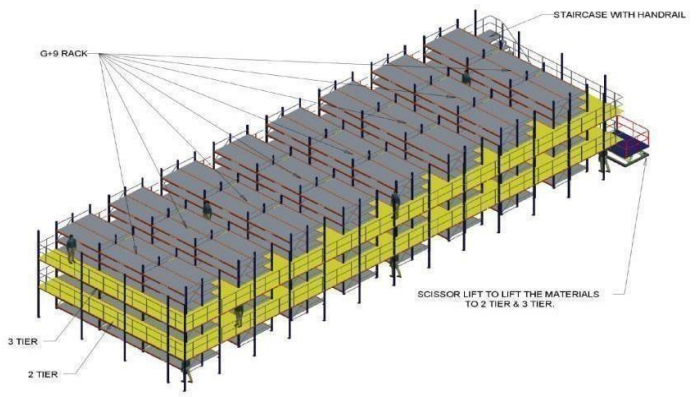
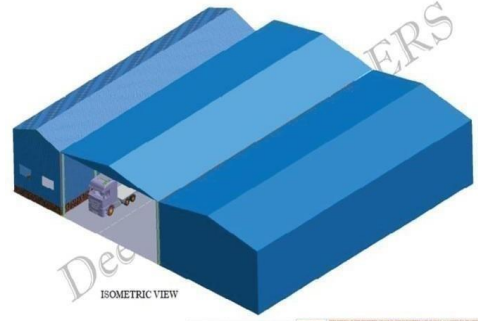
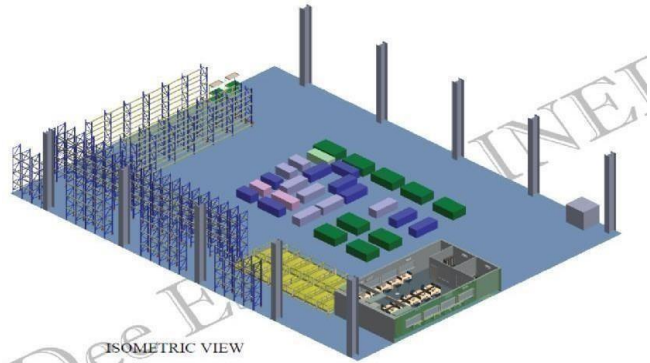


- NOTES:  
 1. MAIN STORAGE LAYOUT.  
 2. MAIN STORAGE AREA MULTI TIER (3 TIER) RACK 1.  
 3. MAIN STORAGE AREA MULTI TIER (3 TIER) RACK 2.



- NOTES:  
 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIC.  
 2. LAYOUT AREA DETAILS TAKEN FROM CAD DATA SHARED BY PI.  
 3. CAD REFERENCE NO. NPI - A-16-011804-02  
 4. MAIN STORAGE AREA GRID LOCATION FROM DMD NPI - A-19-01 REVISED - 021 - 006

- LEGEND:  
 1. ED - EXISTING DOOR.  
 2. ES - EXISTING SHUTTER.



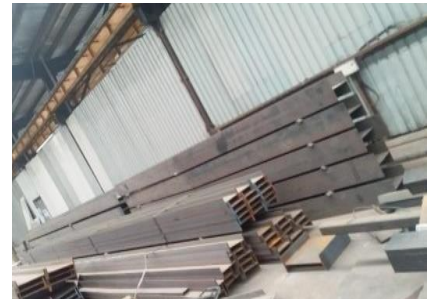
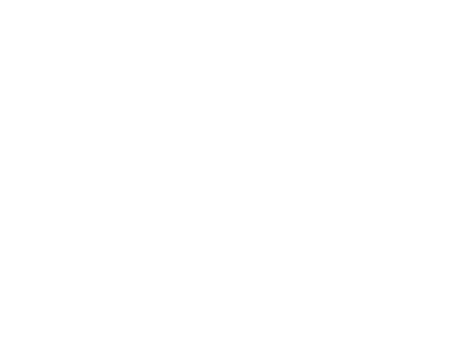
# EXPORT ACTIVITIES



# PLATFORMS AND MEZZANINE FLOORS



# MANUFACTURING CAPABILITIES



# EVENTS & CONFERENCES

