
PYRAMID

ENGINEERING :: SOLUTIONS

ENGINEERING CAPABILITIES



Engineering Capabilities

Robust engineering team with track record of delivering more than 350 global assignments successfully. All the disciplines are in-house e.g.


- ▲ **Process Engineering**
- ▲ **Mechanical Engineering**
- ▲ **Structural Engineering**
- ▲ **Electrical & Instrumentation**
- ▲ **Plant 3D Modeling**
- ▲ **Construction Drawings**
- ▲ **Automated MTO**














Largest single work executed: 80,000 Man-hours

Annual Engineering Capacity: 300, 000 Man-hours

Departments




-  **Process Engineering**
-  **Static Equipment**
-  **Rotary equipment**
-  **Piping**
-  **Structural Engineering**
-  **Electrical**
-  **Instrumentation**
-  **Special Engineering Applications**
-  **3D Modeling**
-  **Engineering Coordination**
-  **Documentation**

Process Engineering







-  **Process Simulation**
-  **Basic engineering**
-  **PFD & P&ID Development**
-  **HAZOP & Safety Studies**
-  **Design of Process equipment**
-  **Plant hydraulics design**
-  **Specification for package systems**
-  **Instrument Specifications**
-  **Loss prevention system design**
-  **Operation & Maintenance Manual preparation**
-  **Commissioning & Troubleshooting**

Static Equipment









**Mechanical Design of entire range of process equipment
e.g. distillation Columns, Vessels, Tanks, Heat exchangers
and Reactors**









-  **Design & Engineering as per international codes e.g.
ASME Sec. VIII, Sec. III, Sec.I, NUREG, API 650/ 620,
AD Merckblatter, British Standards, Indian Standards etc.**
-  **Design by Finite Element analysis, Stress, Thermal
analysis & Fatigue life evaluation**
-  **Generation of Fabrication Drawings**








Rotary Equipment

-  **Specification of Pumps and Compressors**
-  **Specifications for Package bought outs**
-  **Technical and commercial bid analysis**
-  **Vendor Document Approvals**
-  **Factory acceptance test witness**
-  **Commissioning support**









Piping Engineering

-  **Development of Plot Plans and Equipment layouts**
-  **Strength Calculations**
-  **Flexibility analysis**
-  **Plant 3-D Modeling and clash detection**
-  **Piping material Specification**
-  **Support specifications**
-  **Isometrics and Bill of Materials**
-  **Advanced dynamic analysis**

-  **Development of facilities and related civil work**
-  **Structural analysis**
-  **Foundation Design**
-  **Structural design**
-  **Design of Platform top sides**
-  **Engineering of Skids and Modular Structures**
-  **Structural 3-D Modelling**
-  **Automated fabrication drawing and MTO generation**

-  **Development of Control Logic**
-  **Preparation of Cause & Effect diagrams**
-  **Safety studies**
-  **Specifications of controls system**
-  **DCS/PLC engineering**
-  **Preparation of Field Instrument specifications**
-  **Layout and 3D modelling of Instrument system**
-  **Mounting and hook up drawings**
-  **Communication Network Design**

Electrical Engineering

-  **Electrical System Study**
-  **System reliability and stability study**
-  **Substation Design**
-  **Area Classification**
-  **Load Calculation and System design**
-  **Specifications for Electrical Equipment**
-  **Calculation of Electrical Bulk materials**
-  **General Arrangement & Interface inputs**

Special Engineering Applications

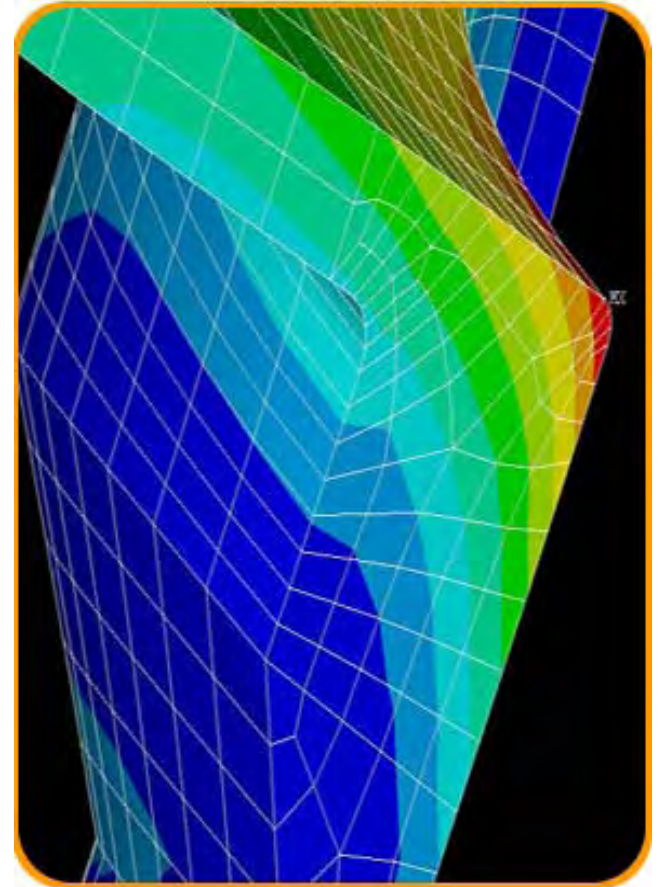
⑩ **Finite Element Stress Analysis**

▲ **Computational Fluid Dynamics**

▲ **Fatigue and Vibration Analysis**

▲ **Surge and Transient Studies**

▲ **Residual Life Assessment**



MAJOR ENGINEERING TOOLS

Process Engineering

HYSYS Process Simulation
HTFS Thermal Design
Pipe Net Hydraulic analysis
Flare net Flare System Design
Smart plant P&ID Generation

Mechanical Engineering

PDS/ PDMS Plant 3 D Modeling
Isogen Piping isometric
Caesar II Piping Stress Analysis
ANSYS Finite Element Analysis
PV Elite Pressure Vessel Design

Instrumentation

IN Tools Instrument Specs
Instru Calc Instrument Sizing

Electrical Engineering

ETAP Electrical Systems Design
CABsys Electrical System Detailing

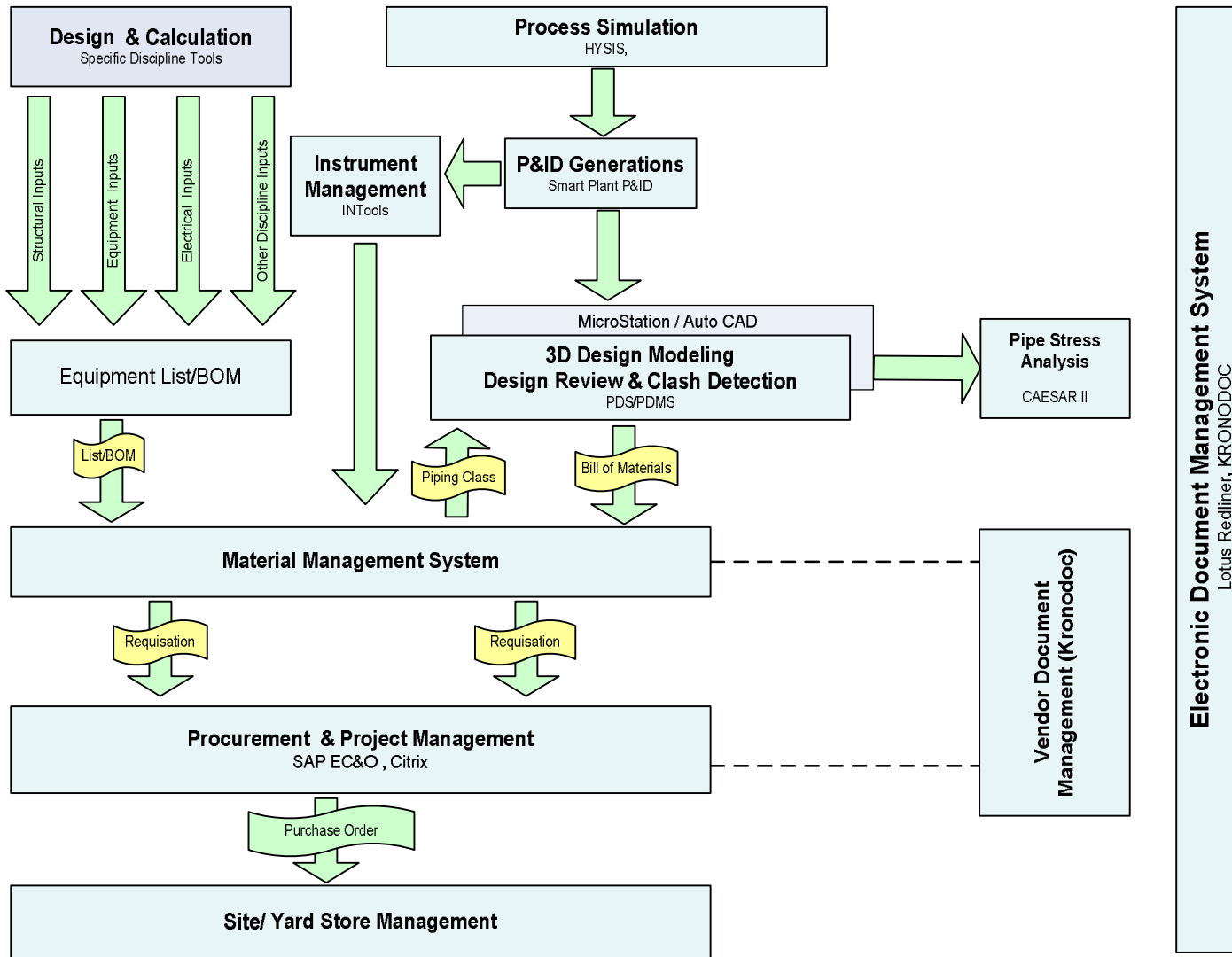
Structural Engineering

SACS Offshore Structural Analysis
STAAD Structural Analysis
X-Steel Structural detailing

Project Management

Primavera Project Planning & Control
Kronodoc Document Management
Redliner Drawing Collaboration
SAP ERP

Engineering Coordination



Electronic Document Management System
 Lotus Redliner, KRONODOC

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