

Mechanical Engineering

Services Deck

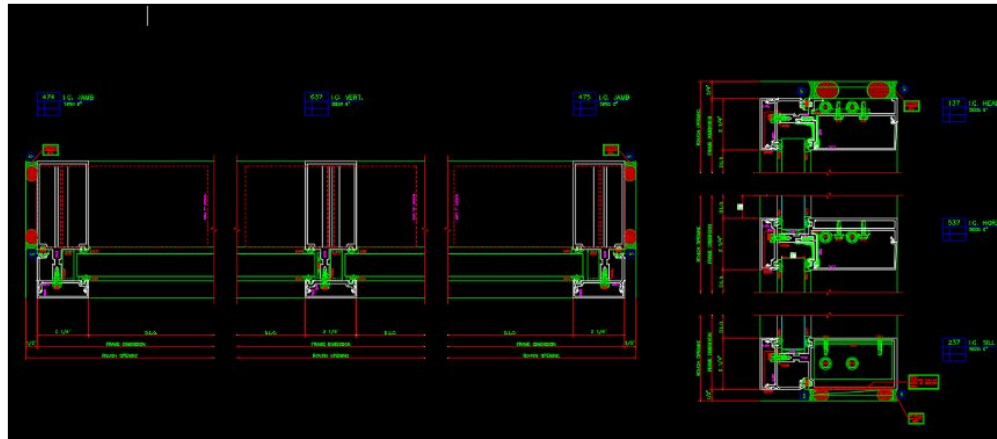
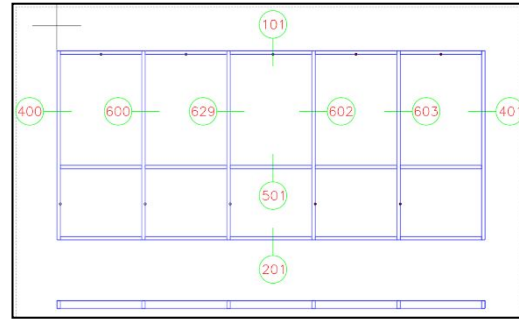
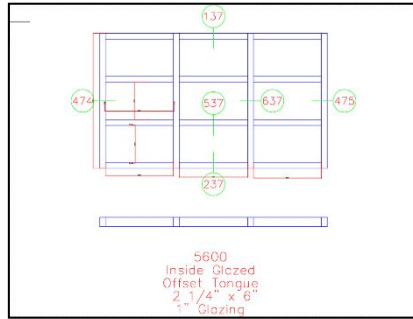


CAPABILITIES

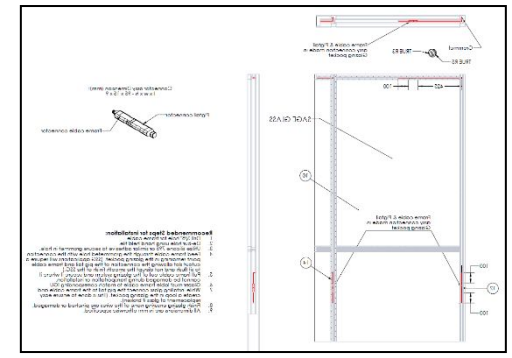
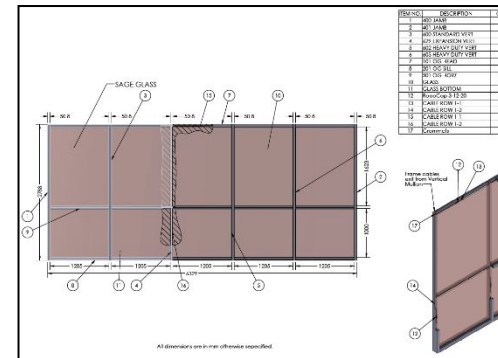
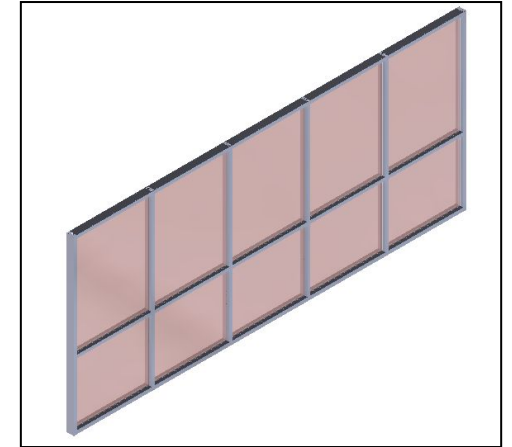
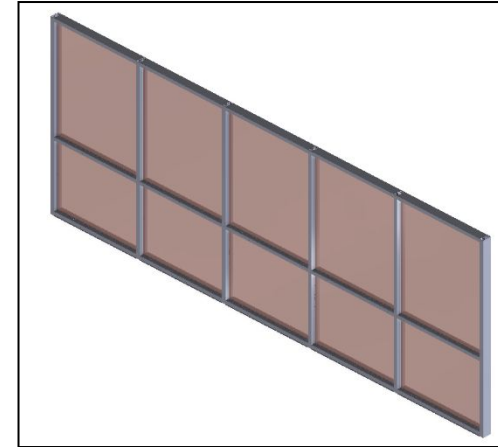
- Plant and Process Engineering
- Steel Detailing
- Engineering Design and Drafting services
- HVAC
- Finite Element Analysis (FEA)
- Reverse Engineering
- Engineering Data and Documentation
- Fire and Safety



INPUT GA DRAWINGS WITH EXTRUSION SECTIONS

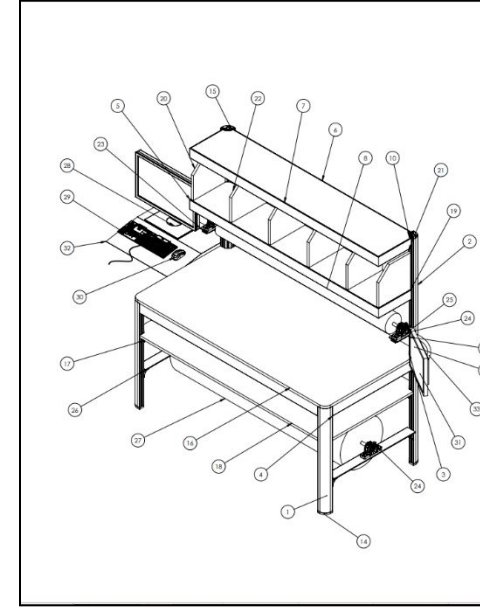
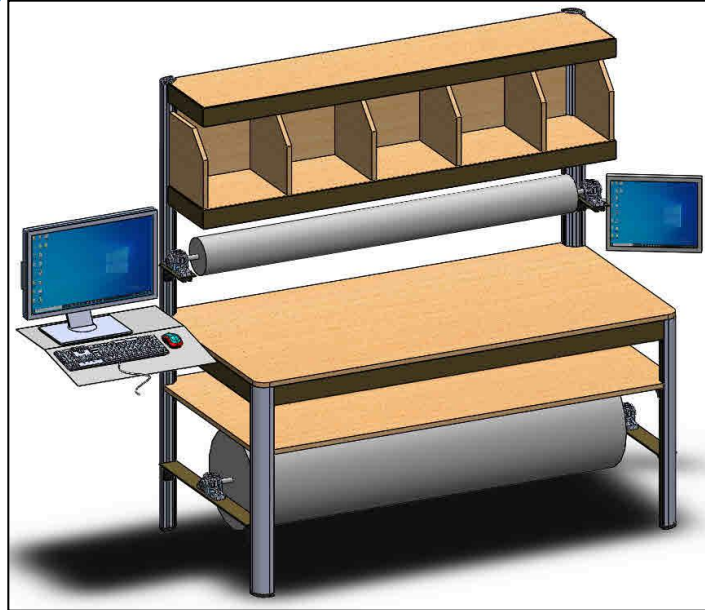


OUTPUT 3D CAD MODEL & DRAWINGS

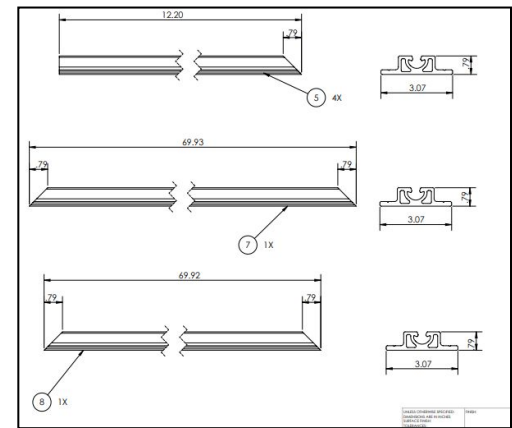


CURTAIN WALL SYSTEM WITH WIRE ROUTING

Custom Packing Station
36" X 72" x 72" Packing Station.



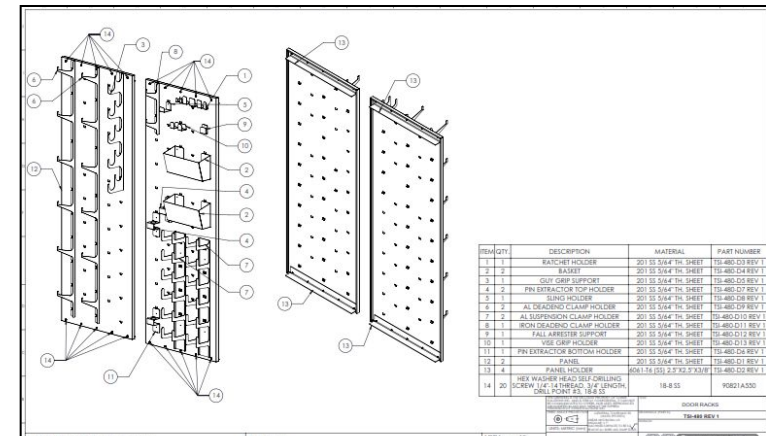
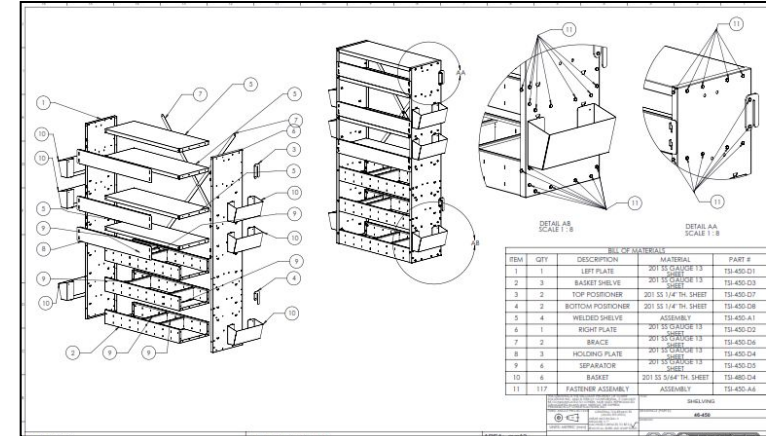
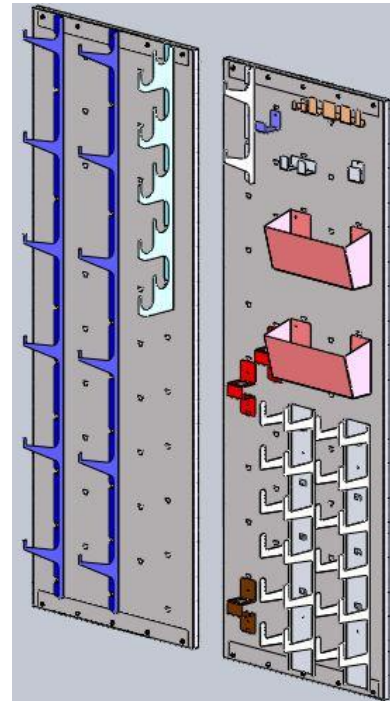
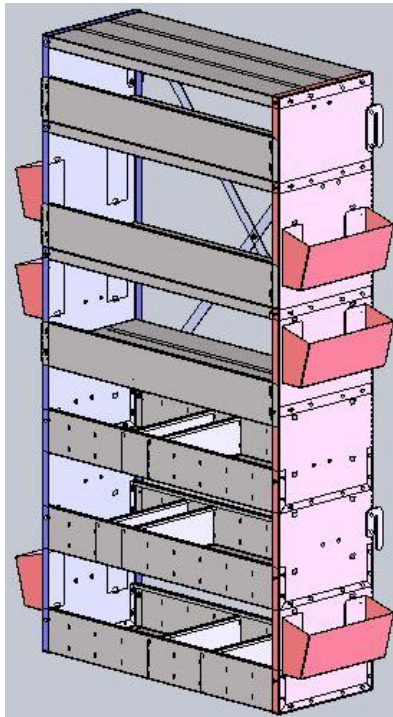
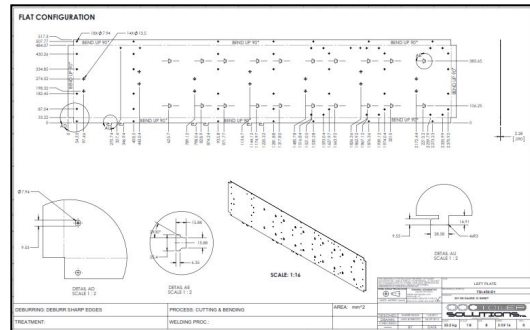
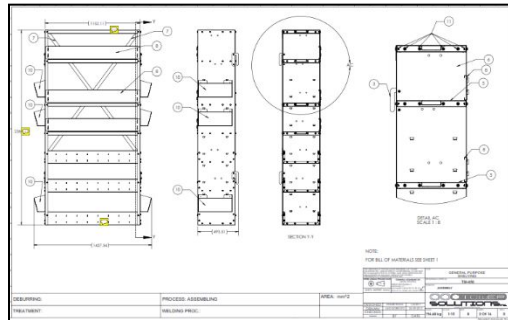
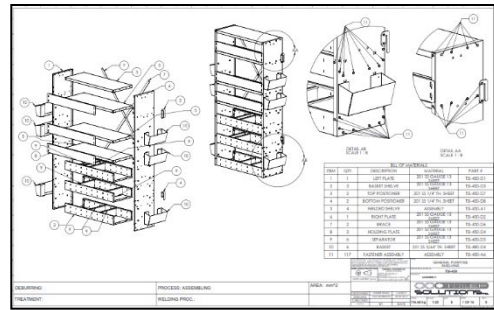
ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REVISION
1	BASE 6 L		2	
2	2INCH L	40MM 3 SLOT TOP 30 PROFILE	2	25
3	42IN L	40MM 3 SLOT TOP 30 PROFILE	2	25
4	FLY PL	40MM 1 SLOT DOUBLE FLANGE 30 PROFILE	4	25
5	FLY PL	40MM 1 SLOT DOUBLE FLANGE 30 PROFILE	2	25
6	FLY PL	40MM 1 SLOT DOUBLE FLANGE 30 PROFILE	2	25
7	FLY PL	40MM 1 SLOT DOUBLE FLANGE 30 PROFILE	1	25
8	1200MM 100X100	40MM 3 WAY CORNER BRACKET KF	4	25
9	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
10	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
11	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
12	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
13	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
14	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
15	TOP TOP	40MM 3 WAY CORNER BRACKET KF	4	25
16	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
17	FLYBOARD	40MM 3 WAY CORNER BRACKET KF	4	25
18	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
19	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
20	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
21	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
22	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
23	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
24	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
25	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
26	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
27	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
28	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
29	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
30	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
31	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
32	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25
33	300 PART	40MM 30 UNIVERSAL CORNER BRACKET KF	4	25



Develop 3D Model & 2D Manufacturing Drawings (Aluminium Extrusion) from Reference Image & Instructions

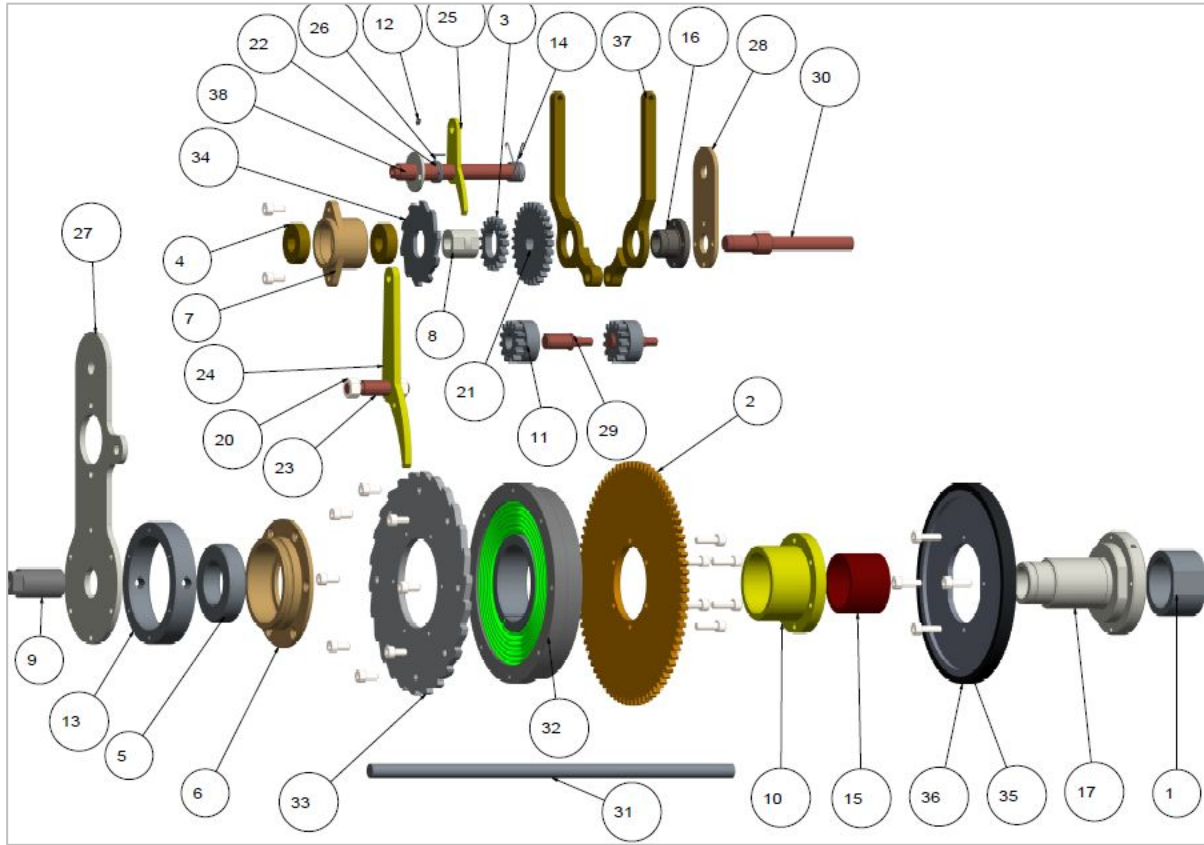
PRINTING RACK ASSEMBLY

INPUT: PDF Drawings



Update 3D Model and 2D DrawingS from given reference 3D Model, 2D Drawing (in PDF) as per instructions.

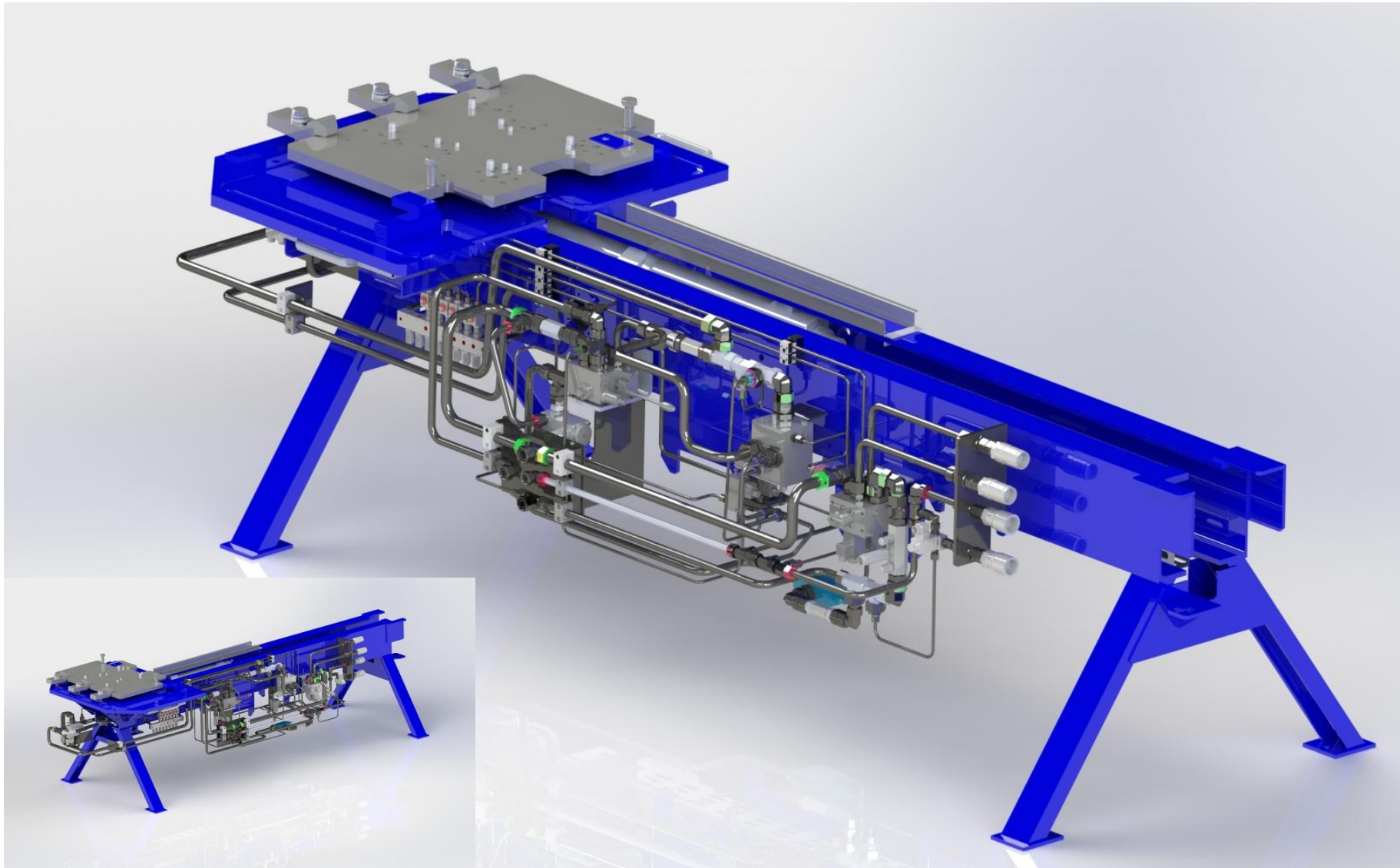
SHEET METAL DOOR RACK ASSEMBLY



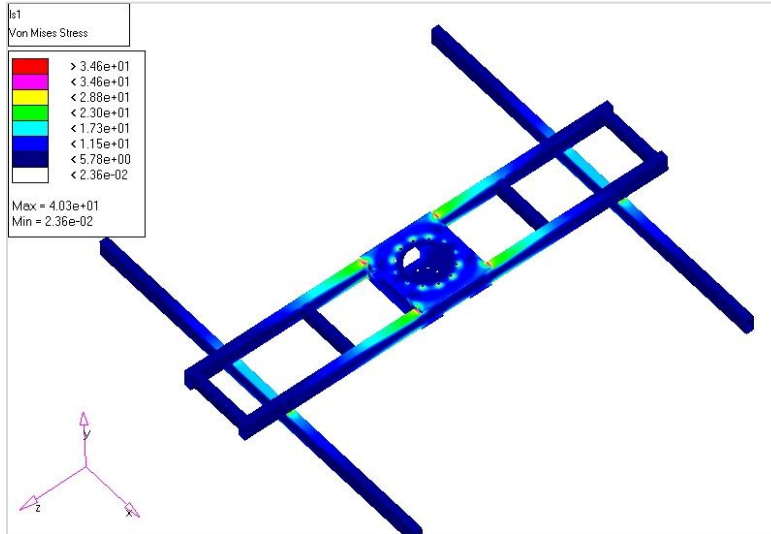
ITEM NO	PART NUMBER	QTY	DESCRIPTION
1	BEARING_6001	3	bearing1.prt
2	ENMEC_D03_001	1	spring_outer_case_new.prt
3	ENMEC_D03_002	1	
4	ENMEC_D03_003	1	shaft_dia_8.prt
5	ENMEC_D03_004	1	async_gear.prt
6	ENMEC_D03_005	1	sync_lever1.prt
7	ENMEC_D03_006	1	sync_lever1.prt
8	ENMEC_D03_007	1	hinge_shaft_1.prt
9	ENMEC_D03_008	1	keyway.prt
10	ENMEC_D03_009	2	keyway.prt
11	ENMEC_D03_010	2	planetary_gear_17teeth.prt
12	ENMEC_D03_011	1	bearing_new_1.prt
13	ENMEC_D03_012	1	hinge_shaft_1.prt
14	ENMEC_D03_013	1	bearing_new_1.prt
15	ENMEC_D03_014	1	chassis.prt
16	ENMEC_D03_015	1	support_frame.prt
17	ENMEC_D03_016	1	sync_lever1.prt
18	ENMEC_D03_017	2	hinge_pin.prt
19	ENMEC_D03_018	2	brake_shaft.prt
20	ENMEC_D03_019	1	sync_lever1.prt
21	ENMEC_D03_020	1	spring_pin.prt
22	ENMEC_D03_021	1	spring_torsion.prt
23	HFL2026_ONEWAY_CAM	1	hfl1022.prt
24	M4X10	8	
25	M6_WASHER	1	prt0001.prt

ENMEC			
DIVISION			
EQUIPMENT			
TITLE			
EXPLODED VIEW			
DATE	DESIGNED BY	CHECKED BY	DATE
SCALE	APPROVED BY	TECHNICAL MANAGER	
REV	REV	REV	REV
001	001	001	001
DRAWING NO		ENMEC_D03_000	
PART NO		ENMEC_D03_000	
SCALE		A3	

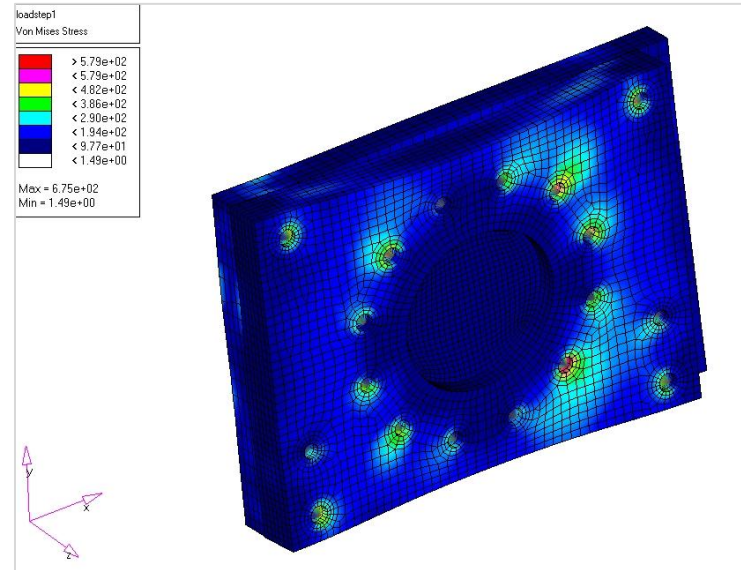
CREATE EXPLODED VIEWS AND PARTS INDEX



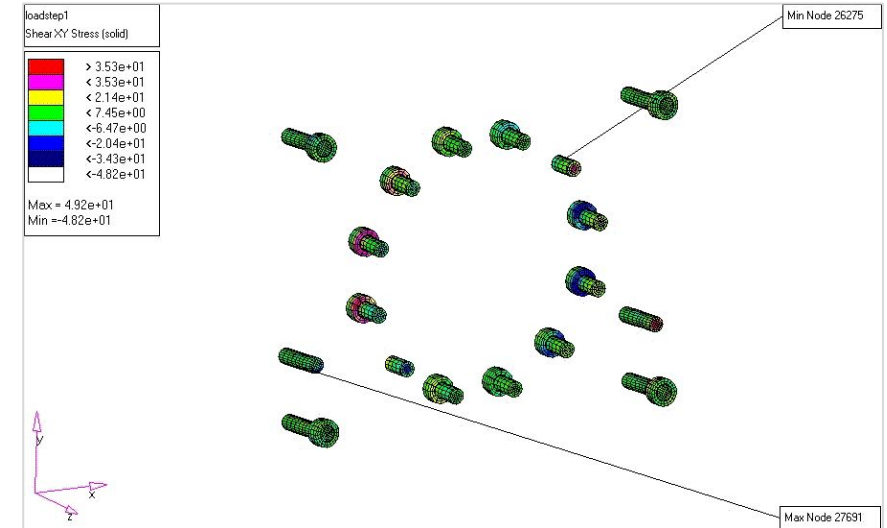
MECHANICAL 3D RENDERING



Stress analysis on Tool Holder Arm of a Robot



Stress analysis of mounting plate of robot tool holder arm plate

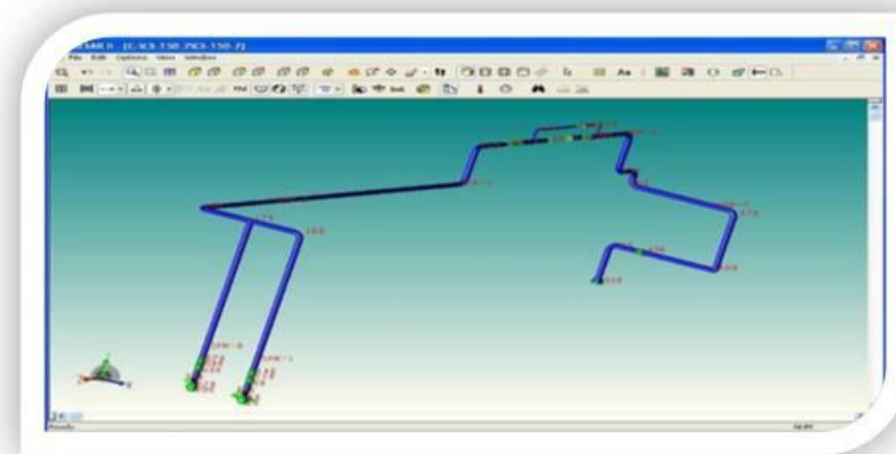


Stress analysis of mounting bolts to establish the factor of safety

FINITE ELEMENT ANALYSIS (FEA) SERVICES

PIPING ENGINEERING

- Equipment General Arrangement Layout
- Preparation of Design documents & Drawings for
- Statutory approvals like IBR, CCOE, etc
- Development of Piping Plans, Sections and Details
- Finalization of Nozzle Orientations
- Piping Stress Analysis & Flexibility Calculations
- Support Layout & Design of Special Supports
- Pipe rack design
- Utility Flow Diagrams
- 3D Modeling
- Isometrics



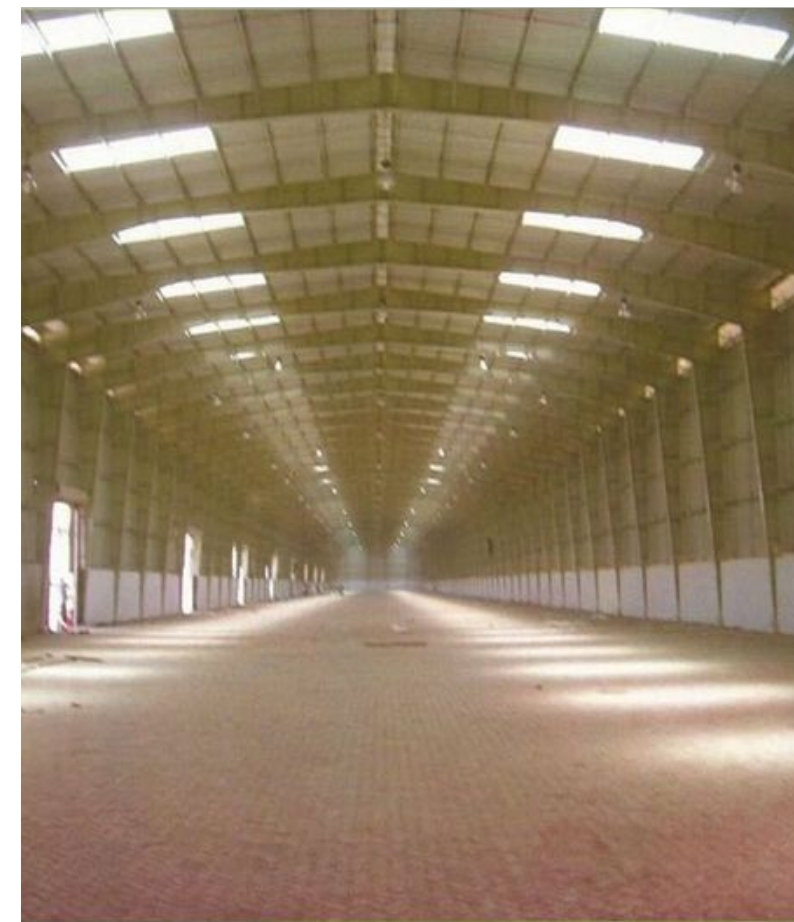
PROCESS ENGINEERING

- Heat and Mass Transfer calculations
- Pressure drop calculations
- Pump / Compressor Head determination
- Network Analysis (PIPENET)
- Preparation of Process Flow Diagrams (PFD)
- Pipe size calculation
- Preparation of Piping & Instrumentation Diagram (P&ID)
- Piping & Equipment Material Selection
- HAZOP & Safety Studies
- Equipment Sizing Calculations



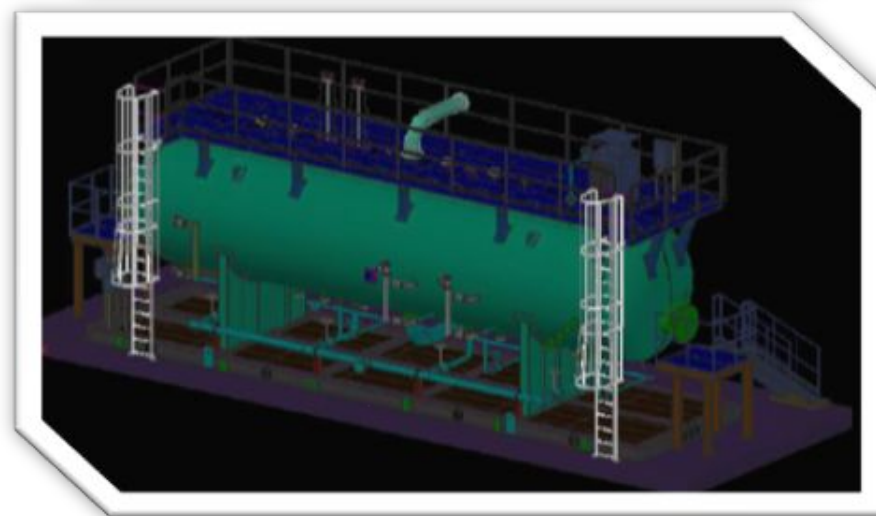
STRUCTURAL DESIGN, ANALYSIS, 3D MODELING & DETAILING

- Skid Mounted Structures
- Pipe Racks
- Equipment Supporting Structures
- Material Handling Equipment's & Supporting Structures
- Building Structures-Commercial, Residential, etc
- Stress and fatigue analysis of structures using FEA
- Preparation of GA Drawings
- Preparation of Fabrication Drawings with Bill of Materials
- STAAD Analysis for structures
- Structural Steel Detailing and Fabrication using Tekla



STATIC EQUIPMENT ENGINEERING

- Pressure vessels : As per ASME Sec VIII Div 1/Div.2 , PD-5500 , EN-13445, IS-2825.
- Heat Exchangers (Shell and tube type): As per ASME Sec VIII Div 1 part UHX , TEMA EN- 13445 & PD -5500.
- Columns : As per ASME Sec VIII Div 1
- Shop welded /site welded Storage tanks : As per API-650, IS-803 , EN 14015
- Underground and above ground (single wall double wall) horizontal storage
- Tanks: As per UL- 58,EN 12285-1 and 2
- Flare Steel Stack : ASME Sec VIII Div.1 + STS 2000.
- Duct Sizing & Mechanical Thickness Calculations.
 - Duct & Equipment Layout.
 - Duct & Equipment Fabrication drawing.



CAD & FEA SOFTWARE



AcuSolve

