

Welcome to



**IPPE**

**Indian Power Press Engineers**

**1339, Golden Colony, Mugappair, CHENNAI-600 050**

**Proprietor : +91 97877 38596**

**Accounts : +91 96263 56420**

**Manager : +91 98849 22597**

**[sakthivel@ippengineers.in](mailto:sakthivel@ippengineers.in)**

**[accounts@ippengineers.in](mailto:accounts@ippengineers.in)**

**[electrical@ippengineers.in](mailto:electrical@ippengineers.in)**

**[mechanical@ippengineers.in](mailto:mechanical@ippengineers.in)**

**[engineering@ippengineers.in](mailto:engineering@ippengineers.in)**

**[sales@ippengineers.in](mailto:sales@ippengineers.in)**

**Official websites: [www.ippengineers.in](http://www.ippengineers.in) / [.com](http://.com)**

# Company Overview

**Established: Since 2008**

we provide best techno - commercial solutions to all power presses and Forging, Stamping, Blanking, sheering industries and we will work with any type of presses and can support for any spares and service. we are also exports in Making new Electrical Panels and reconditioning of press and panels, we provide all technical supports at low costs of charges and using rich experience of our experts.

From 2010 we started sales, erection and service commissioning of any kind of tool room machines like presses, lathes, CNC, VMC, Universal drilling, surface grinding, pipe bending, industrial AGV, industrial Robots, and Etc.,

We are also doing Reverse engineering of break down components, Research And Development Projects like Quick Die change, Gantry Crane Projects and Etc.,

## Our Expertise

Power Press Maintenance, Mechanical Power Press Maintenance, Hydraulic Power Press Maintenance, Hot Forging Press Maintenance, Cold Forging Press Maintenance, Sheet Metal Press Maintenance, Coining Press Maintenance, Heavy Forging Press Maintenance, Stamping Press Maintenance, Electrical panel for all above press and reverse engineering any parts, Spares support and design solution and all spare parts in above machines and etc.....,

# Our Services

- ☐ Modernization and Renovation Erection and commissioning
- ☐ Automation of Technological Processes on Presses
- ☐ Special Purpose of Machines
- ☐ Used machines Trading



**THE PRESSES WE  
UNDERTOOK ARE**

# The Presses We Undertook Are

- ☐ Hot forging presses
- ☐ Servo Presses & Feeders
- ☐ Trimming presses
- ☐ Coining presses
- ☐ Horizontal up setters
- ☐ Screw presses
- ☐ Billet Shearing
- ☐ Warm Forging Press
- ☐ Sheet Metal Stamping Press
- ☐ Billet reducer
- ☐ Knuckle joint coining presses
- ☐ High speed presses
- ☐ Hydraulic presses
- ☐ Die spotting presses
- ☐ Press brakes
- ☐ Shearing machines
- ☐ Turret punch presses ( CNC)
- ☐ Tire curing presses
- ☐ Ring rolling machines
- ☐ Fine blanking

# Advantages of IPPE

- ◆ Advance design ideas
- ◆ Commitments in Time
- ◆ Assistance in development of specifications
- ◆ Feasibility studies and prototype assistance
- ◆ Computer aided design and drafting services
- ◆ Equipment specifications and procurement
- ◆ Research and development Assembly, testing, & installation
- ◆ Accept most CAD formats

# Our Professionalism

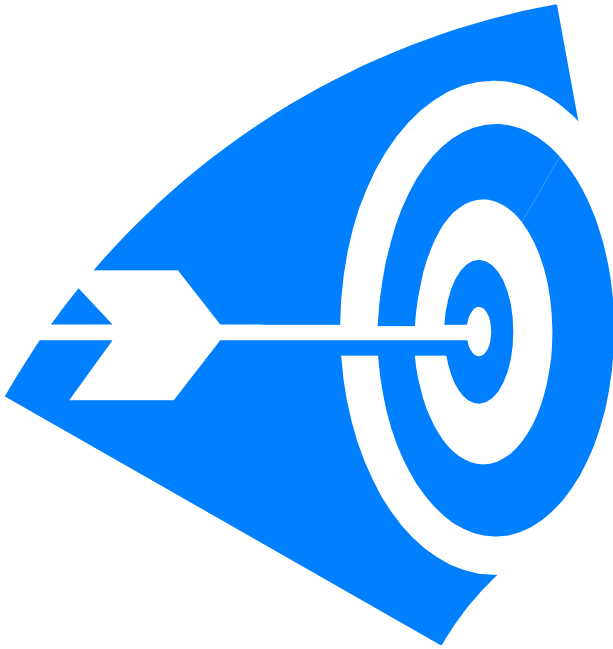
- ◆ Pneumatics and Hydraulics
- ◆ System integration
- ◆ Electrical, Electronics and controls
- ◆ Automation and Robotic design
- ◆ Under-the-hook lift devices
- ◆ Reverse engineering and improvements
- ◆ R&D Projects

# Quality Commitment

Our custom designed manufacturing systems are proven to maximize production, lower reject and rework rates, and improve the overall quality of the product. Whether single cell manual machines or multi-line turnkey automated systems, our engineering team works with customers to ensure a full understanding of system parameters and requirements. From development through production, our commitment to quality comes through for you.

# Quality Assurance

- Defining Quality Check team
- Defining Quality Check list
- Developing Quality check tools
- Manual Quality Check



## Our Focus

- ◆ **Enable Customer's Business**
- ◆ **Help Customers growth**
- ◆ **Completion in commitments**
- ◆ **Zero defects**
- ◆ **Safety is more important at any point**

# Some of our Customers

- ◆ Siempelkamp Germany. 5000T hydraulic press
- ◆ National Engineering USA. 2500T horizontal Up setter.
- ◆ Simpac Korea. Die spotting press.
- ◆ JIER China. Blanking line.
- ◆ Thansu Australia.
- ◆ Daimler India commercial vehicles Chennai
- ◆ Renault Nissan Automotive india pvt ltd. Chennai
- ◆ Caparo Groups Engineering Pvt Ltd.
- ◆ JBM Groups, Chennai, Sanand Gujarat (6000 Ton hot forging)
- ◆ Bimetal bearing Ltd, Hosur
- ◆ TI Metal Groups of Forming Ltd
- ◆ Brakes India Ltd, Wheels India Ltd, Clastek, Chennai
- ◆ Nippon Thermostat India Pvt. Ltd.
- ◆ IHI Corporation Japan
- ◆ Konoike Asia India Pvt. Ltd
- ◆ TTK Prestige Ltd.
- ◆ Reliable Autotech Pvt. Ltd





**TI METAL FORMING**

(A Unit of Tube Investments of India Limited)



**murugappa**

## **Certificate of Appreciation**

Presented to

**M/s. INDIAN POWER PRESS ENGINEER**

In acknowledgment of their dedicated  
support to 1050 Ton Weingarten (Germany)  
Press - Refurbishment & Installation / Commissioning.

We look forward to many more years of  
mutual success

**K R SRINIVASAN**

Sr. Vice President



# Erection & Commissioning of some of presses





# Successful Projects

**Bi metal  
Bearings Pvt Ltd**



# Successful projects













# Successful projects







**Successful  
projects**

**Jyoti toolings  
Pvt Ltd**















25/11/2009



**Caparo group**





25/11/2009

# Successful projects







































*Supply/ Installation and Maintenance of Hydraulic and Pneumatic Presses:*







**Prabha Auto Ltd Chennai**





























Siempelkamp





ACE

14XV25000S & ERECTORS

































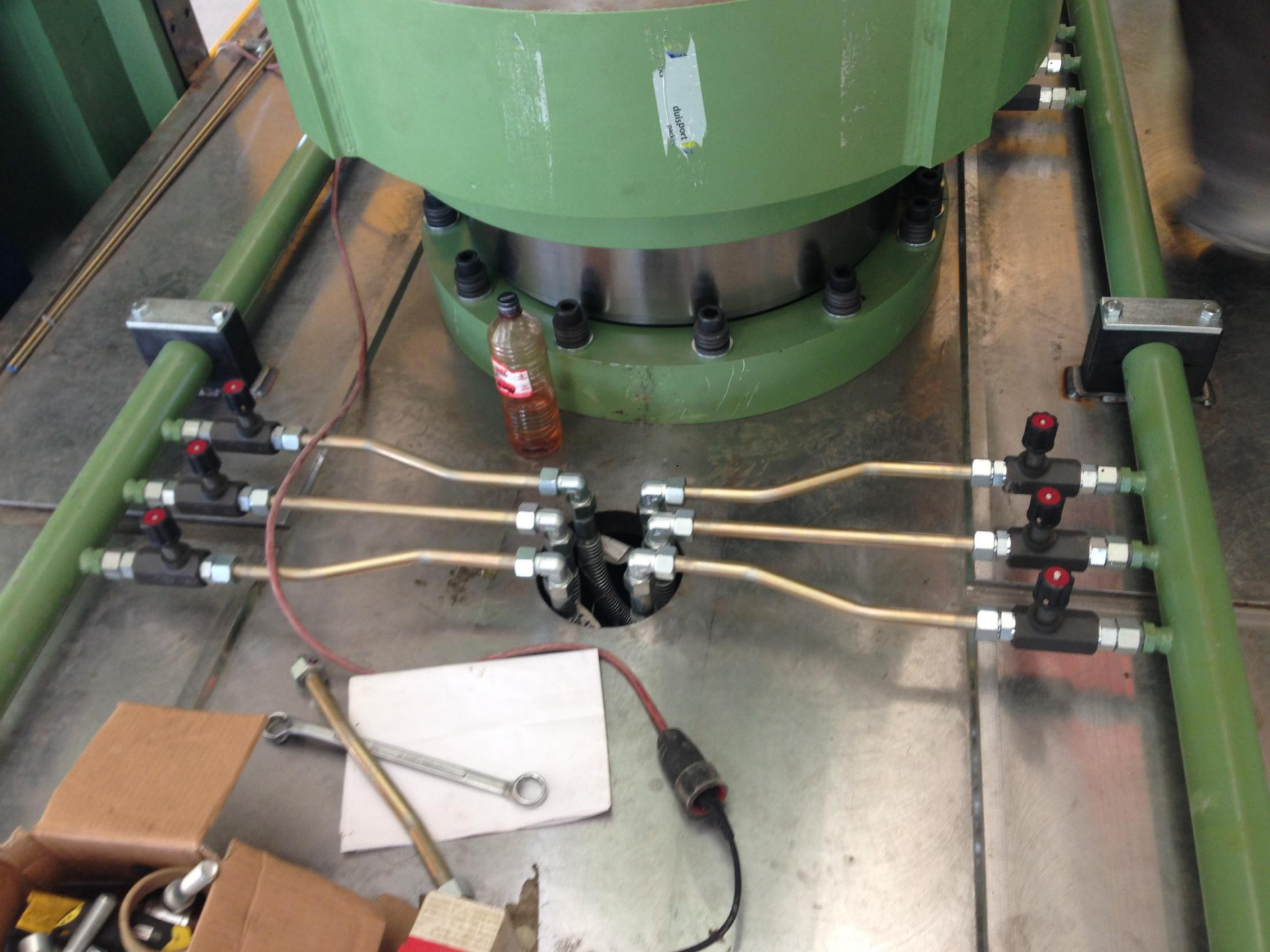
































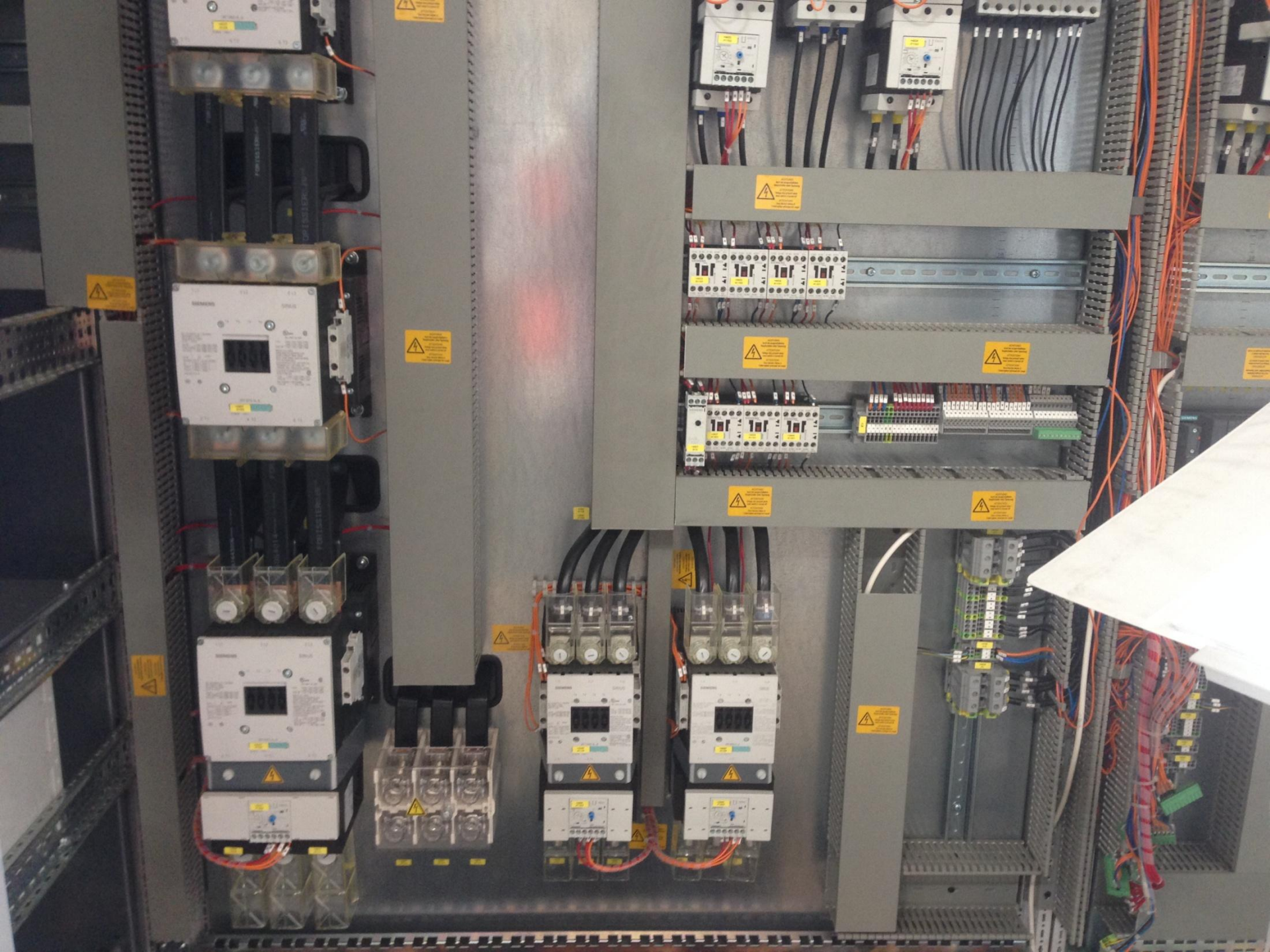




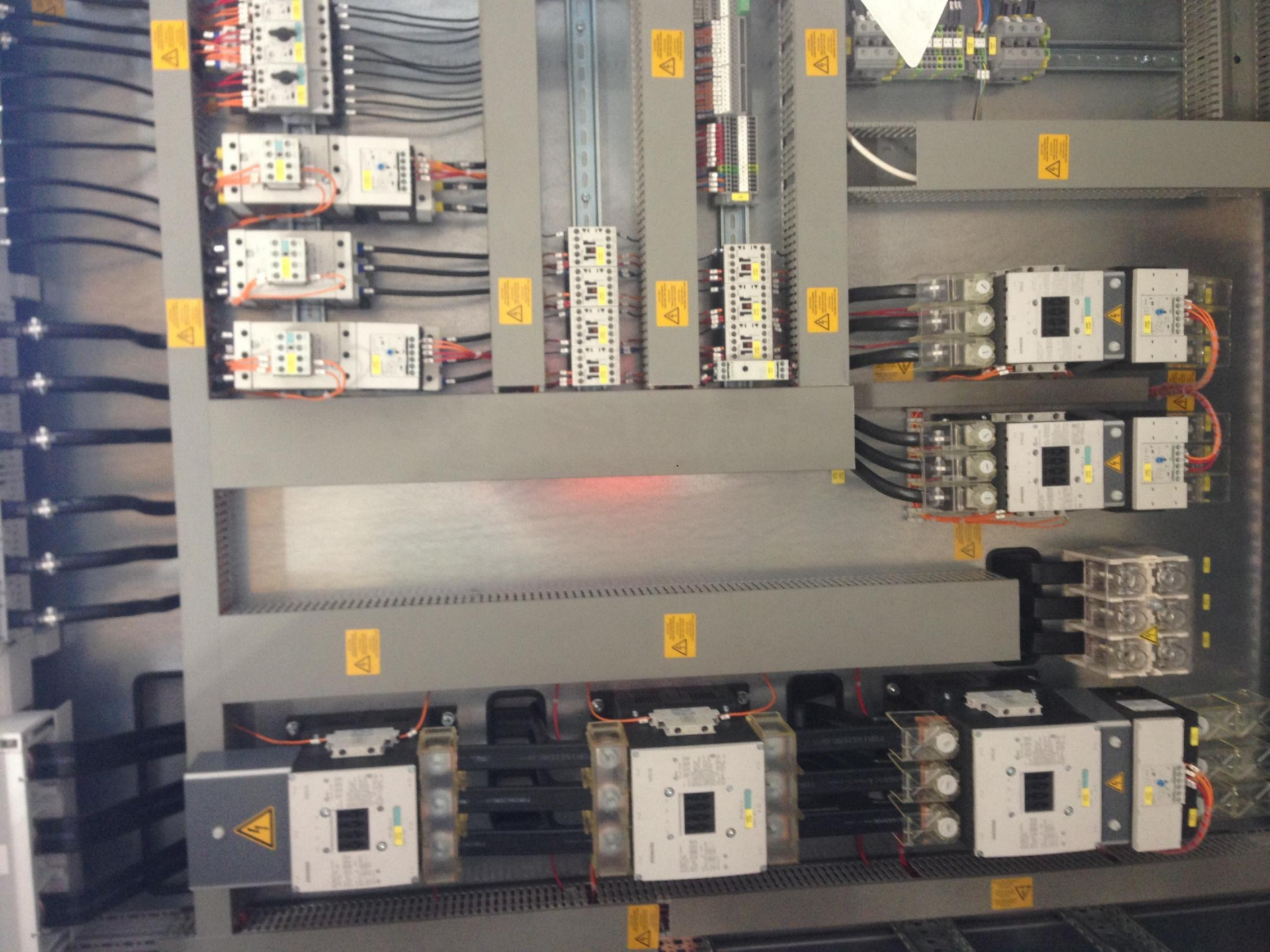


























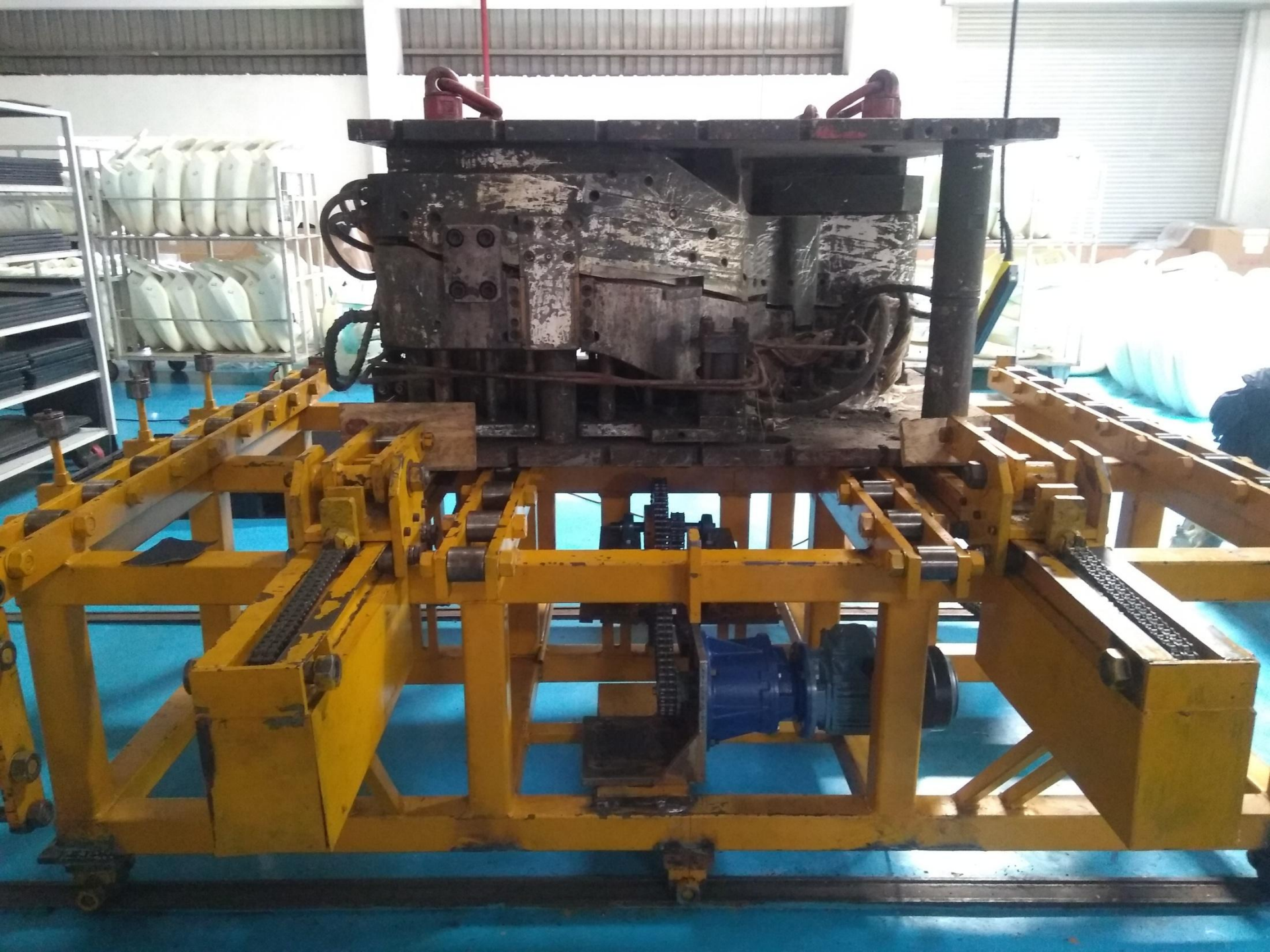


## Design Projects

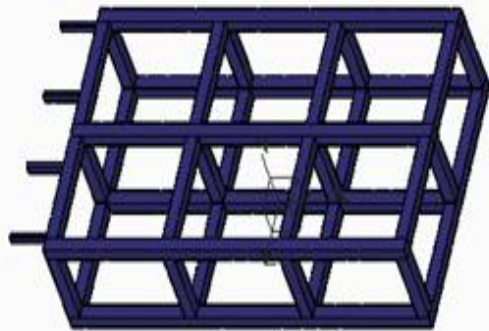
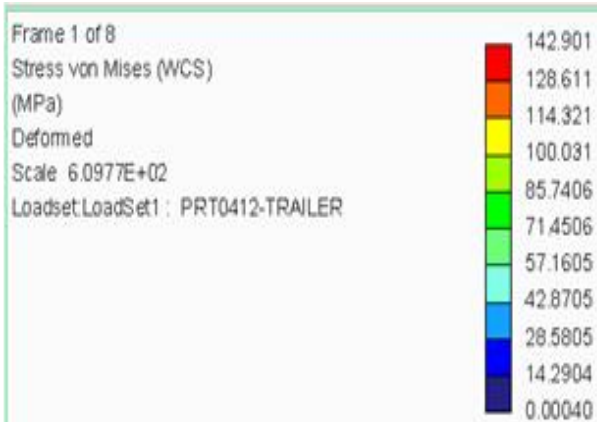
Harita Fherare Pvt Ltd  
Chennai

Quick Die Changer  
Capacity: 20Ton  
Conducted on 30/11/2017

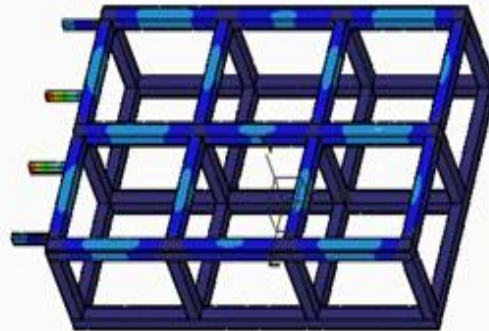
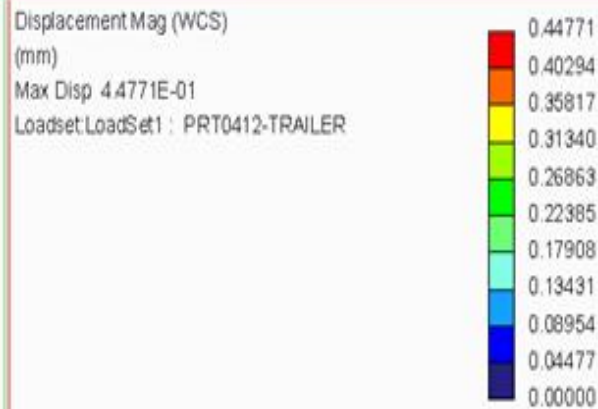




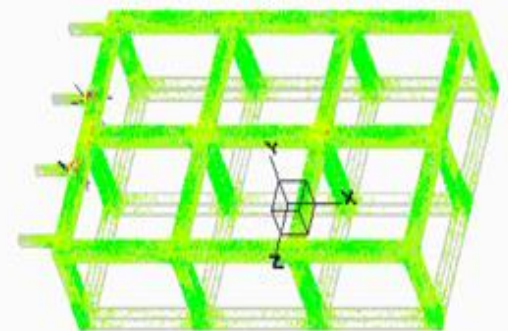
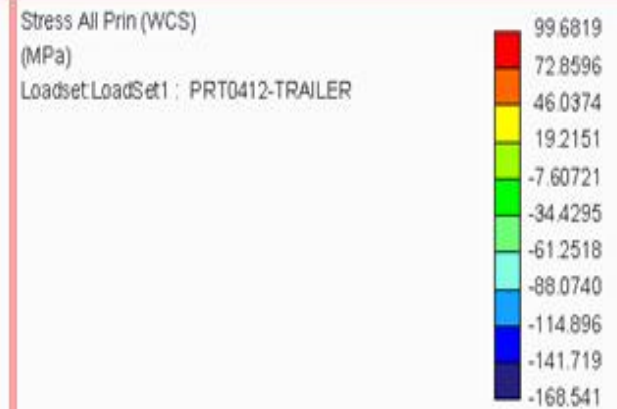
# Static Analysis Die Cart structure



von Mises Stress Animation



Displacement Magnitude Fringe



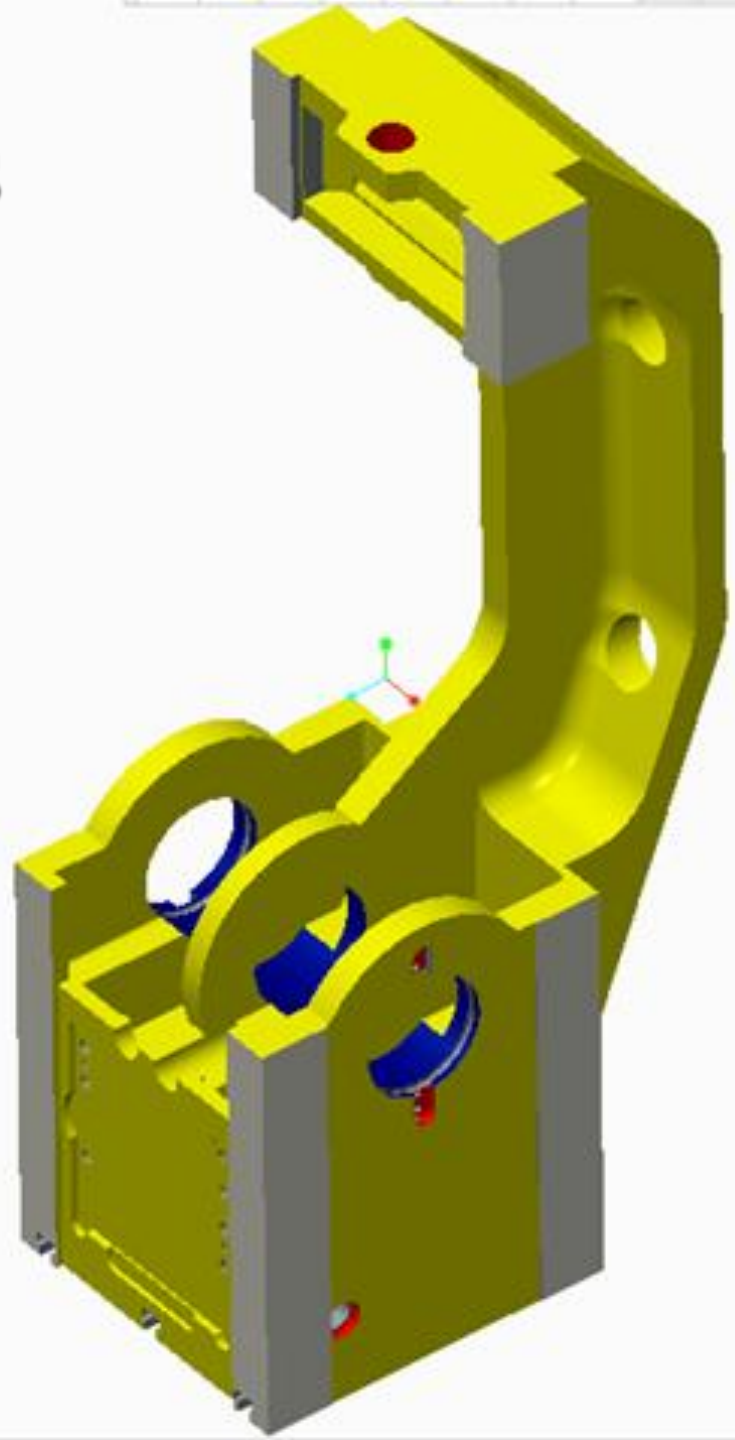
Principal Stress Vectors



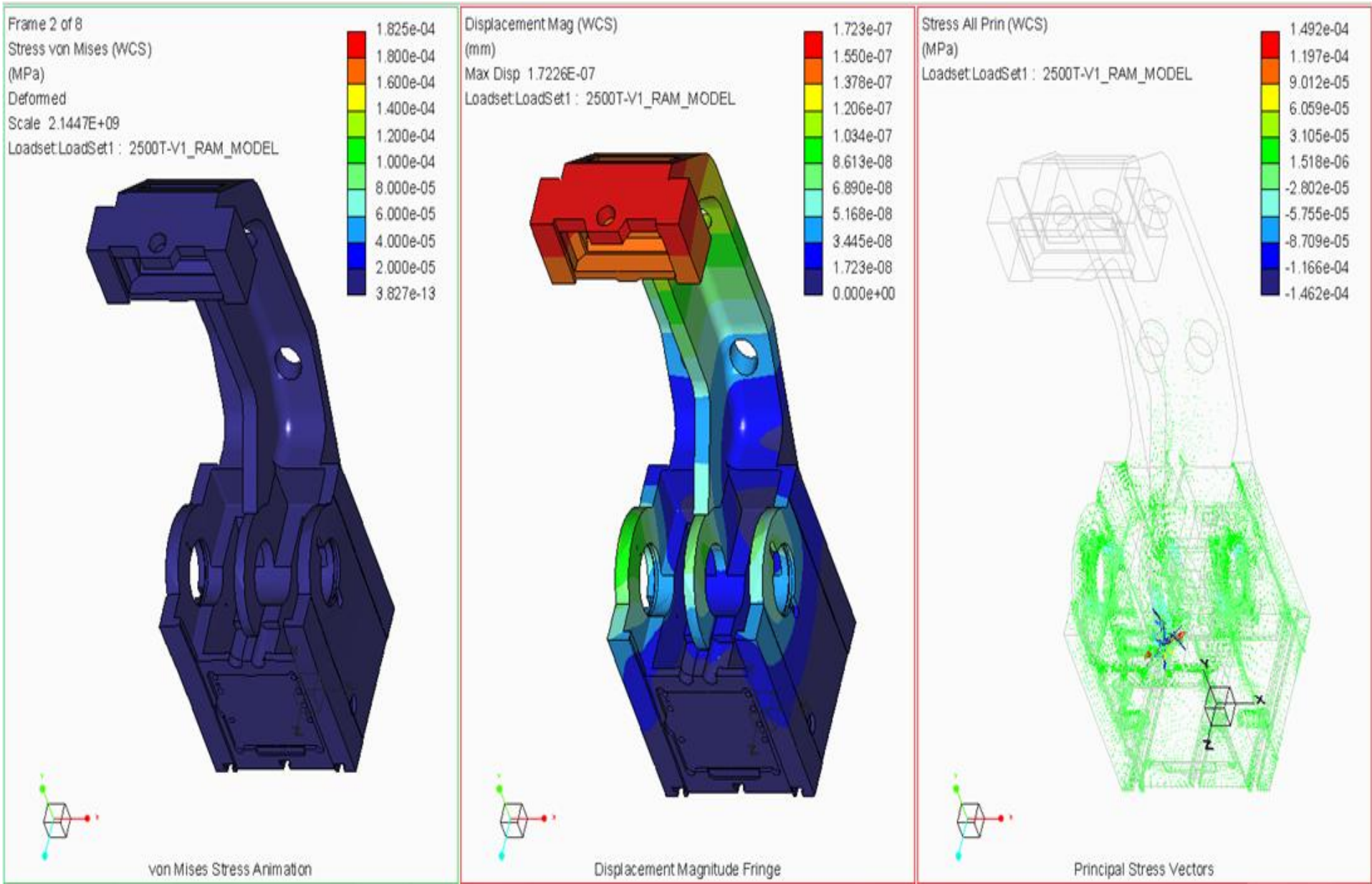
# DESIGN AND ANALYSIS

Bill forge Pvt Ltd  
Bangalore

V1 RAM - 1000 TON  
PRESS



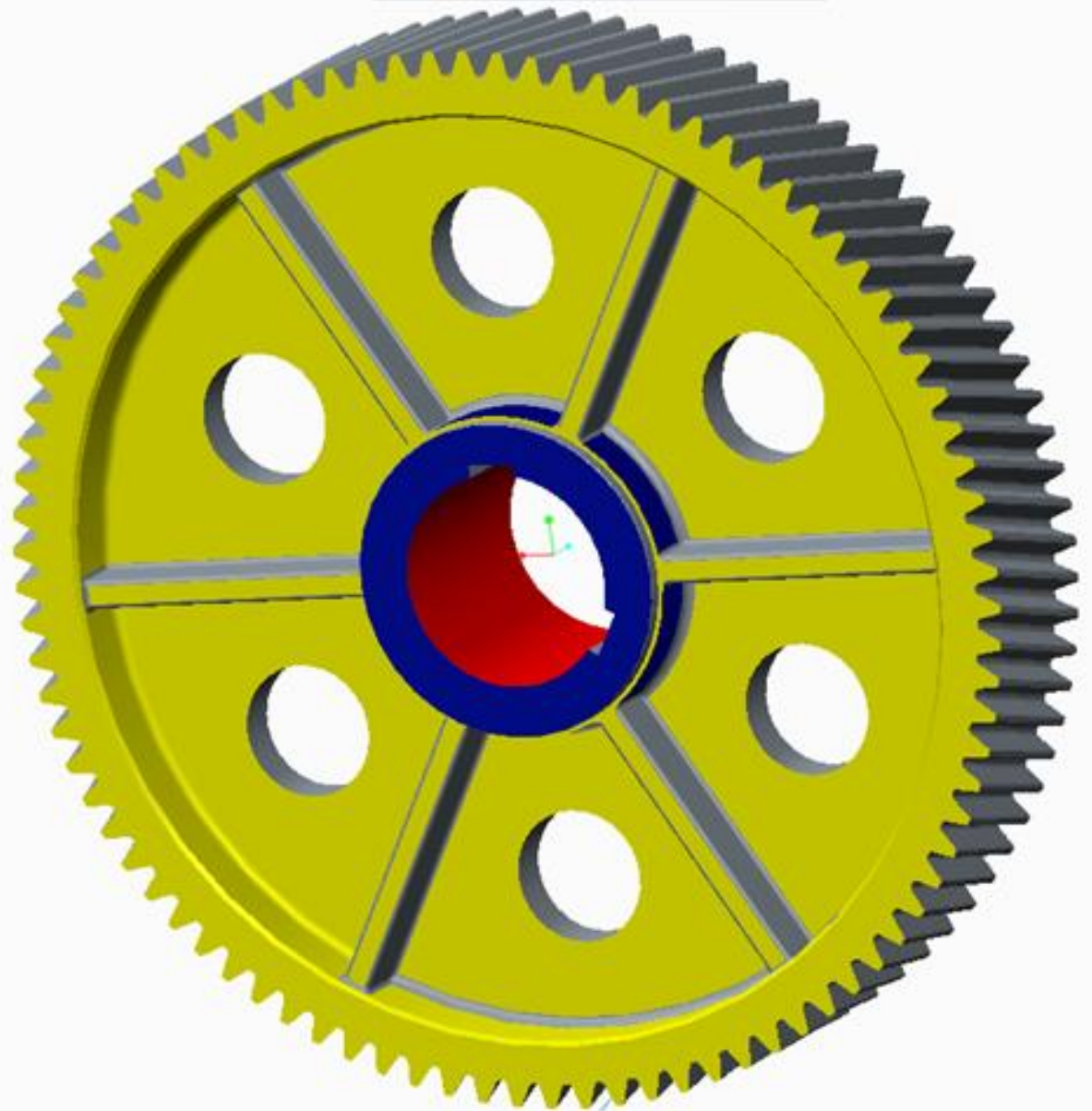
# ANALYSIS in Creo parametric 2.0





# Ti Metal forming

## BULL GEAR 1500 TON PRESS









Frame 1 of 8

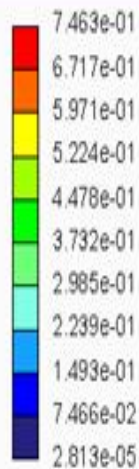
Stress von Mises (WCS)

(MPa)

Deformed

Scale 3.0464E+05

Loadset: LoadSet1 : PRTHELICALGEAR01



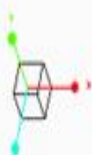
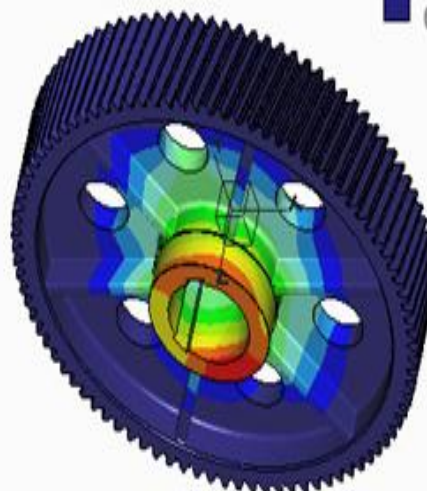
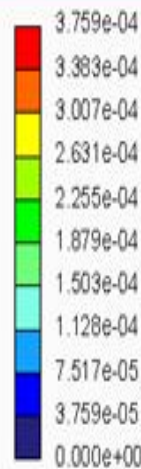
von Mises Stress Animation

Displacement Mag (WCS)

(mm)

Max Disp 3.7585E-04

Loadset: LoadSet1 : PRTHELICALGEAR01

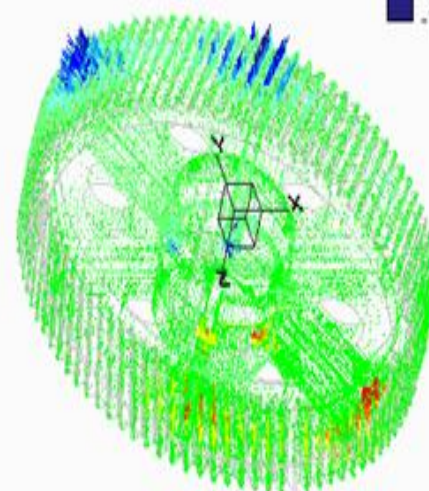


Displacement Magnitude Fringe

Stress All Prin (WCS)

(MPa)

Loadset: LoadSet1 : PRTHELICALGEAR01



Principal Stress Vectors



## LOAD ANALYSIS FOR HERRINGBONE GEAR

**Organization Name: Indian Power Press Engineers,**

**Place: Chennai**

### **Description:**

Analyzing the load capacity of welding which is acting on the herringbone gear. So, According to the welding dimension we take, Thickness of the weld,  $t = 15$  mm, Maximum Shear Stress =  $115 \text{ N/mm}^2$ , Inner diameter of the Shaft  $d = 150$  mm, Outer Dia  $D = 285.11$  mm, let we find the load capacity of the welding area  $\approx ?$

Welding Thickness  $t = S \cdot \sin 45^\circ$  (considering the area of weld as Triangular Shape)

Then,  $15 = 0.707 \cdot S$  Where "S" is side width of the welding.

$$S = 15 / 0.707 \approx 21.1 \text{ mm}$$

$$\text{Maximum Shear stress for welding area} = 2.83 \cdot T / 3.14 \cdot S \cdot (D^2 - d^2)$$

Where, T = Torque in N.m

$$115 = 2.83 \cdot T / 3.14 \cdot 21 \cdot (285^2 - 150^2)$$

$$115 = 2.83 \cdot T / 65.94 \cdot (81225 - 22500)$$

$$115 = 2.83 \cdot T / 3872326.5$$

$$T = 115 \cdot 3872326.5 / 2.83$$

$$T = 157356023.851 \text{ N.m}$$

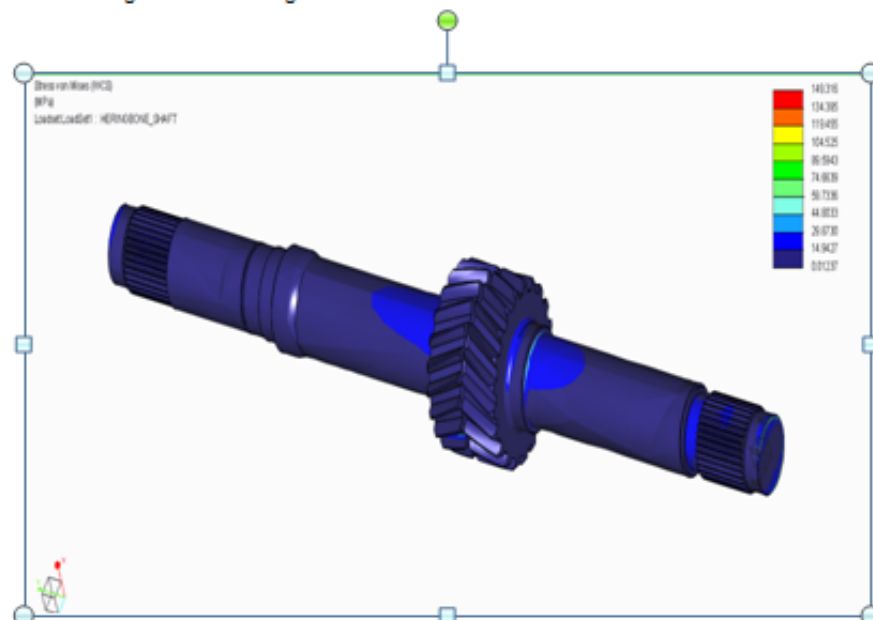
$$T = 157.36 \text{ K.N.M}$$

From the theoretical Method the design is safe for 260T load acting on the Herring bone Gear as well as Welding area during static load condition.

Note: The keyway load carrying capacity is 10 T.

## GRAPHICAL METHOD ANALYSIS

The following simulation result gives the clear idea about the LOAD



This simulation describe there is no failure due to load acting on the herringbone gear.

The maximum Fatigue or Failure occurs at 300 Tonne or impact Load.

### Conclusion :-

According to the theoretical calculation method and Graphical method the design is safe. And the Maximum load capacity of the welding area is 157.36 K.N.M at rotation and 260 T at static.

### APPROVAL:

Name :	Designation :	Signature :	Date :





# STTI Bangalore





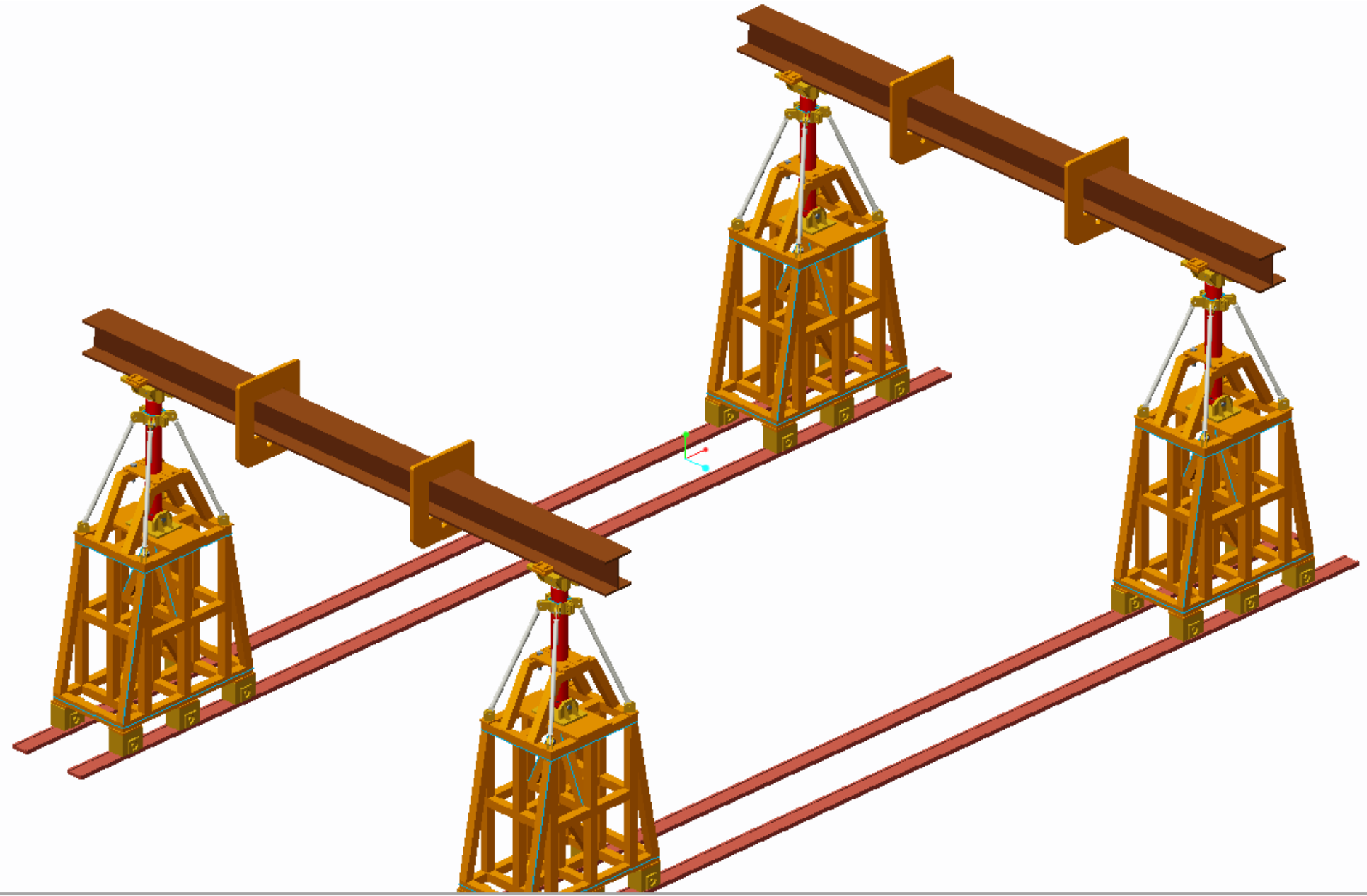
Hydraulic Gantry  
capacity: 150ton

NTC Logistics



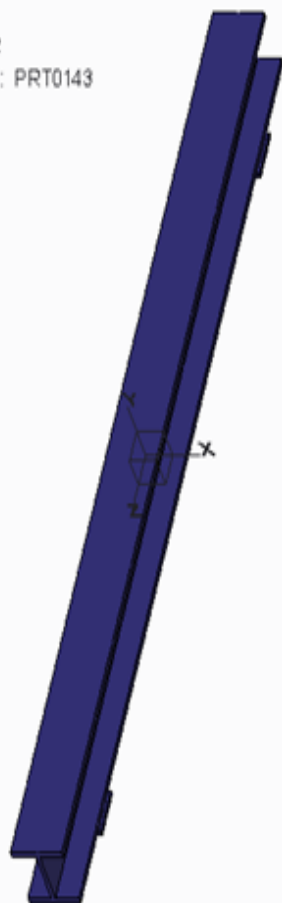
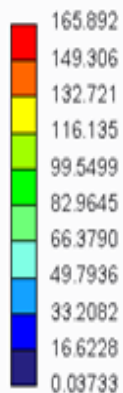


# Gantry Crane



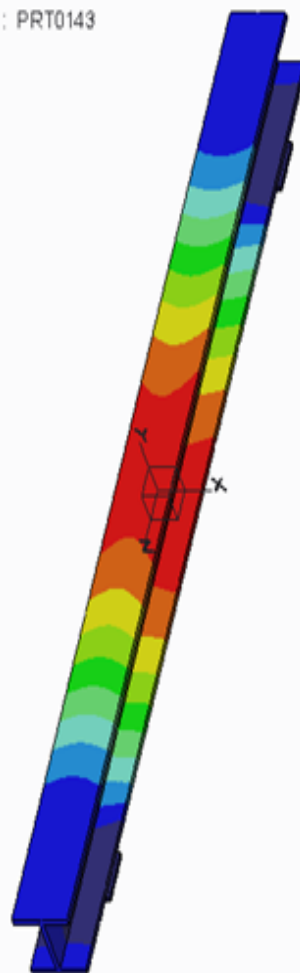
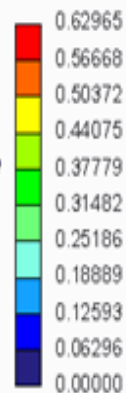
# Gantry crane H-Beam

Frame 1 of 8  
Stress von Mises (WCS)  
(MPa)  
Deformed  
Scale 9.5291E+02  
Loadset: LoadSet1 : PRT0143



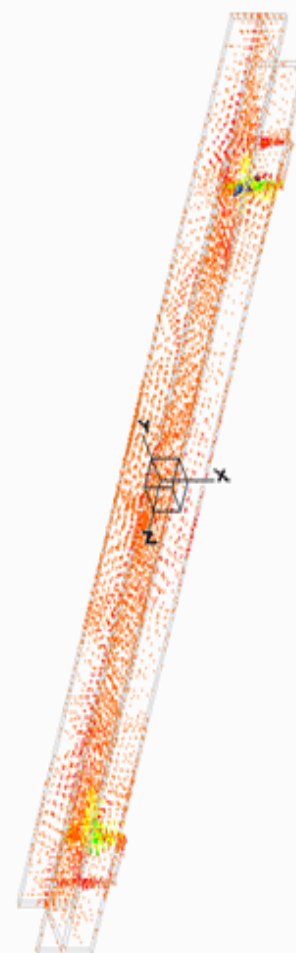
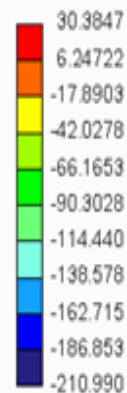
von Mises Stress Animation

Displacement Mag (WCS)  
(mm)  
Max Disp 6.2965E-01  
Loadset: LoadSet1 : PRT0143



Displacement Magnitude Fringe

Stress All Prin (WCS)  
(MPa)  
Loadset: LoadSet1 : PRT0143



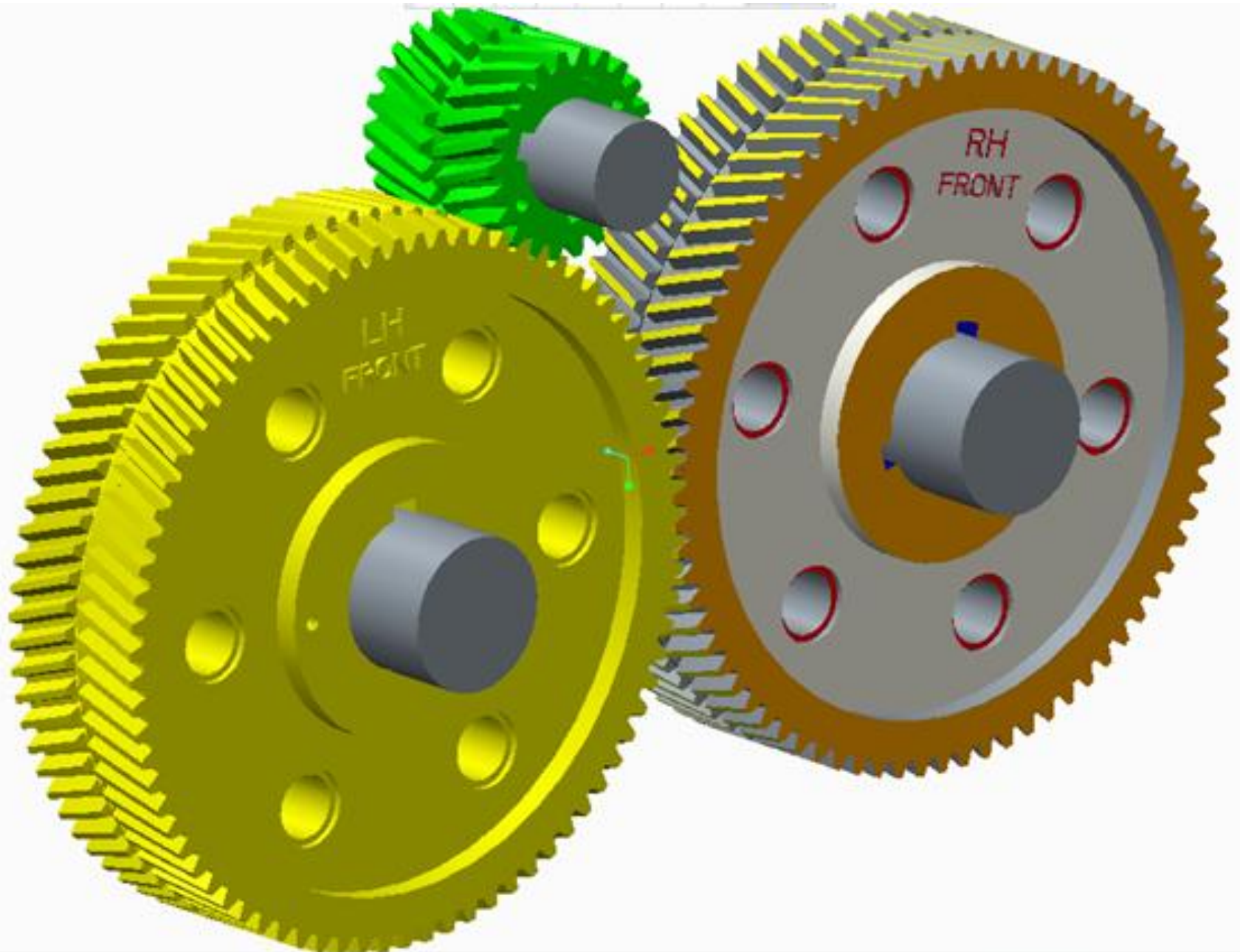
Principal Stress Vectors



# Renault Nissan – Rovetta 1200ton press



# Rovetta 1200ton press main drive gears change







# Ferule Printing Machine



Socket spanner set



















KHMEI T'SANY SOCKET WRENCH SET

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

1/2" DRIVE  
1/4" DRIVE  
3/8" DRIVE

KHMEI T'SANY



















TRUSCO

ADJ.

1DIV = 0.02mm/1m(4SEC)

NO, T130246

















3000kg CAPACITY  
CE













SN1-250

SEYI



P1

POMP1  
POMPE EX ON

SN1-250

SEYI

P2

POMP2  
POMPE EX ON

SN1-250

SEYI

P3

SEYI

REJOINTE A PAUTO VICIUS



# Thank you

## Contact Us

No. 1339, Golden Colony

Anna Nagar West Extn

Chennai 600 050

Mobile - 97877 38596

E-MAIL- [sakthivel@ippengineers.in](mailto:sakthivel@ippengineers.in)

Web - [www.ippengineers.in](http://www.ippengineers.in)

Web - [www.ippengineers.com](http://www.ippengineers.com)