

KAT & ARTRIX TECHNOLOGIES

D.No.8/192-11, SF.No.3/28,

Vellore Approval Layout, Govindha Agraharam, Begapalli,  
Sipcot-1, Hosur-635 126, Krishnagiri Dist, Tamilnadu.

[www.katartrix.com](http://www.katartrix.com), [info@katartrix.com](mailto:info@katartrix.com)

## Company Overview

- Kat & Artrix Technologies is an engineering company, we provides bespoke and turnkey assembly and testing solutions for an Automobile, Energy, Medical, and food processing sectors.
- Designs consulting and PLC programming support started in the year of 2018.
- Machine Building started in July 01, 2024
- Team members with rich experience in different domains of machine design and manufacturing
- We designed and successfully commissioned the Fully automated machines like, material handling conveyors, tyre mounting machines and automatic tube cutting machines.
- And also successfully commissioned tube & rod bending machine, Vertical lift with conveyor, Resistance based SPOT/PROJECTION welding machines and Induction brazing machines.

# Project Lifecycle

## SALES

- RFQ
- Techno Commercial Offer
- Purchase Order

## DESIGN

- Concept Design
- Embodiment Design & DFMEA
- Design Approval Process

## PURCHASE

- Procurement
- Standard Mechanical And Electrical
- Fabricated

## BUILD

- Assembly
- Offline Programming
- Online Programming and Debugging

## INTERNAL QUALITY

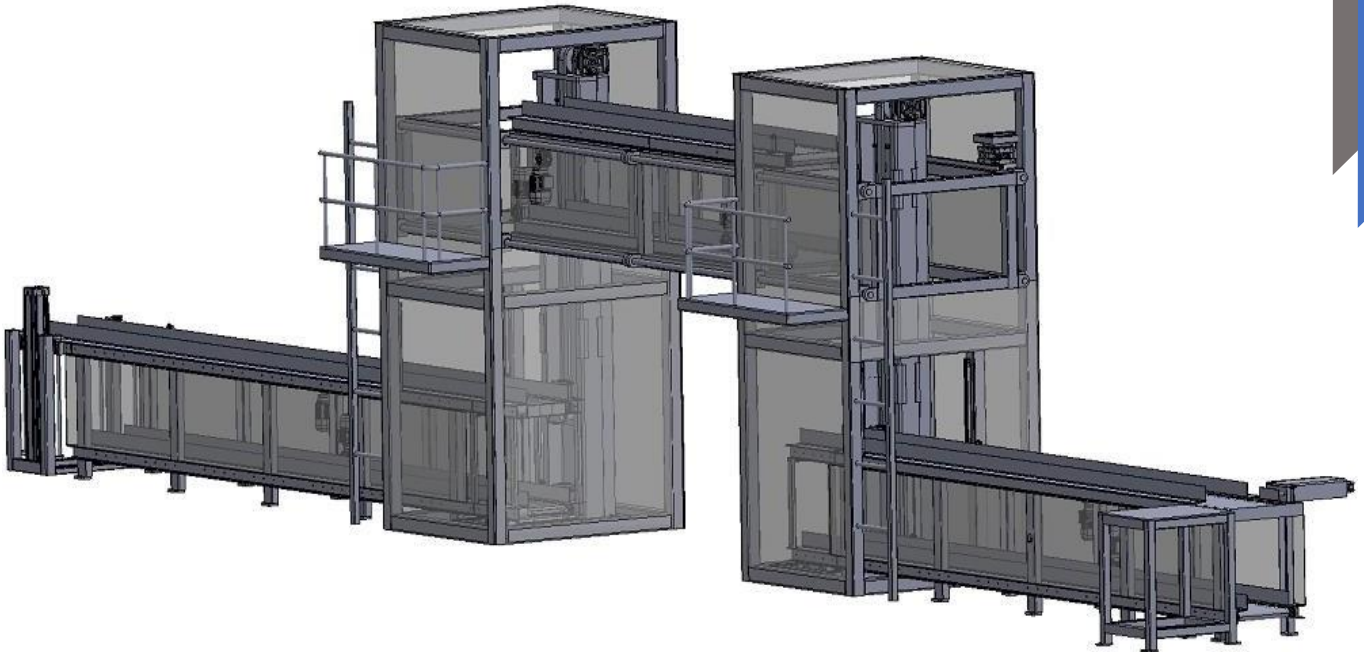
- Internal Testing
- Pre-Qualification
- Machine Qualification 1 (FAT) Dispatch

## INSTALLAT -ION

- Installation
- Machine Qualification 2 (SAT)

# TECHNICAL COMPETENCY

## Material Handling Conveyor Machine



This material handling conveyor is designed and manufactured to transfer materials/components to desired destinations without deterioration of plant layout even across the gangway.

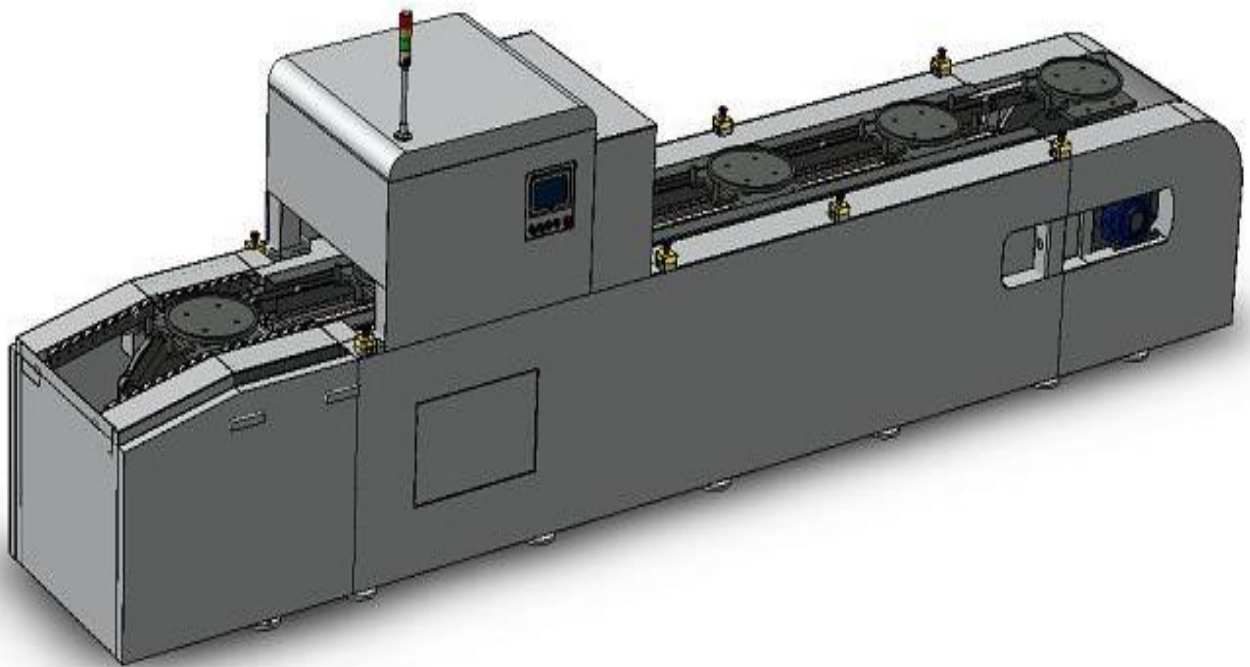
### **HARDSHIPS EXPERIENCED**

- Continuity of work cycle.
- Space constrain.
- crowded/machine interrupted gangway .
- Passage of industrial trucks.

### **SOLUTIONS GIVEN**

- To ensure seamless continuity of the work cycle, we installed actuators and sensors effectively by which it can transfer and brake perfectly.
- By effectively utilizing mechanical components, motor, transmission systems, and actuators, We decreased the consumption of space in the factory.
- By using the retracting mechanism, we can open and close the overhead conveyor when needed for vehicle movement.

# Tyre Mounting Conveyor



This automatic tyre and rim mounting conveyor is a slot conveyor which is designed and manufactured for seamless tyre & rim and tyre mounting.

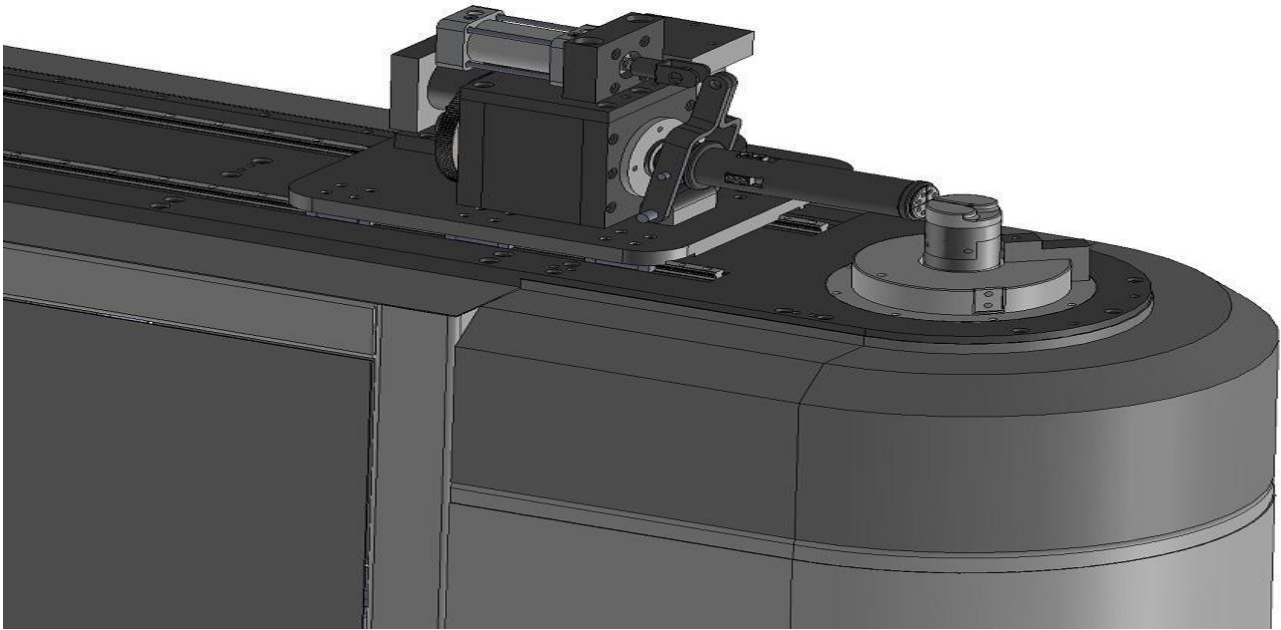
## **HARDSHIPS EXPERIENCED**

- Continuity of work cycle.
- Space constrain.
- Production rate.
- Maintanance free.

## **SOLUTIONS GIVEN**

- To ensure seamless continuity of work cycle by installing actuators effectively, Which activated by sensors to sense pallets to start the mounting process. We decreased the space constrain by minimalizing the usage of materials.
- To achieve production rate, we attached mounting systems with bearings and link mechanism for perfect rolling of rollers without any interruption and accidents. We designed the machine with easily replaceable parts for easy maintenance.

# Multi Axis Tube & Rod Bending Machine



This tube & rod bending machine designed and manufactured to bend the tube into desirable shapes. This custom machine manufactured for bending (6 to 16) mm diameter rods & tubes.

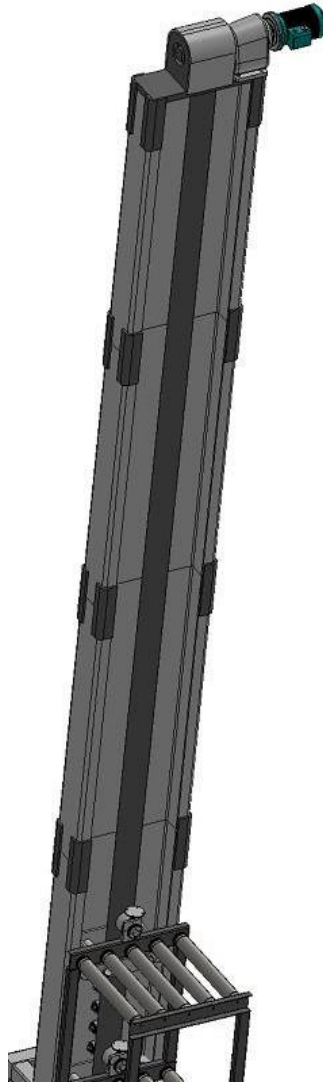
## **HARDSHIPS EXPERIENCED**

- Cycle time.
- Tube dimensions.

## **SOLUTIONS GIVEN**

- To achieve cycle time, we have used servo motors, actuators & gear mechanisms to ensure seamless movement of systems and slip-free attachments.
- We especially designed & developed bending rollers to achieve the tube dimensions, By avoiding protuberance of the tube.

## Vertical Lift With Conveyor

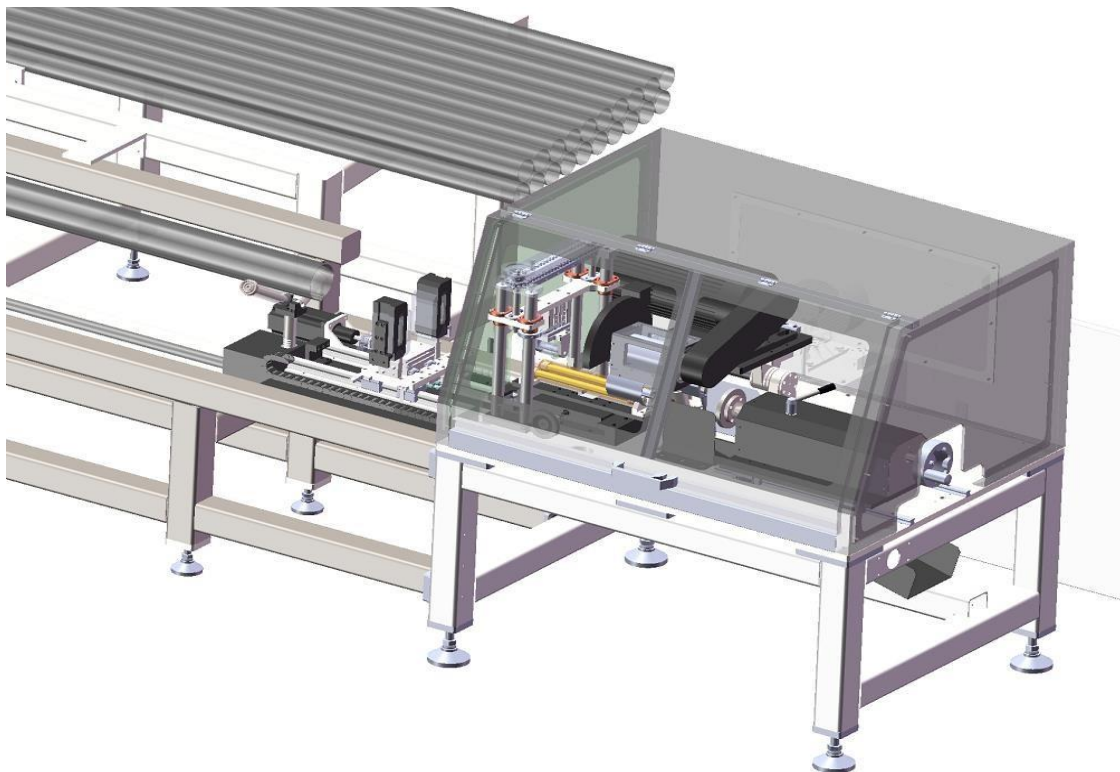


This vertical lift was designed & manufactured for material handling systems. This Lift is used to transfer the materials to desired locations. It has been attached with a roller conveyor setup to ease loading and unloading.

### **SPECIFICATIONS**

- Compact in size.
- Easy maintenance.
- Detachable parts for easy switch place.

# Fully Automatic Pipe Cutting Machine



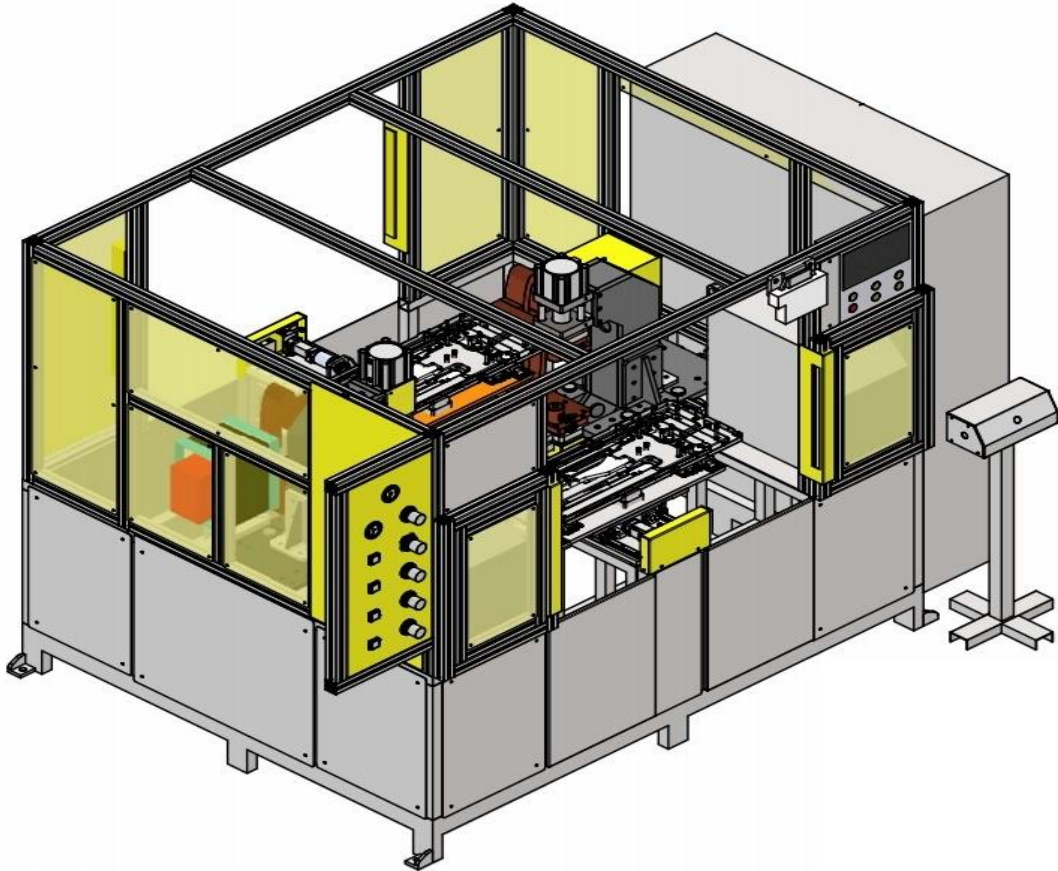
This tube cutting machine was designed and manufactured to cut the tube into a desirable size. This custom machine manufactured to cut up to 90mm diameter tubes and 50mm dia rods.

## SPECIFICATIONS

- Automatic loading.
- It can cut both tube and rods.
- Easy to change cutting tools.
- Detachable units to ease shifting.
- Maintenance free.
- Servo systems used for accurate tube sizing.



## Resistance Based Special Purpose welding machine



This dual operator system machine is designed and manufactured to weld the highly complicated component with studs. This is a multi model welding machine, each component has separate fixtures. The servo motor will help to actuate all the process. By the use of HMI, the model selection can be done. All the axis positions and values can be called by recipe in HMI.

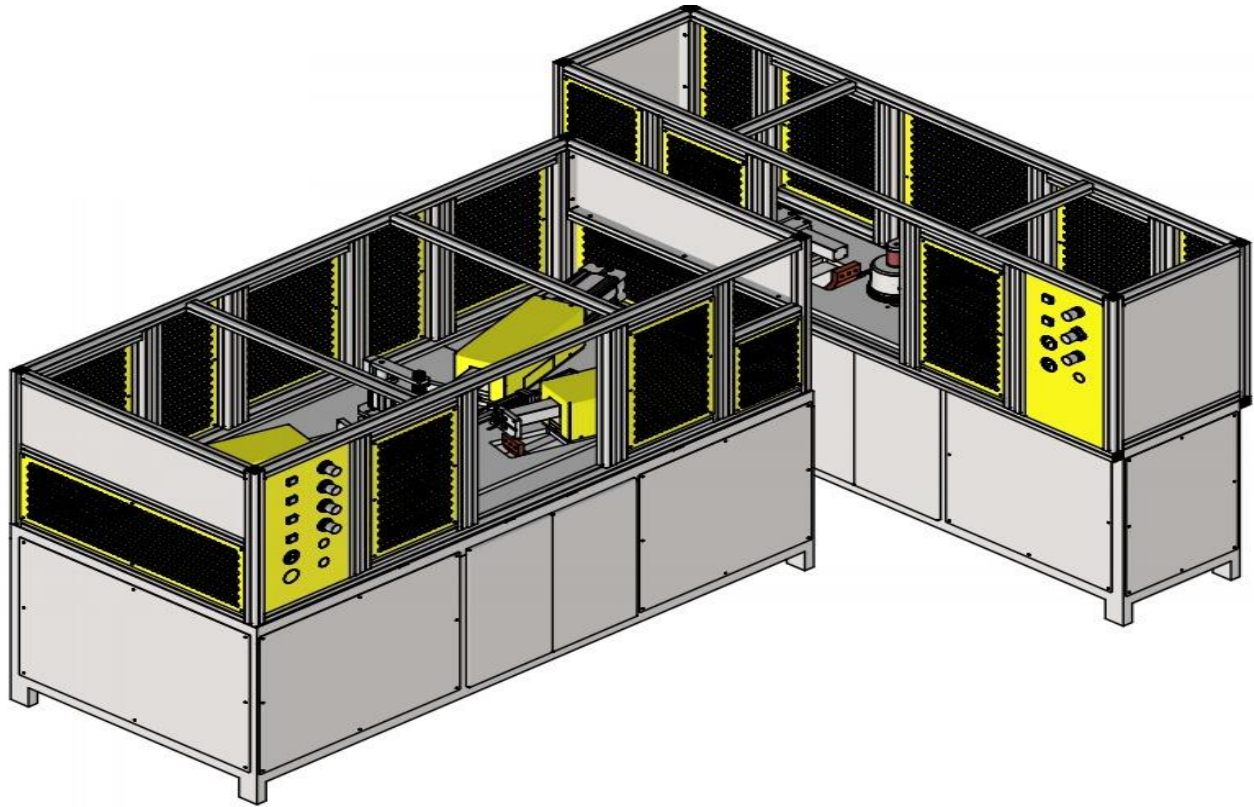
### **HARDSHIPS EXPERIENCED**

- Production rate
- High strength meeting.

### **SOLUTIONS GIVEN**

- To achieve high production, two operating systems are implemented.
- For high strength meeting, high performance of MFAC controller is used.

# Resistance Based Special Purpose welding machine



This two station operator machine is designed and manufactured to weld the cooking vessel cap with the handle. This is an multi model welding machine, each vessel have separate fixtures. The servo motor will helps to actuate all the process. By the use of HMI, the model selection can done. All the axis positions and values can call by recipe in HMI.

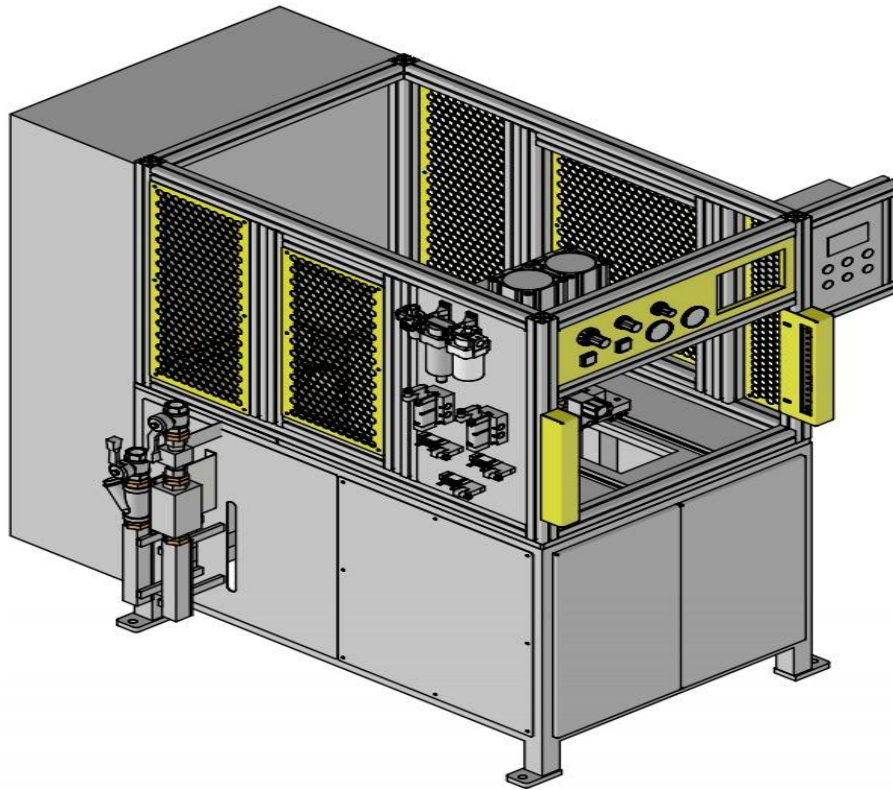
## **HARDSHIPS EXPERIENCED**

- Production rate
- High strength meeting.

## **SOLUTIONS GIVEN**

- To achieve high production, two operating system is implemented.
- For high strength meeting, high performance of CDWS controller used.

# Resistance Based Special Purpose welding machine



This machine is designed and manufactured to weld the automobile component. This is an multi model welding machine, each component have separate fixtures. The servo motor will helps to actuate all the process. By the use of HMI, the model selection can done. All the axis positions and values can call by recipe in HMI.

## **HARDSHIPS EXPERIENCED**

- Production rate
- High strength meeting.

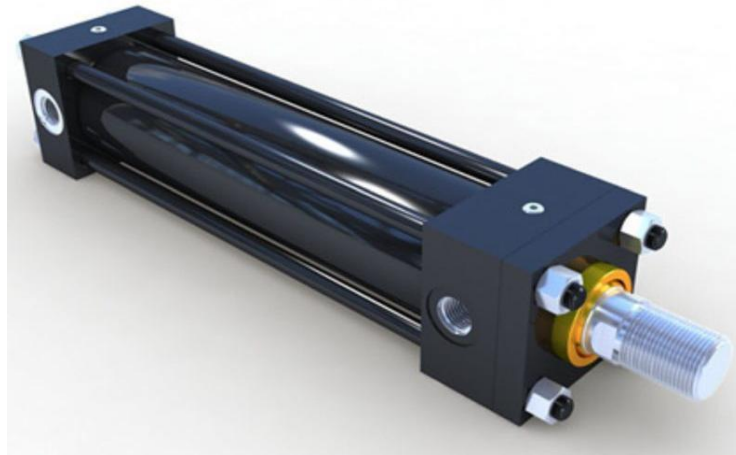
## **SOLUTIONS GIVEN**

- To achieve high production, two operating system is implemented.
- For high strength meeting, high performance of MFDC controller used.

## Customised Hydraulic Powerpacks And Cylinders



- It is a stand alone assembly consisting of a drive motor, hydraulic pump and hydraulic fluid tank. The drive motor is connected to the hydraulic pump via a shaft and drives. The motor and pump can be installed on the tank, as well as inside the tank in oil.
- Electric motors used in hydraulic power packs typically range from 0.5kW to 100 kW, offering a balance of efficiency and power suitable for various applications.
- A power pack converts the movement of build into mechanical force. Its function is to pressurize fluid to perform heavy duty tasks related to offshore oil and gas operations. Since the fluid cannot be compressed, the pressure pushes the fluid and it does its designated work such as moving a piston.



- A hydraulic cylinder is a mechanical actuator that is used to give a unidirectional force through a unidirectional stroke.
- It has a seal gland, cap port, barrel, piston rod, piston seal, base port, piston, nut, base, head cap and seals.
- Majorly we are manufacturing single acting, double acting, telescopic and tie-rod cylinders.

## Additional Projects

- Leak testing
- Pick And place systems.
- Packing machines.
- Deburring machines.
- Hydraulic press.
- VMC fixtures.
- Production lines.
- Rotary welding.
- Thread rolling and knurling machines.
- Jigs & fixtures.
- Vision camera testing.
- Three axis systems.

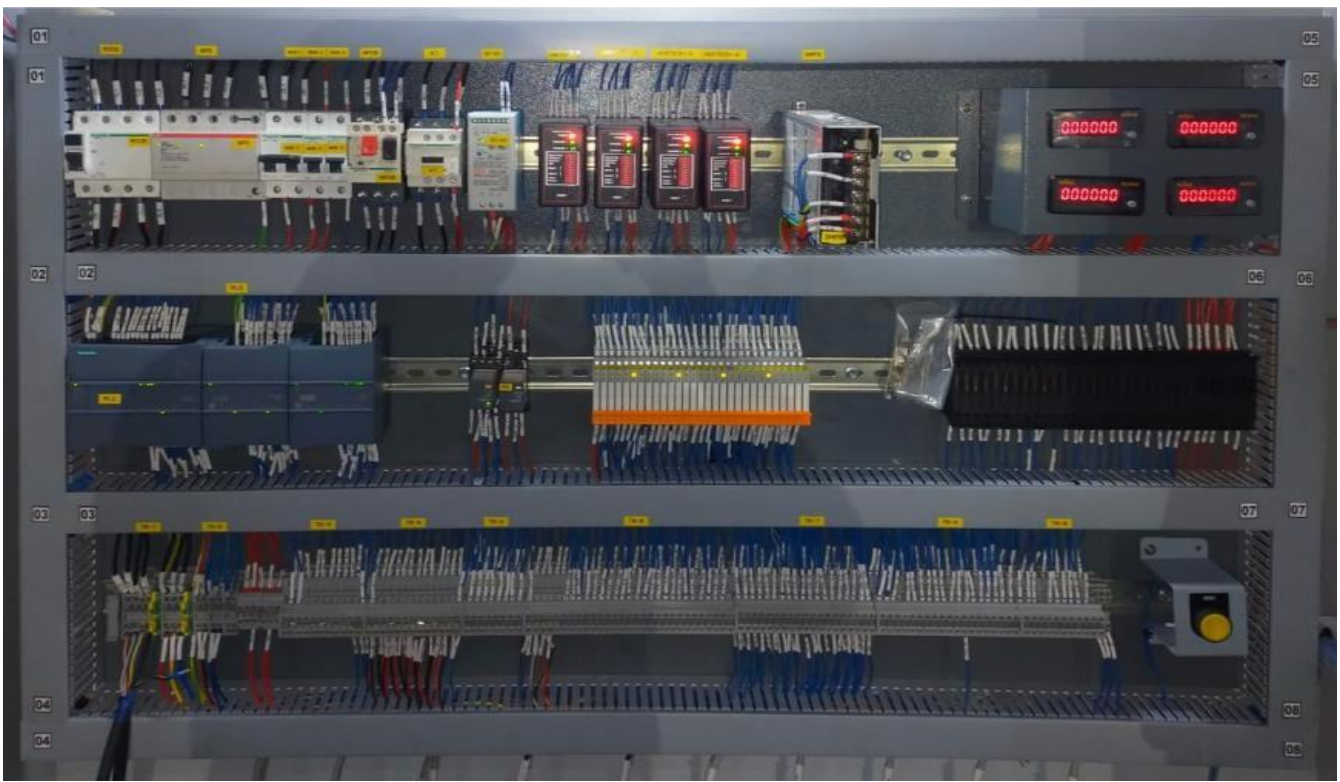


## Panel Building

- We build a panel with extensive safety to ensure the possibilities of short-circuiting and malfunctioning devices are low. By using PMR, Safety Switch Gears like RCCB, ELCB, Transformers, Fuses, SPDs, etc...
- We provide Electrical planning drawings and wiring harness to ensure precise power supply to PLCs, Drives, etc...
- We provide E-PLAN and addressing of wires to ensure easy troubleshooting.
- Some of our panels shown below.



Siemens Servo Based Fully-Automated Control Panel



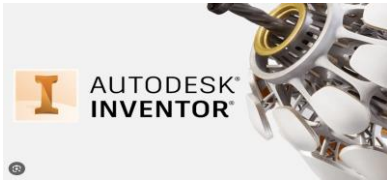
Siemens I7-1200 PLC Based Control Panel



Mitsubishi Servo Based Control Panel

## Designing & Programming Consultation

- We are taking care of the mechanical designing as per the customer requirement. For designing support, the following software are used



- And also we are providing the programming, material solution supports for lead brands of PLC.



**KAT & ARTRIX TECHNOLOGIES**

D.No.8/192-11, SF.No.3/28,

Vellore Approval Layout, Govindha Agraharam, Begapalli, Sipcot-1, Hosur-635 126,  
Krishnagiri Dist, Tamilnadu, India.

[www.katartrix.com](http://www.katartrix.com), [info@katartrix.com](mailto:info@katartrix.com)

Mob : +91 99945 02355, 90874 44478