

# Internship Report

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# Introduction

- Hi-Tech Industries takes this opportunity to introduce ourselves as an ISO 9001:2000 Company started in April 1998 at Chennai (INDIA) by a qualified engineer with more than 20 years experience. We are rapidly growing supplier of Precision machined components, Sub Assemblies, Medium to heavy fabrication jobs, valves parts, machining and drilling of valve bodies, Special fasteners, Small, Medium to heavy fabrication jobs Steel plant Equipment and Maintenance spares, Piping and erection works.
- We also manufacture precision components and specialized items according to customer's samples and specifications. We receive repeated orders from our customer ends.

# Processes

- Planning
- Raw Material processing
- Machining
- Assembly
- Fabrication
- Quality and Testing

# Raw material processing

Materials processing is defined as the series of steps or “unit operations” used in the manufacture of raw-materials into finished goods. The operations involve a succession of industrial processes with various mechanical or chemical procedures, usually produced in large quantities or batches.

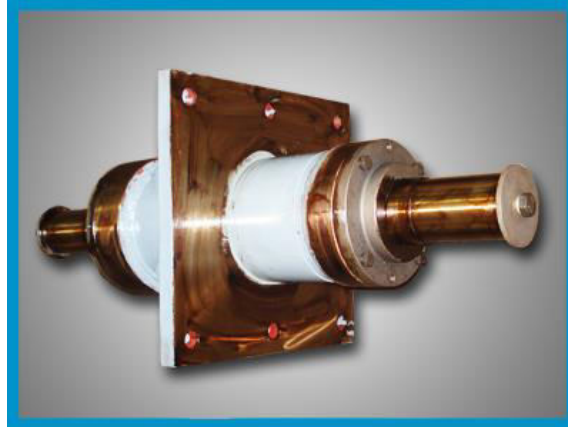
# Machining

- A broad range of technologies and techniques were used. It can be roughly defined as the process of removing material from a work piece using power-driven machine tools to shape it into an intended design.
- A wide variety of machining processes were done with different machines.
- About 4-5 CNC's were operated and around 4-5 Lathes are being used for machining various jobs.
- Arc Welding, Air Plasma, Band saw Cutting Machine are used.

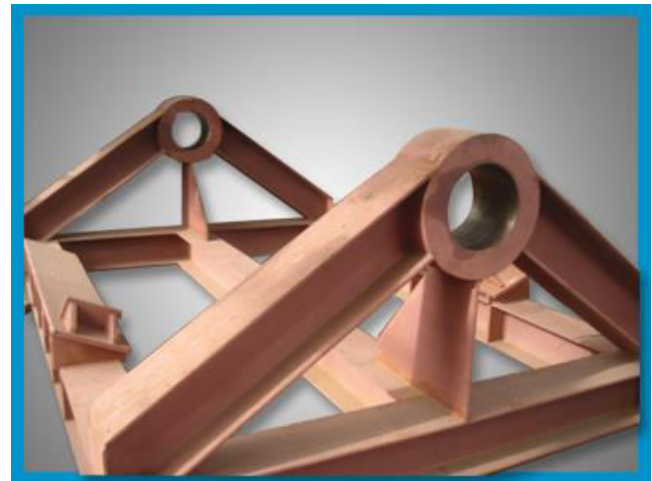
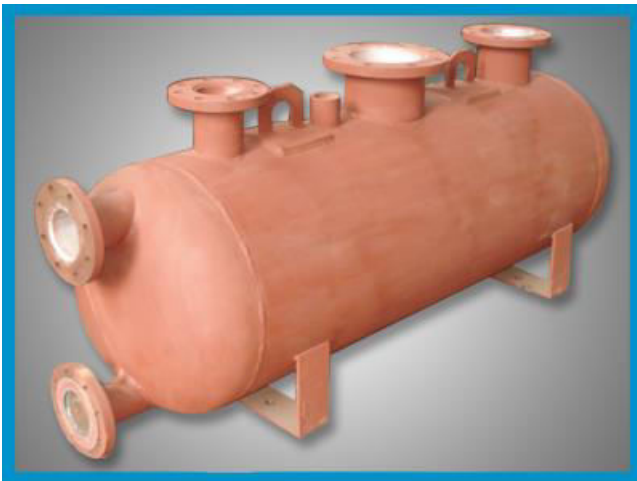
# Few machining products



# Assembly



# Fabrication





# Quality

Quality Management System is certified for ISO 9001: 2000 standard. The following systems are maintained to meet customer requirements:- Incoming Inspection, First off Inspection, Patrol Inspection and Final Inspection are carried out for the manufacturing components and separate Inspection report with GRN for Sub Contract materials and for raw materials. 100% visual inspections are carried out for both incoming and finished products.

# Material Testing

## 1) **MICRO LAB**

Chemical, mechanical, chrome plating thickness and welding test specimen.

## 2) **CHENNAI METTEX LAB PRIVATE LTD**

Chemical, mechanical, rubber polymer test.

3) **KIDAO LABORATORIES** - Chemical, mechanical, rubber polymer test.

4) **J.K. METALLURGICAL SERVICES** - Chemical analysis.

# NON-DESTRUCTIVE TESTS done at the following labs

- 1) DB Test done by QC Person in our company.
- 2) Kitana Industries - Ultrasonic Test, Magnetic Test

# HEAT TREATMENT :

- 1) **Everest heat Treaters** - Hardening & Tempering.
- 2) **National heat treaters** - Stress relieving and Annealing.
- 3) **Universal dishes** - bend removal, Dish forming.
- 4) **Sengoda Gounder Pvt Ltd.,** - Induction hardening.
- 5) **Abitech** - Hardening, Tempering & Sursulf treatment

# PRESSURE TESTING

- 1) Motorized hydraulic pump - 15-30bar capacity
- 2) Hand pump - 0-10 Bar Capacity
- 3) Pressure Gauges calibrated.
  - i) 0-10 Bar Pressure gauge
  - ii) 0-14 Bar Pressure gauge
  - iii) 0-70 Bar pressure gauge

# Conclusion

- These are the overall processes that are done throughout the industry
- Few safety protocols are being followed in the industry to maintain unnecessary accidents or injuries