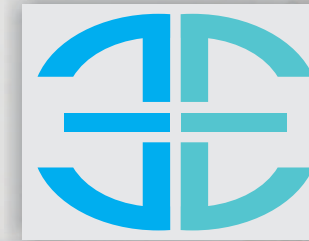
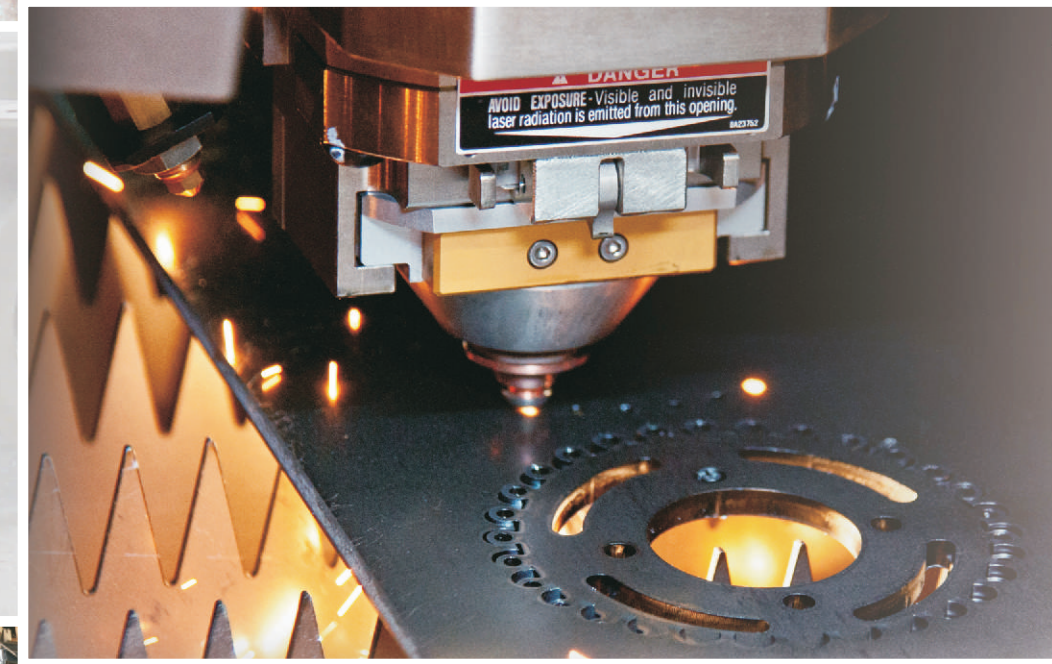
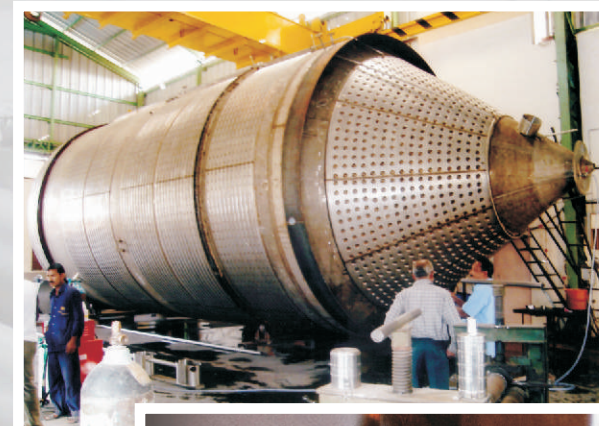


INDUSTRIES SERVED:-
RAILWAYS
AUTOMOBILE
AEROSPACE
DEFENSE
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CHEMICAL
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POWER PLANT.



EFFICIENT ENGINEERING



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Established in the year 2001, we, Efficient Engineering, are one of the well known names in offering S.S. Fabrication, M.S. Fabrication Laser Cutting And CNC Bending Services to our clients. Our services are acknowledged for their efficiency and high performance. The comprehensive services provided by us find usage in cutting any kind of metal like mild steel, stainless steel, aluminum, G.I. Steel for bending and fabrication purpose. The professionals hired by us render these services on the basis of their professional qualification and experience in the domain. Owing to our competent team members, we have been able to uplift the standard of our organization in rendering S.S. Fabrication, Laser Cutting and CNC Bending Services within the stipulated time period. To ensure that

our employees are updated with the latest techniques and equipment as per the requirements of the industry, we conduct regular training programs and workshops on a regular basis under the supervision of a trainer. We have been able to attain a huge client base across the nation with the help of our quality services.

We have progressed extensively under the guidance of our Director 'Mr. Anil Soundade', who possesses in-depth knowledge and vast experience in this domain. His constant support and motivation have helped us reach the peak of success.

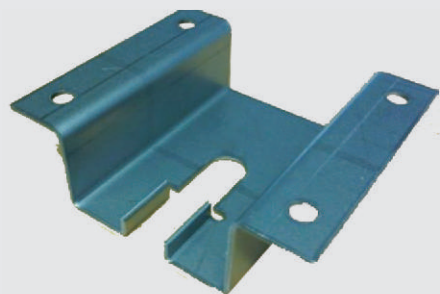
COMPLETE ENGINEERING SOLUTIONS PROVIDED UNDER ONE ROOF

Processing of Sheet Metal parts, Fabrication and assemblies is done with the aid of following facilities

Machines:- CNC Laser Cutting Machines, CNC Plasma Cutting & CNC Press Brakes. In addition we also have welding facilities such as CO2, MIG, TIG & Arc welding which enables our company to make assemblies. We can also provide surface treatment processing such as shot blasting, & tank treatment and final finishing as epoxy painting & powder Coating. The variety and richness of above CNC machine technology ensures high precision components at competitive rates.

Manpower:- Strengthened by skilled work force of more than 50 members and highly motivated technical team of engineers.

Method:- The product is analyzed and the best method of manufacturing is arrived by the design department. The required tooling and fixturing are designed and manufactured. Company has large quantity of flexible fixturing making it possible to make proto types and first assemblies very quickly.



Advantages:- Availability under one roof, of state of art facilities for processing sheet metal ranging from cutting, bending, welding, assembly and Painting. Company practices Lead manufacturing system. This ensures completion of product at reasonable pricing and shortened deliveries.

Industries Served:- we cater to a wide range of industries like Automobile, Aerospace, Defense, earthmoving Equipment, Chemical, food Processing, pharmaceutical & power plant.



The sheet steel process chain:

The sheet steel process chain includes the manufacturing process of sheet steel parts right from their design to finished assemblies. The above chain encompasses 3 essential areas Design & Development, Programming and Production.

Design & Development:- Advanced software is used to create 3D models of product. Which are then unfolded to create part drawing. The usage of sophisticated I.T tools helps in fast preparation of first parts and prototypes. A developed view is then passed on to the programming section, for flat processing. The design of complex bending parts poses a challenge to every designer.

Programming :- NC programs for specific machines are generated from drawings.

Two important features of programming are

1. The programming system automatically suggest the best and fastest processing method
2. A good programming system always creates a processing definition automatically taking into account the material and the geometric profile. E.g. in the case of a sheet coated with lamination, the programming system must be able to generate an NC code which, at first vaporize the film and then cuts the part.

Production:- Beings with flat steel processing .blanks are cut from sheet steel ,the parts are then bent, and several such parts are then connected to each other. the individual pieces these pieces Pass though several stages during the production. The goal to produce the final form is as few steps as possible. At times, machining welding as well as punching/flattening operation, precedes the bending operation.

Surface preparation:- a sheet steel surface needs to be prepared as there are several non uniformities and impurities that adhere to the surface which act as a hindrance for protective coating. Hence the surface is prepared, in order to ensure a good bonding between the metal and the protective coat by various methods like shot blasting, liquid dipping, before final surface coating of sheet steel assembly.

Surface coating:- Buffing, Polishing, powder coating, epoxy painting, zinc plating



A) Laser cutting machine:-
 Make:- AMADA- Japan
 Bed Size:- 1.5mtr x 3.0 mtr
 Laser Power:- 2.5 KW
 Cutting Thickness:- MS 16mm thk, SS 8mm thk, Al 4mm thk, GI 4mm thk

B) Bending Machine

- 1) Make:- AMADA- Japan
 RAM Length:- 3mtr
 Tonnage:- 100 Ton
- 2) Make:- Ermaksan- Turkey
 RAM length:- 6.2 mtr
 Tonnage:- 450 ton



Fabrication Setup:-
 TIG / MIG/CO2 Welding, Rolling, Machining, Buffing Polishing Setup.