

SEAMLESS PIPE FITTINGS

Pipe fittings & flanges cover many components that connect pipe ends for in-line, offset, multi-port, and mounting configurations. Pipe and pipe fittings are manufactured from a wide variety of materials for the transport of an equally wide variety of solids and fluids. Fitting cross sections are often, but not necessarily, circular in shape to mate with the pipe sections they are connecting; systems are typically configured with straight sections connected by fittings or specially-formed connections and joints. They are used in pressurized applications and non-pressure applications such as drain, waste, and vent (DWV) systems. Pipe fitting construction and material specifications are application-dependent; user consultation with fitting suppliers is typical for optimization of component selection.

Common types of pipe fittings include adapters, bulkhead fittings, caps, compression fittings, rigid couplings, flexible couplings, cross or 4-way fittings, 90 degree elbows, 45 degree elbows, reducing elbows, end bells, expansion joints or couplings, ferrules, flanges, nipples, offset fittings, plugs, concentric reducers, eccentric reducers, returns or traps, side outlet elbows, side outlet tees, standard tees, reducing tees, bullhead tees, unions, standard wyes, and reducing wyes. Some pipe fittings have a swivel feature that allows one or more fitting ends to rotate or swivel.

Proposal

There is a substantial market for seamless M.S. pipe fitting because of heavy demand in chemical, fertilizer, pharma & petroleum industries. APITCO recommends setting up of manufacturing unit for Seamless pipe fittings.

The products under consideration are:

- Full socket weld coupling
- Half Socket Weld Coupling
- Union
- 90° & 45° Elbow
- Tee
- Cross
- Flanges of different NB

Capacity: A capacity of 1 TPD – 5 TPD can be planned.

Market

India is estimated to consume 46.6 million tones of steel in the year 2006-2007 (Source: Ministry of Steel) and the figures are expected to increase substantially in coming years. The main consumer of pipe fitting being petroleum, pharma, chemical, fertilizer & construction industry.

Spurt in demand for seamless pipe fittings in A.P. is anticipated from the following end users

1. Natural gas piping, particularly for domestic supply
2. Bulk drug and petrochemical industry in Kakinada, Vizag belt
3. Power plants

Manufacturing Process

Seamless Pipe fittings are made out of seamless pipe as base raw material. The pipes are cut different shapes & sizes as desired by customer specification and requirement. The pieces then undergo the process of bending, rough turning, facing of OD, threading and tapping, machining & galvanizing, Quality checking & packing as per the requirement.

The process of manufacturing flanges is rather simple, the process includes turning to desired OD, boring to desired NB (Nominal bore) tapping & facing. Anti-corrosion coating or galvanizing can be done as per requirement.

Specification

The specification of the finished product should be as per IS, or as per the requirement of the customer.

Plant & Machinery

Manufacturing of Pipe Fittings and flanges includes machinery like Lathe, Shaper, Welding Machine, Press machine, Hacksaw, Drilling machine, Bench Grinder, Pug cutting machine etc. All the machinery is indigenous.

Raw Material

The main Raw material for manufacturing of Seamless pipe fittings and Flanges are:

- Seamless Pipe
- M.S. Plates

The consumables are:

- Electrodes
- Tools & Blades etc.

The raw material and consumable are available from open market.

Utilities:

Project Cost: Capital investment of Rs. 60 Lakhs will be required for setting up 1 TPD capacity plant and the investment will be around Rs. 115 Lakhs for 5 TPD capacity.

A turnover of Rs. 200 Lakh can be expected from a 1 TPD capacity plant, with a profit margin of around 18-20% on turnover.

Suggested Location

Vishakapatnam, Hyderabad or any industrial belt, for easy access to raw material, utilities and market.

Entrepreneur Profile

As the working capital requirement of the project will be high, this project is feasible for entrepreneurs with strong financial support.

APITCO's consultancy

- Technical Support
- Market Analysis
- Locating financial support