



# Akash

**STEEL CRAFTS PVT. LTD.**

AN ISO 9001 - 2000 CERTIFIED COMPANY

Manufacturers of : Welded / Seamless Stainless Steel Pipes & Tubes



## Our Products

We always provide the best Stainless Steel tubing and piping product to our customers, by strictly adhering to ASTM, JIS-DIN & other international standards as per details given below,

- TIG welded Tubes & Pipes,
- Large diameter pipes,
- Seamless Pipes / Tubes,
- U-Tubes,
- TIG welded polished Pipes,

## Product Range :

Outer Diameter	Thickness	Standards
6 mm to 168.3 mm OD	0.6 to 6 mm	ASTM 249, 269, A312, A213
Above 168 mm OD	3 mm & above	ASTM 358, Class I, II, III, IV, V.

## Manufacturing Process

### Raw Materials :

Raw material for manufacturing of **Akash** pipes & tubes procured only from approved sources. The quality requirements for raw materials are governed by the technical parameters set forth by quality assurance department and relevant technical specifications.

## The Process

Manufacturing of welded pipes and tubes are carried out on sophisticated Tube Mills where the cold rolled stainless steel strips are welded into tubes in a fully automated process.

The process begins with the slitting of coils into strips of required width based on the diameter of the tubes to be formed. The slitted coils are passed through a series of rollers where it is continuously formed and welded into tubes in high precision by fully automated TIG welding. Under this process, the edges of the strips are heated and fused together in a protective atmosphere of Argon gas through a non-consumable electrode without the addition of any filler material.

A continuous bead rolling operation removes the inside and outside weld bead to produce a perfect bore. The continuous tube is then cut to specified lengths by an online cutting machine. Depending on the relevant specifications the tubes are then cold drawn solution annealed, straightened, pickled, passivated and polished before testing and dispatch.



Annealing



Large Diameter Pipes



Tube Mill

## Large Diameter Pipes

Stainless Steel Large Diameter (Welded) Pipes from 6" NB and above are hydraulically formed as per Schedule 5, 10, 20 and 40. We have facilities to produce stainless steel pipes as per ASTM A-358 in Class I, II, III, IV, & V.

- Class I. Pipes are double welded from inside and outside 100% Radiography is taken.
- Class II. Pipes are double welded but no Radiography is obtained.
- Class III. Pipes are single welded and 100% Radiography is taken.
- Class IV. Pipes are single welded with 100% radiography. Welding of root pass is done without addition of filler metal.
- Class V. Pipes are double welded with spot Radiography.

All these Pipes are normally Hydrotested as per the ASTM Standards.

## Cold Drawing Section For Seamless Pipes and Tubes :

Mother tubes or hollows are procured from reputed manufactures in India and abroad, and are subjected to thorough chemical analysis along with rigorous physical and mechanical tests.

The best quality mother tubes are then cold drawn on the draw benches with precise pull forces. The cross section of the tube is thereby reduced by tension through a die and a fixed or floating plug to achieve the precise mechanical dimensions and a uniform and smooth surface. The tubes are then solution annealed, straightened, pickled, passivated and polished before inspection and dispatch.

## Quality Control

All **Akash** products are manufactured under strict process control and monitored throughout production process. They are subjected to a number of checks to ensure total conformity to specifications.

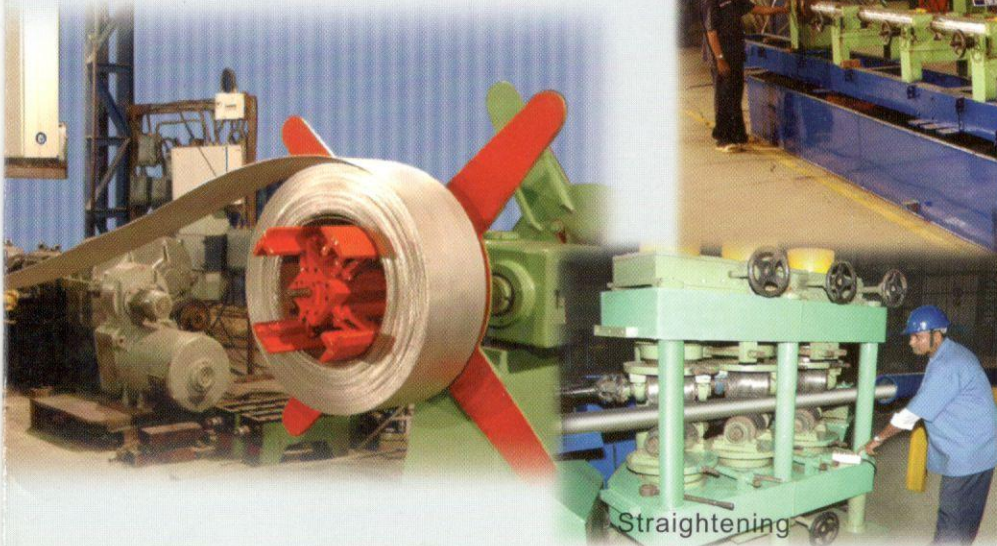
It is the stringent regime of quality controls and procedure established at **Akash** that gives its products the critical advantage in the industry. Strict process requirement and continuous monitoring throughout the production process minimize the range of possible deviations in the final output. Also at the end of this meticulously controlled process, **Akash** tubes are subjected to a number of harsh and absolutely uncompromising quality checks.



Hydraulic Press



Hydrostatic Test in progress



Straightening



### Eddy Current Testing :

To detect homogeneties in subsurface, eddy current testing is carried out using the latest digital system.

### Hydrostatic Testing :

100% Hydrostatic testing carried out according to ASTM norms to check tubes for leakages.

### Air Underwater Pressure Test :

Tubes are internally pressurized with clean and dry compressed air, and being submerged in clear water to check any evidence of air leakage.

### Visual Inspection :

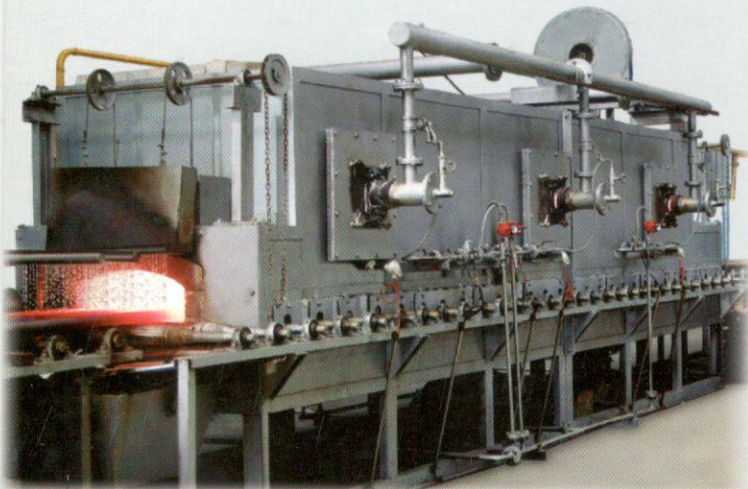
After final passivation every single length of tube and pipe is subjected to a thorough visual inspection by trained staff to detect surface flaws and other imperfections.

### Special Test (on client's request)

- IGC Test ( Inter Granular Corrosion Test )
- Micro Structure Analysis
- Spectro Chemical Analysis
- Radiography Test

## Annealing

Annealing or heat treatment of the tubes is carried out in a fully automated and conveyor equipped furnace with temperature recorders & controls. It consist of heating the tubes to a specified temperature and immediate quenching thereafter.



Annealing

## Straightening

After the annealing operation the tubes are straightened with a straightening machine. In addition to giving a high degree of straightness the tubes are also rounded up during this operation.

## Pickling & Passivation :

**Pickling** : it is the removal of any high temperature scale and any adjacent low Chromium layer of metal from the surface of stainless steel by chemical means.

**Passivation** : It is the treatment of the surface of stainless steels to remove contaminants and promote the formation of continous passive film on a freshly created surface.

## Eco Friendly Akash :

In consonance with the worldwide concern regarding the ecological balance, **Akash** is ever committed to preserving the environment. All efforts are being made to ensure that industrial wastes and pollutants are recycled. For this an upgraded effluent treatment plant is set up. Greening of the factory premises ensures a healthy work environment.

## Polishing :

The excellent properties of stainless steel tubes and pipes including their high aesthetic & hygienic value, low maintenance and high durability has led to an increased demand for polished tubes and pipes in architecture, general engineering, dairy & food processing sectors among others. To meet such demands for high quality externally polished tubes and pipes, **Akash Steel** is equipped with a state of the art polishing machine. All range of finishes are made available as per customer's requirement.

## Marking

To ensure complete identification and traceability, all informations as required by the standards i.e. Brand Name, Size, Grade specifications, Heat No / Lot No etc, are marked on all the pipes and tubes by using the latest inkjet marking machine.

## Packing



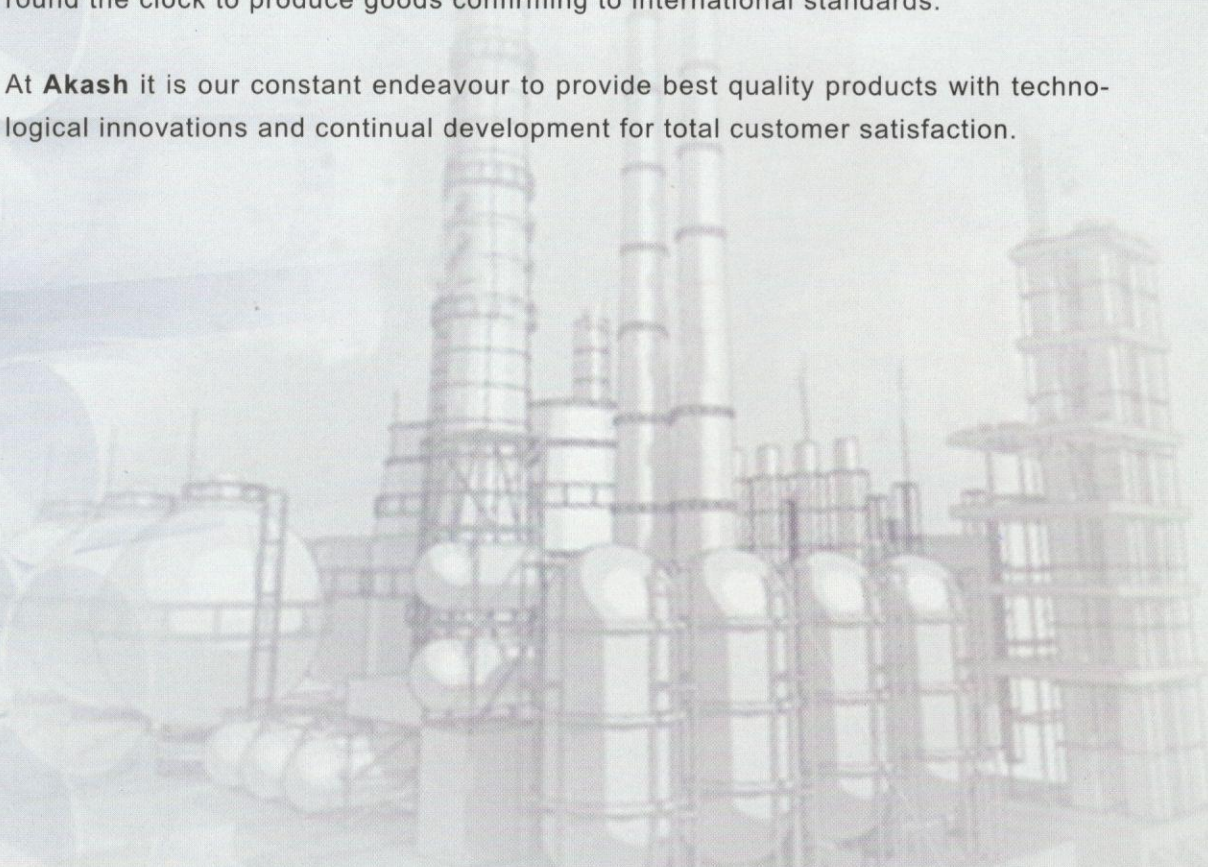
## Introduction

**Akash Steel Crafts Pvt. Ltd.** was established in the year 2005 to manufacture stainless steel Tubes and Pipes. The company's 35000 sq. ft. of modern manufacturing facilities is located at Taloja. The promoters of the company have ample experience and expertise in the business of stainless steel for the last three decades as actual users, in manufacturing of Stainless Steel Heat Exchangers, Stainless Steel Condensers, Evaporators, Dust Catchers etc. in addition to trading of all kinds of Stainless Steel materials.

The vision of the company is "**Leadership through Excellence**". This is made possible through adherence to industry standards & quality norms, modern manufacturing and innovative techniques. The mission of the company is to deliver solution based products with unique expertise superceding clients expectations.

No wonder the company has grown leaps and bounds and caters to growing requirements of diverse sectors of economy. Dedicated Managers, Engineers and staff work round the clock to produce goods confirming to international standards.

At **Akash** it is our constant endeavour to provide best quality products with technological innovations and continual development for total customer satisfaction.





# Akash

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