



eXensys Micro Vertical Solution

Micro-Vertical – Seamless Tubes

Agenda

Industry Overview

Industry Characteristics

Key Processes 'n' Challenges

eXensys Best Practices



Industry Overview

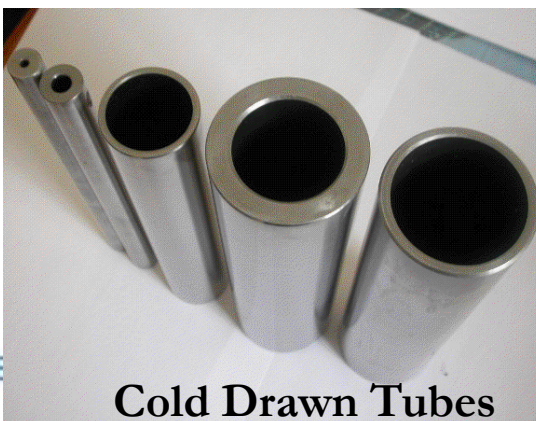
Micro-Vertical – Seamless Tubes

The tubes can be produced through hot finished using CPE technology or cold drawn tubes. The different standards used in these kind of industries are ASTM, DIN, BS. Various types of materials such as alloy steel, carbon steel tubes are used in industries like heat exchangers, boilers, automobiles, oil and gas sector etc.,

This industry requires stringent quality control, state of art machinery to produce quality goods, reliability of end products, continuous service to customers and minimum lead time for production

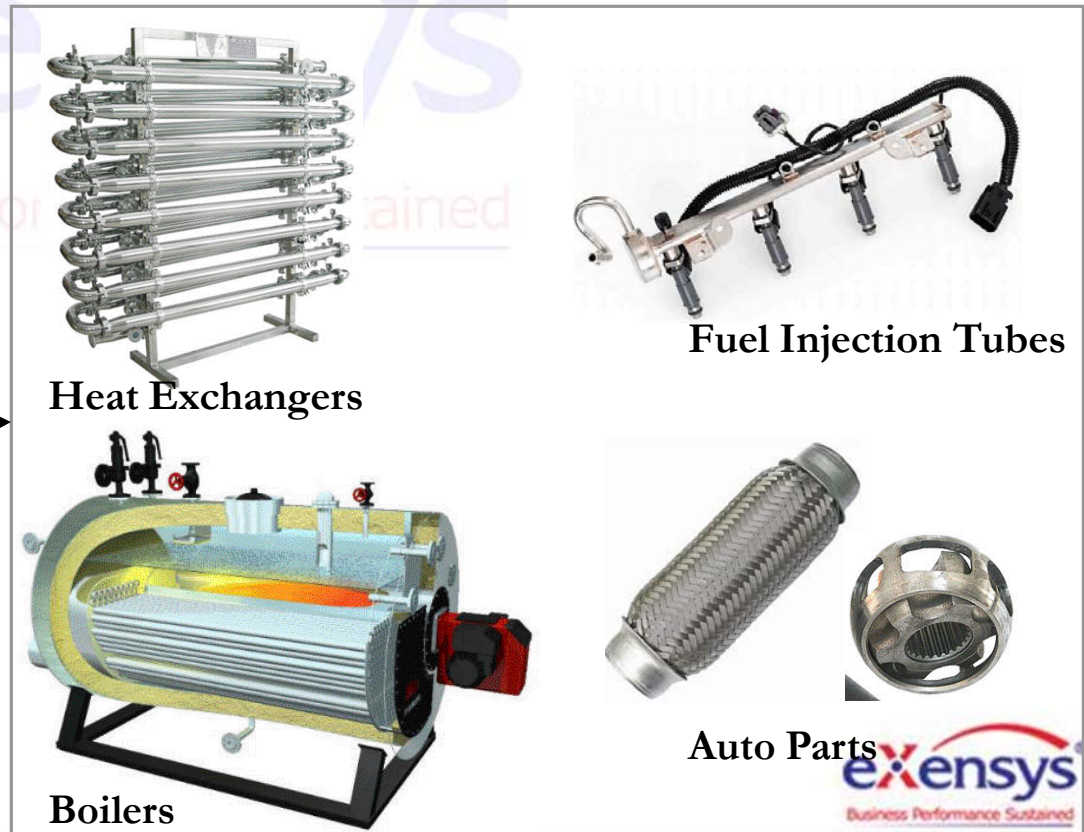


Hot Finished Tubes



Cold Drawn Tubes

Used in



Heat Exchangers

Fuel Injection Tubes

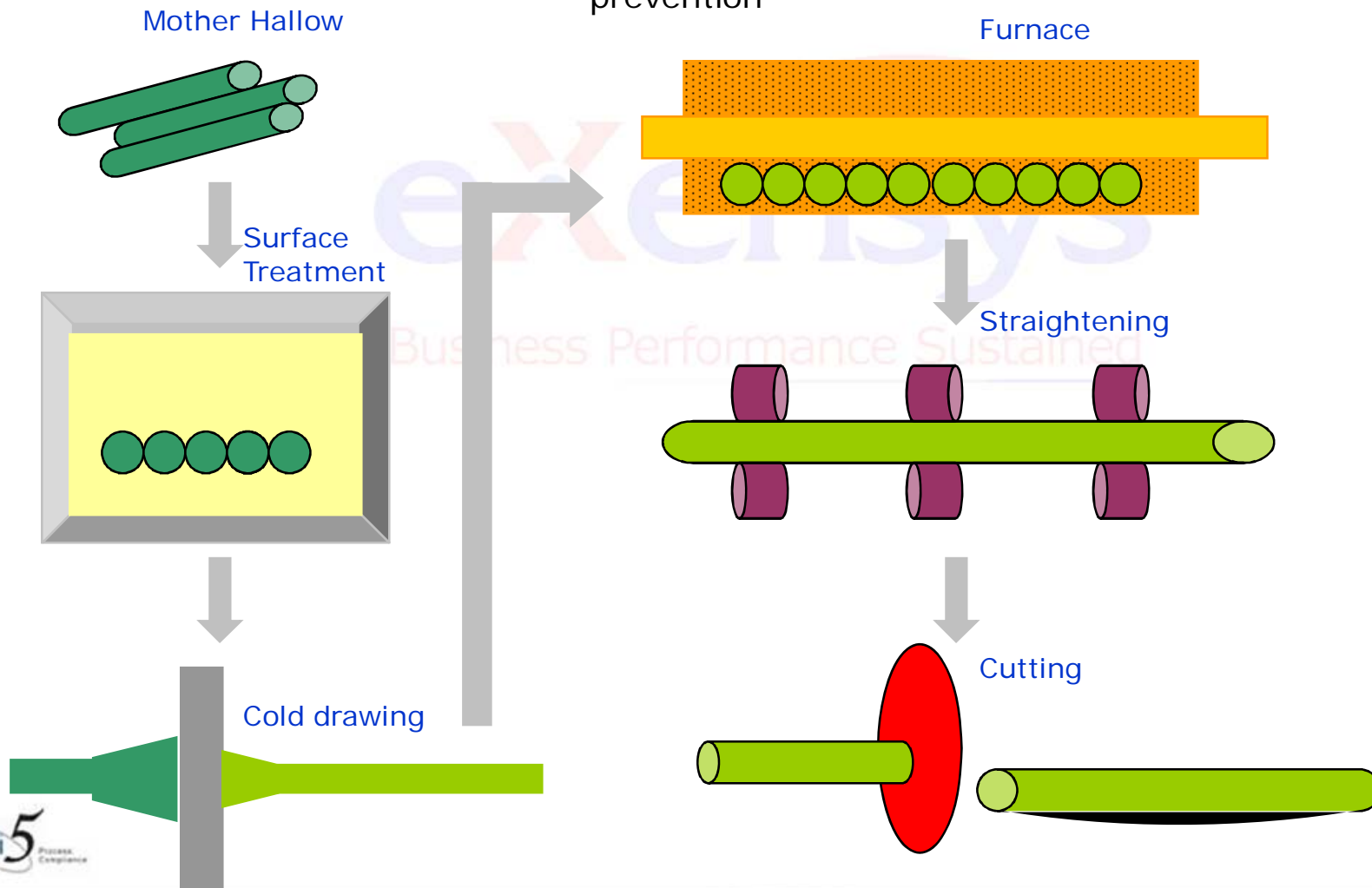
Boilers

Auto Parts

Industry Characteristics

Micro-Vertical – Seamless Tubes

- Both MTS & MTO strategy
- Various standards of fabrication such as DIN, BS followed
- Job work In production orders generated
- Final tube can be passivated, phosphated etc., for rust prevention
- Final tubes can be straight or U-Tube depending on requirement



Key Processes 'n' Challenges

Micro-Vertical – Seamless Tubes

Key Processes

- Mother hallow identification and planning
- Dynamic creation of BOM and routing
- Ready information on work center load for future periods
- Maintenance of mechanical and chemical property details for raw materials
- Monitoring of furnace capacity
- QC inspection (Dimensional, mechanical test, hydro testing, eddy current)
- Preventive & predictive maintenance schedules

Challenges\Pain Areas Business Performance Sustained

- Raw material planning
- Maintenance of inventory for raw materials with different dimensional variations
- Work center loading – Bottleneck machine furnace
- Plant maintenance information for critical equipments
- Tracking of rework and scrap items

eXensys Best Practices

Micro-Vertical – Seamless Tubes

S.No	Pain Areas	Why do companies fail?	eXensys Best Practice
1	Raw material planning (Mother Hallow)	<ul style="list-style-type: none"> ➤ RM with all dimensional variations details not available ➤ Mechanical and chemical properties of items are not maintained 	<ul style="list-style-type: none"> ✓ Stock details of raw materials with dimensional variations maintained ✓ Stock valuation is carried out separately for dimensional variation items ✓ Automatic raw material suggestion from the System based on size, mechanical and chemical properties
2	Work center loading for furnace	<ul style="list-style-type: none"> ➤ Standard times not maintained ➤ Capacity factor for items not known ➤ Dates are not calculated based on bottle neck machine capacity 	<ul style="list-style-type: none"> ✓ Furnace kind of machines maintained as dense WC ✓ Work center load as well capacity occupied is known ✓ Planning streamlined for bottle neck machine ✓ Improvement in customer response time
3	Maintenance for Critical Equipments	<ul style="list-style-type: none"> ➤ Maintenance only on break downs ➤ No planning for spare parts ➤ No information of time taken for maintenance 	<ul style="list-style-type: none"> ✓ Machine maintenance history ✓ Schedules of preventive and predictive maintenance ✓ MTBF information ✓ Spare parts planning

