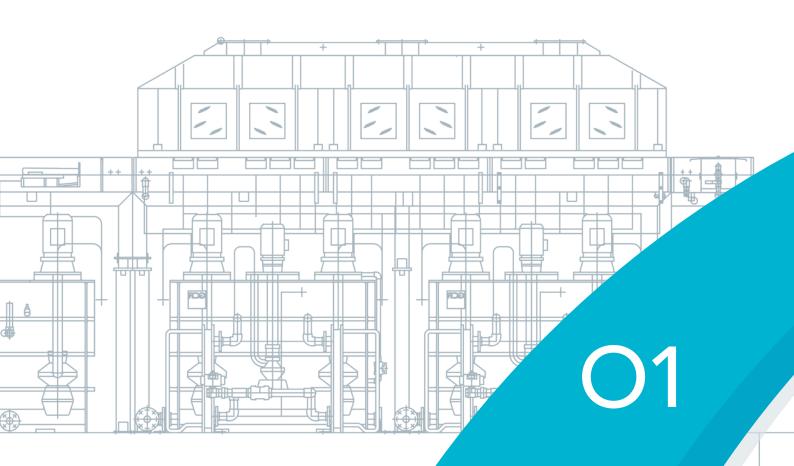


PLANTS FOR PRODUCTION OF TIRE STEEL CORD, BEAD WIRE, HOSE WIRE, STAPLE WIRE AND WIRE ROPE

CLEANING AND PLATING LINES, DOUBLE-TWIST AND TUBULAR STRANDERS AND CABLING MACHINES, WET DRAWING MACHINES, PAY-OFFS AND TAKE-UPS



01.01	WIRE ROD PREPARATION	LINES
	IN-LINE DESCALING, PICKLING AND COATING	

- O1.O2 MTS AND MTX WIRE DRAWING MACHINES

 IDEAL TO PROCESS HIGH AND LOW CARBON WIRE
- O1.O3 BRASS-PLATING LINES
 SINGLE OR MULTI-WIRE WITH WIRE-BY-WIRE, TRAY-BY-TRAY PLATING CONTROL
- O1.O4 BEAD WIRE COPPERING/BRONZING LINES FAST, EFFICIENT AND FLEXIBLE MULTI-WIRE LINES FOR BEAD WIRE
- O1.O5 ELECTRO-GALVANIZING LINES

 FOR LIGHTLY GALVANIZED CARBON STEEL WIRE AND GALVANIZED COPPER WIRE
- O1.O6 WET DRAWING MACHINES

 DIFFERENT MODELS FOR ALL MEDIUM AND FINE WET DRAWING REQUIREMENTS
- O1.O7 STEEL CORD AND WIRE ROPE STRANDING, BUNCHING AND CABLING MACHINES

 DOUBLE-TWIST AND TUBULAR CONFIGURATIONS FOR STRANDS AND ROPES
- O1.O8 MULTI-WIRE PAY-OFFS AND TAKE-UPS
 FOR HEAT TREATMENT AND PLATING LINES
- O1.O9 KNOW-HOW, ACCESSORIES AND SERVICES KNOW-HOW AND TECHNOLOGY FOR STEEL CORD AND RELATED PRODUCTS

WIRE ROD PREPARATION LINES

IN-LINE DESCALING, PICKLING AND COATING

Before any wire drawing, wire rod must be descaled and/or pickled. In case of low carbon wire rod, it is generally sufficient to use a mechanical descaler and a brushing unit; however for high carbon wire descaling alone may not be sufficient to assure efficient wire drawing.

For the production of tire steel cord and hose wire Eurodraw Wire Equipment offers a rod preparation line that includes mechanical descaling, steam pickling or $\rm H_2SO_4$ electrolytic pickling and hot rinsing; and finishes with borax coating and drying. This line can be installed either inline with a wire drawing machine or can be used as a stand-alone unit where the wire is wound on large capacity spools.

Eurodraw Wire Equipment offers four types of mechanical descalers suitable for low or high carbon rod and for small or large diameter wire rod. Descalers for high carbon, large diameter wire rod are equipped with descaling rollers that are mounted on a hydraulically operated swiveling support so that threading is very simple. Descalers can be followed by brushing units. The Eurodraw Wire Equipment brushing unit is available in single or double configuration for high speed brushing.

Eurodraw Wire Equipment has designed a unique steam pickling unit. The unit works on the simple principle that if the skin of the wire is heated very quickly, the hard scale present on the surface expands and falls off. The unit uses only overheated steam and is very effective and environmentally friendly.

For wire that is very rusty or with thick layers of scale, Eurodraw Wire Equipment can supply an electrolytic pickling line. The unit can be designed for a single wire or even up to five wires. The line consists of four main parts: A pickling tube in which electrolytic pickling takes place, an acid recycling tank where the acid is stored and pumped to the pickling tube, a rinsing unit and an electrical cabinet that contains the rectifiers necessary to perform the electrolytic process. Electrolytic pickling is the most effective way to clean rod; it ensures consistent quality of the product and has very low operating costs, comparable to mechanical descaling and brushing.

Prior to wire drawing the rod should be coated to neutralize the surface and facilitate subsequent drawing operations. In-line wire rod preparation usually uses borax or lime. The coating unit consists of an insulated and heated tank where

the borax or lime is circulated by a pump. The borax or lime is generally heated by electric resistances; stem coils can be used as an alternative if steam is available.

In order to limit the space necessary to dry the borax or lime before the wire proceeds to the wire drawing machine, Eurodraw Wire Equipment has developed an induction dryer that heats the wire to instantly dry the borax or lime solution coating.

Heating power is automatically adjusted with the speed of the wire and can be further controlled with an optical pyrometer that reads the wire surface temperature and adjusts the power accordingly.

