

In-Line Drawing and Stabilizing Unit

for the production of prestressed concrete wires with low relaxation either in coils or as bars



Application/Mode of operation

The line is suitable for the production of heat treated prestressed concrete wires with plain or profiled surface and low relaxation. Starting with wire rod, the finish product i.e. either coils or bars, is manufactured „in-line“. The finish product conforms to all standards set by German and International standard authorities.

- By means of the very large capstans of 1200 mm dia. On the drawing machine, the wire will be cooled down in a very short distance of time to abt. 50 to 60° C after leaving of the drawing die; thus providing the required high quality standard of the finish products
- Traversing induction furnace for increase of quality and productivity
- Use of 2 individually driven, V-grooved capstans of 4000 mm dia. on the stretching unit, thus providing a very straight wire or bar with deflection of < 1 mm/m
- Automated operation for the production of coils by use of double take-up collectors with wire cutter installed in front and automatic switch-over after cutting
- Automated operation for the production of bars by use of a looping floor and intermediate accumulator at the bundling station of the bar cutter
- Rectangular and burr-free cutting of bars by using cutter bushes
- Safety devices for the total unit according to EN-standard



Wire rod pay-off with flyer



Drawing machine with capstan-ø 1200 mm



Induction furnace with water quench



V-grooved capstans ø 4000 mm

Mechanical design features

- Rod wire pay-off with capacity of 3 coils with incorporated flyer and coil pushing device
- Straight-line drawing machine for max. 5 drafts, capstan dia. 1200 mm
- Combined drawing, profiling and straightening unit
- Traversing induction furnace with following water quenching section
- V-grooved capstans of 4000 mm dia. on the stretching unit
- Caterpillar take-off with individual drive of both flat belts
- Wire cutter with rotating cutting knife
- Double coil take-up collectors with automatic switch-over device
- Looping floor with internal width of 4000 mm
- Bar cutter with cutter bushed and attached bundling station with incorporated intermediate accumulator

Technical Data

Wire- \emptyset H8		Traction power Drawing Stretching machine unit		Capstan- \emptyset Drawing Stretching machine unit		Line speed
Inlet- \emptyset	Finish- \emptyset					
mm	mm	kN	kN	mm	mm	m/min
16,0 to 10,0	10,0 to 5,0	75 to 60	75 to 60	1200	4000	90 to 180

Number of shear cuts	Bar length	Coil weight	Installed motor power		
			Drawing machine	Stretching unit	Induction furnace
per minute	mm	kg	kW	kW	kW
15 to 42	2000 to 7000	500 to 1800	5 x 75	2 x 75	300



Ringschere, Doppelringaufsammler,
Schlingbett



Stabschere mit Bündelbank

Electrical design features

- AC three-phase induction motors, water- cooled, i.e. low-noise level, environment-friendly
- Frequency converters SIEMENS with control system "VECTOR control"
- Profi-Bus connection
- Stored-program computer control SIMATIC S7
- Operator panel OP for drawing machine and stretching unit
- Computer control for induction furnace
- Central control desk for the entire line

Modifications reserved without prior notice.