

Inspection and Straightening Lines for Round Bars



We provide you with high quality, high volume hot-rolled bar stock manufacturing and meet all special requirements you may have for your production facilities.

Inspection and Straightening Lines for Round Bars

Designed to increase the added value of your rolled bar stock by guaranteeing your customers production quality within the essential parameters. This regards the flatness, lack of internal and surface defects, accuracy of transversal dimensions, surface quality, quality of the material and last but not least, the longitudinal dimensions in the desired product range and tolerances. We design our machines based on your requirements and range of products. Our lines are delivered with an advanced process control system that provides both automatic control of the equipment and technological monitoring of each bar, collection of their data and certification at the end of the manufacturing process.

In 2010, ŽDAS delivered two inspection lines for non-peeled material and one line for glossy material to the Russian company OEMK Stary Oskol.



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An example of material output parameters:

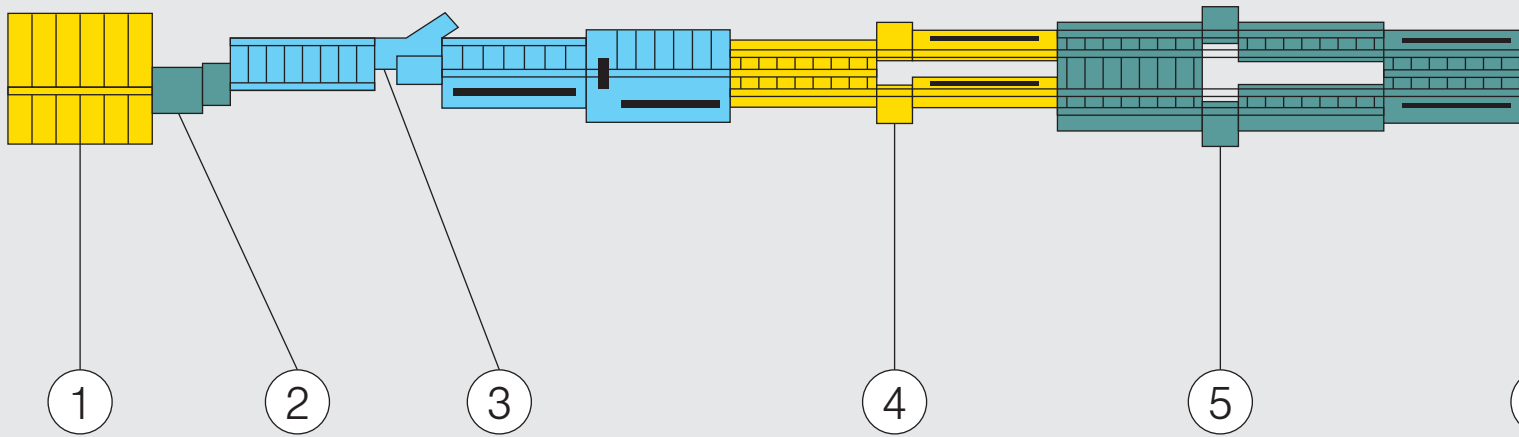
Bar diameter	20–83 mm
Bar length	5.5–12 m
Bundle weight	10 t
Input curvature	5 mm/m
Ultimate strength	1,500 MPa
Yield point	1,300 MPa

An example of material output parameters:

Output curvature	0.5 mm/m
Output curvature after polishing	0.3 mm/m
Detection of surface defects (circoflux)	– from a depth of 0.15 mm – width of 0.1 mm
Chemical composition test	Magnatest
Internal defects check	Ultrasound
Bar length	2.5–12 m
Bundle diameter	200–600 mm
Bundle weight	1.5–10 t
Surface quality after blasting	Asa 2 - 2.5; ISO 8501-1
Annual capacity	100,000 t



Diagram of glossy material inspection lines



(1) Loading and separating of bars



(2) Steel shot blasting of the bars



(3) Straightening with a 15 roll straightener



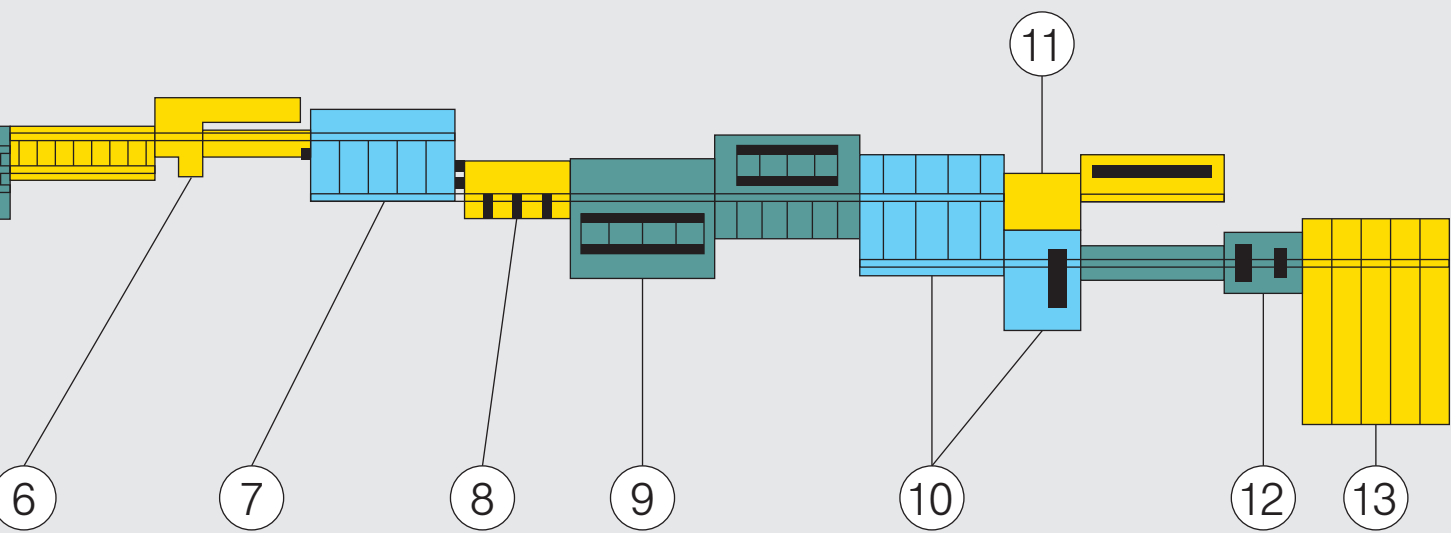
(4) Peeling machine



(5) Polishing straightener



(6) Cutting bars to commercial lengths



Legend:

- | | |
|---|---|
| 1) Loading and separating the bars | 7) Deburring and marking the bar ends |
| 2) Blasting the bars | 8) Defectoscope |
| 3) Straightening the bars with a 15 roller straightener | 9) Classifying defective bars |
| 4) Peeling the bars (2 parallel branches) | 10) Bundling and binding the bars |
| 5) Polishing the bars (2 parallel branches) | 11) Bar protection |
| 6) Cutting bars to commercial lengths | 12) Packaging the bundle |
| | 13) Warehousing the bundle for expedition |



(7a) Deburring the ends



(7b) Marking the ends



(8) Defectoscope



(10a) Bundling the bars together



(10b) Binding the bundle



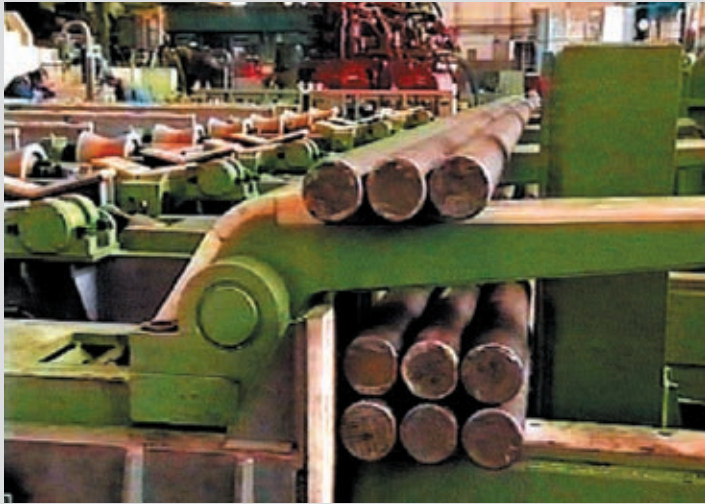
(12) Packaging the bundle



(13) Warehousing the bundle for expedition

Inspection lines for Sandvik

Two inspection lines for bar stock with a diameter of 75–360 mm and 75–500 mm were delivered to the Swedish company Sandvik. These lines allow for surface grinding of the bars, automatic and manual inspection of surface and internal defects, bar marking, hand grinding defects, defect cut outs and samples. Other main features of these machines are the mechanisms for longitudinal and transverse conveying of individual bars and bundles. The output of these lines are binded bar bundles.



The longitudinal conveyor and round stock bundling on these lines were delivered to Sandvik, SE.

Technical parameters for the Sandvik Sandviken lines:

Line size	360	500
Min. bar diameter	75 mm	75 mm
Max. bar diameter	360 mm	500 mm
Min. bar length	3,000 mm	3,000 mm
Max. bar length	13,000 mm	8,000 mm
Min. bundle width	150 mm	150 mm
Max. bundle width	600/800 mm	600/800 mm
Max. bundle height	500 mm	500 mm
Max. bundle weight	15 t	15 t

