

HJK CONSULTING ENGINEERS

Project Management – Technology – Operating – Consulting Excellence







COLD ROLLING MILL EQUIPMENT



HJK Consulting Engineers is supporting its client in sales of the following southern Europe based Cold Rolling Mill equipment:

- Line II: Twenty Rolls Reversible Sendzimir Cold Rolling Mill

- Line IV: Four high Temper Mill

- Line V: Combined Tempering and Tension Levelling Line

NOTE: optional the possibility for revamping and re-starting mill operations is given too

For further details please contact:

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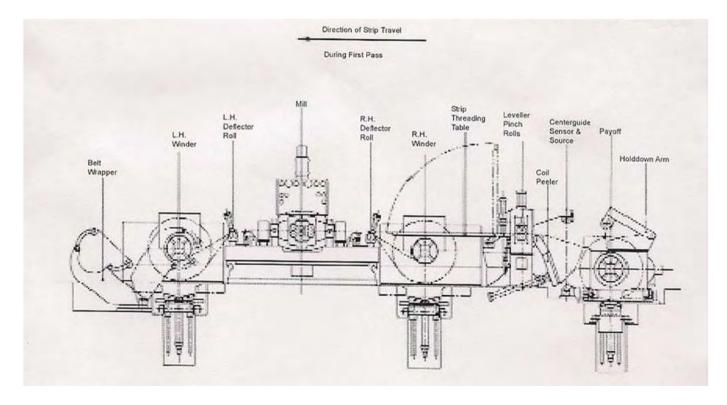






LINE II - TWENTY ROLLS REVERSIBLE SENDZIMIR COLD ROLLING MILL

intended for cold rolling of low carbon, high carbon and stainless steel as well as hard aluminum alloy









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LINE II - TWENTY ROLLS REVERSIBLE SENDZIMIR COLD ROLLING MILL

Manufacturer	Waterbury Farrell (USA)	
Model	ZR 22B 52"	
Serial Number		
YoM	1978	
	Max. strip width	1320 mm
	Max. strip inlet thickness	6 mm
Hat Ballad Chris (HBC)	Min. final strip thickness	0,2 mm
Hot Rolled Strip (HRS)	Pinch rolls diameter	406 mm
	Strip speed through the mill	0 / 300 / 762 m/Min.
	Min./Max. winder's tension	2.720 / 30.000 kg
max. total strip thickness reducti	ion on low carbon steel strip	90% (to be achieved in 5 passes)
	Max. coil weight	24 t
Two winders with strip gripers	Coil outside diameter (OD)	1950 mm
	Coil inside diameter (ID)	610 mm
	Rolls diameter (two pieces)	63,5 mm (non-driven)
	Four 1st support rolls diameter	101,6 mm (non-driven)
Delle	Six 2nd support rolls diameter	173 mm (non-driven)
Rolls	Support rolls bearings	48
	Support rolls bearing diameter	300 mm
	Support rolls bearing width	172 mm







LINE II - TWENTY ROLLS REVERSIBLE SENDZIMIR COLD ROLLING MILL

	Max. coil weight	24 t
Payoff	Coil inside diameter	610 mm
	Coil outside diameter	1.950 mm
Mill's Motor (General Electric)	Payoff motor (only for first rolling pass)	1 x 500 kW, 400 V, 200/600 r/Min
	Mill winder motor (left)	2 x 1.840 kW, 200/600 r/Min.
	Mill winder motor (right)	2 x 1.840 kW, 200/600 r/Min.
	Mill driven rolls motor	2 x 1.840 kW, 0/1000/2500 r/Min
	Water-Oil emulsion capacity	5.680 I/Min.
	Emulsion storage capacity	114.500 l
Christ and words well a coeling and	Bearings lubrication	Oil/fog
Strip and work rolls cooling and	Hydraulic System	12,55 kW
lubrication		2 M-Pumps á 74 bar; 75,7 l/Min.
	Hydraulic Control Screw Down Device	13.154 kg (during operation)
	for thicknesses up to 2 mm	2 LFE non-contact measuring units
Automatic strip thickness control	for thicknesses over 2 mm	2 ESP contact measuring units
(ESP)	for strip speed measuring	2 Tachometers
	Process digital computer	PDP 8M
Nominal Mill Capacity		125.000 t/a



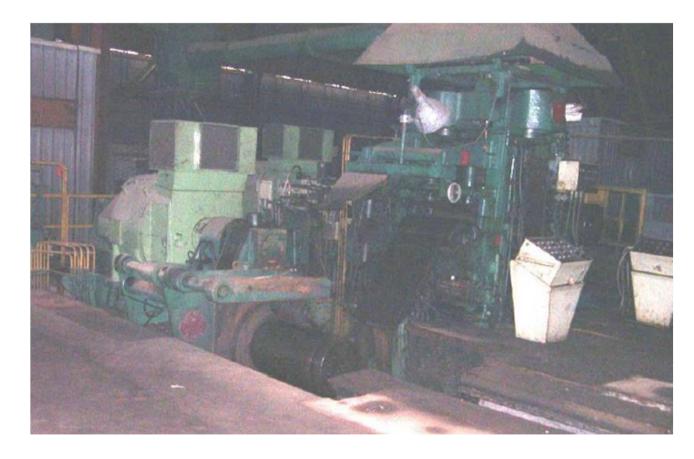
this mill can produce 200.000t/a of low carbon CRS.



LINE IV - FOUR HIGH TEMPER MILL



non-reversible – direction left to right







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LINE IV - FOUR HIGH TEMPER MILL

Manufacturer	Waterbury Farrel (L	JSA)
YoM	1978	
Model	0000 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000 4 1 6 6 000	
Serial number	50305	
Mill motor power	373 kW	
Controls	GE Siltrol Plus	
Cold Rolled Strip (CRS)	Coil weight	max. 12 t
	Strip width	max. 660 mm
	Strip thickness	max. 4 mm
	Note: up to 5% of strip thickness reduction	
	Rolls width	762 mm
Rolls	Work rolls diameter	254 mm - 4 rolls with chocks - 8 rolls no chocks
	Back-up rolls diameter	508 mm - 4 rolls with chocks







LINE V - COMBINED TEMPERING AND TENSION LEVELING LINE

Intended for cold rolled strip, annealed cold rolled strip and hot deep galvanized strip









LINE V - COMBINED TEMPERING AND TENSION LEVELING LINE

Manufacturer	Siemens VAI Clecim
YoM	1989
	ndanandant units, and towner will and and tonsion leveler

Note: this line consists of two independent units: one temper mill and one tension leveler.

	Strip width	600 – 1.300 mm
	Strip thickness	0,2 – 1,5 mm
	Material Yield Point	200 – 500 N/mm²
Strip/Material	Material Tension Strength	300 – 700 N/mm²
	Leveler Tension	max. 15.000 daN
	Strip elongation (two high D-Mill)	max. 5%
	Strip elongation (tension leveler)	max. 2%
Four High Temper Mill	Hydraulic pressure	max. 1.000 t

Note: This line is constructed for continuous strip tempering and leveling. These two basic line units may be used together or separately, depending on the characteristics of material needed.

Included is the perpendicular cutting and strip edge slitting as well as the electro-static strip oiling.





ROLL PREPARATION WORKSHOP



-	ROLL GRINDER	02 units

- Coil Lifter (for coils with vertical axe) 03 units

- Coil Car for perpendicular transport 04 units

- Coil "C"-Hook 03 units

