

## High Speed Laying Head

Project Engineering • Supply • Services



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### Characteristics of advanced wire rod mills

- Production speeds up to 120 m/s
- Utilization factor up to 90 % and more
- Yield of material over 96 %
- Good tolerances and minimum surface scratching to achieve best prices in the markets
- Temperature control system throughout the mill to achieve repeatable and uniform material properties :
  - Rolling within closed temperature ranges meeting the particular material demands
  - Low temperature rolling
  - Controlled cooling process used as in-line heat treatment or for "pre-adjustment" of material properties
  - Low labour cost due to high degree of automation
  - Extensive program system for both the rolling process and subsequent rod treatment
  - Developed and improved continuously, including the experience and expertise gained from many
  - Rolling mills delivered by Rana Udyog
  - An effective tool to save costs in downstream processes and achieve an optimal product structure and specific Physical properties

### Intermediate cooling upstream the rod mill block

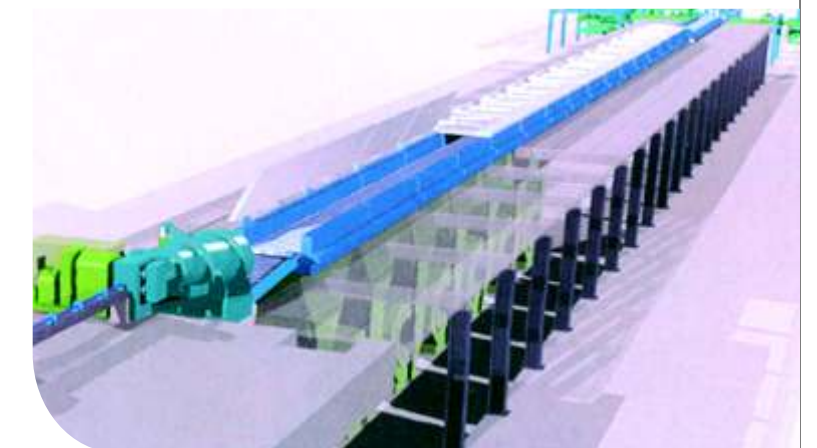
- Maintain the desired temperature field by regulating the water pressure
- Temperature controlled rolling possible
- Improved grain size (fine) of rolled material
- Quick-acting valves for higher speeds and small-diameter rod to shut off the water flow while the rod head end enters the cooling pipes.
- Cooling line also suitable for other products
- High strength values:
 

▪ Yield point :	500 N/mm <sup>2</sup>
▪ Tensile strength:	560 N/mm <sup>2</sup>
▪ Elongation percentage grade:	12%
- Other data:
 

▪ Final rolling temperature:	950-1050 °C
▪ Equalizing temperature at laying head:	650 °C
▪ Water pressure, max:	1.6 Mpa
▪ Max product speed, approx:	80 m/s

### Ring conveyor with air cooling

- Adjustable speed to influence package compactness by varying ring overlapping patterns
- Steps within the conveyor and provision for change of roller groups speed to change overlap position
- Suitable for retarded and accelerated cooling
- Consisting of three sections
  - Ring laying section
  - Secondary cooling train for controlled cooling
  - Delivery section to reforming tub



### Controlled cooling section

- Retarded cooling for cooling rates of less than 0.3 K/s
- Accelerated cooling for cooling rates of more than 25 K/s
- Air flow rates at the loops of more than 50 m/s

