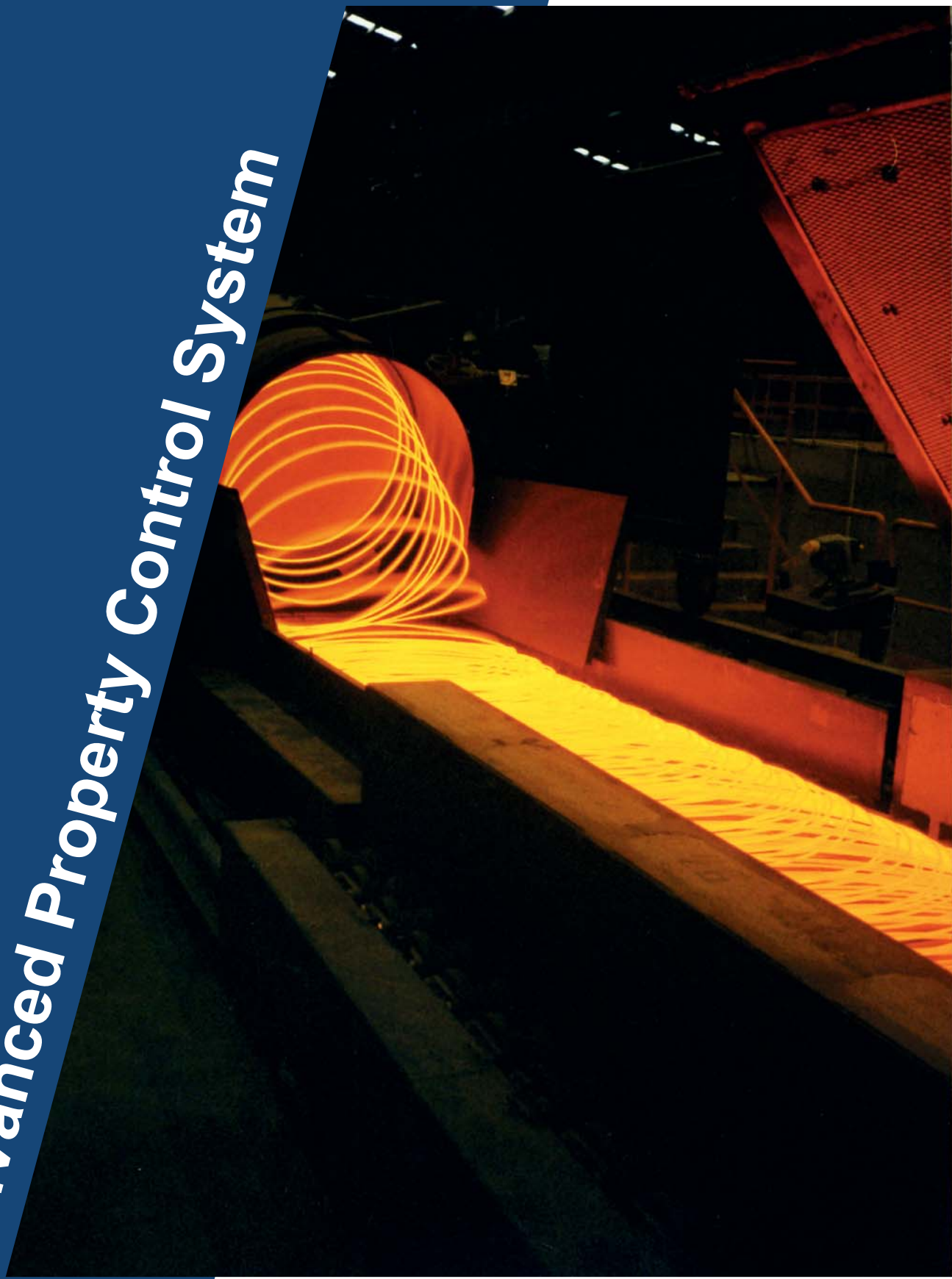
Advanced Property Control System



Design
Supply
Service

MILL SOLUTIONS

Advanced Property Control System

Characteristics of advanced wire rod mills

- Production speeds up to 120 m/s
- Utilisation 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 MWE

Ring conveyor with air cooling

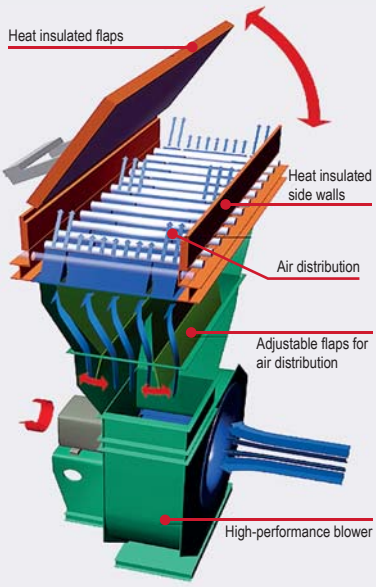
- Adjustable speed to influence package compactness by varying ring overlapping patterns
- Steps within the conveyor and provision for change of roller groups speed to change overlap position
- Consisting of three sections:
  - Ring laying section
  - Secondary cooling train for controlled cooling
 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

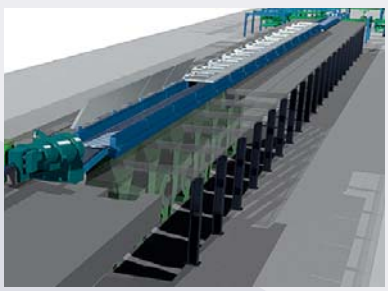
Intermediate cooling upstream the rod mill block

- Maintain the desired temperature field by regulating the water pressure
- Temperature controlled rolling is 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/mm²
  - Tensile strength 560 N/mm²
  - Elongation percentage grade 12 %
- Other data
  - Final rolling temperature 950 - 1,050 °C
  - Equalising temperature at laying head 650 °C
  - Water pressure, max. 1.6 Mpa
  - Max. product speed rebar, approx. 80 m/s

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





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