Thöni Casting Equipment Systems

Thöni supplies casting equipment in systems customised to suit the needs of each customer. The schematics show the main components and different system configurations. Individual components can also be integrated into existing systems.

Melting furnace
Holding furnace
Secondary cooling unit
Withdrawal machine
Shear Upcoiler
Milling machine
Crucible melting furnace with hood
Holding furnace
Secondary cooling unit
Withdrawal machine
Saw Roller conveyor

Thöni Casting Equipment
Metal on design
The Thöni Equipment Range

**Strip (double-strand)**
- up to 500 mm in width

**Strip (single-strand)**
- up to 1,000 mm in width

**Studs**
- 40 - 350 mm in diameter (single- or multi-strand)

**Wire**
- from 16 mm in diameter (up to 12 strands)

**Pipes**
- up to 300 mm in diameter (single- or multi-strand)

**Rods**
- up to 70 x 70 mm (up to 6 strands)

Know-how from A to Z

- Expansion, alteration and modernisation of existing continuous casting equipment
- Latest process and die technologies
- Control software tailored for ultimate ease of use
- Service and maintenance of existing equipment
- Computer-based energy management for melting processes
- Technical advice for:
  - New developments, process technology and procedures, training
  - Technical interventions to reduce metal losses

Highest energy and production efficiency

- Compliance with all safety, environmental and energy constraints

“We set new standards”

All from a single source

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1. Melting
   - SMelting: Melting furnace
   - A special mix of copper and alloys is melted in the melting furnace.
   - Depending on the alloy, the metals are heated to approx. 1,250° C.
   - When the melting temperature is reached, the molten material is analysed and adjusted, then transferred via a channel into the holding and pouring furnace.

2. Casting
   - The purpose of the holding furnace is to maintain the melt to be cast at a constant temperature (+/-3° C).
   - This process step has a significant influence on the quality of the melt.

3. Solidification and cooling
   - The liquid metal then enters the die, where it solidifies as homogeneously as possible and so receives its shape.
   - The strip then emerges from the die at approx. 300 to 650° C and is brought to ambient temperature by secondary or spray-water cooling.

4. Drawing
   - In the withdrawal machine, the strip is removed from the die using precisely reproducible movements to bring the molten material in the solidification zone from a molten to an aggregated state.

5. Separating
   - The hydraulic shear/saw separates the strip. The cutting forces work vertically on the horizontal strip and thus have little effect on the solidification zone.

6. Coiling
   - After cutting/sawing, the material reaches the upcoiler and there is either rolled up or bent. Rolling up calls for the optimal configuration of the triangular bending frame in order to achieve the best roundness, an accurate outside and inside diameter, a layered arrangement and a high coil density.

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Metal on design

Thöni Casting Equipment

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“Through innovation, you can only win with Thöni equipment!”

Thöni equipment is known for its ultra-modern technical standards and state-of-the-art engineering. High flexibility and outstanding equipment service life guarantee our customers the highest level of economy and productivity.

Our customers profit from:
- High-efficiency furnaces with energy-saving potentials up to 12%
- High-tech hoods with controlled ventilation to reduce metal losses by up to 2%
- Innovative dies using the best heat-transfer technology for high throughput and long service life with unvarying quality
- Reduced maintenance costs of up to 80% thanks to innovative die designs.
- Modular and flexible equipment configurations matched to individual customer requirements.
- Modernisation of existing equipment with Thöni components
- On-going performance audits of our innovations and numerous patents.