

Design
Supply
Service



Spooler



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Spooler

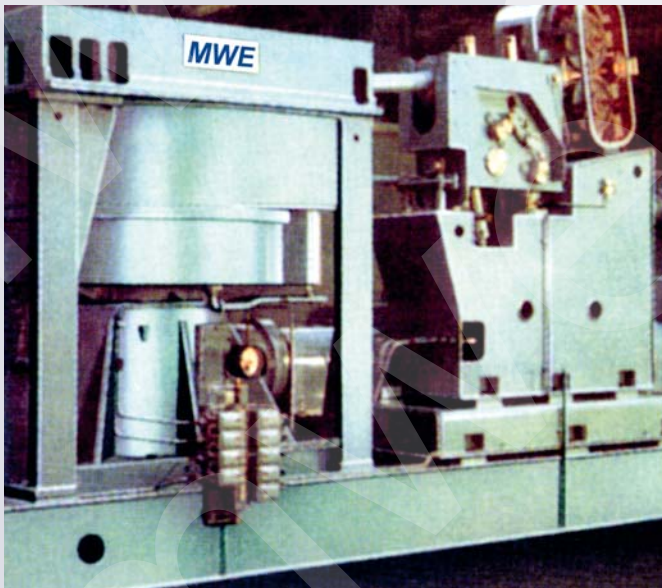
Mode of operation

MWE spoolers adopt the winding principle through a vertical axis. The rolling material enters the revolving take-up cage through the 'oscillating' laying pipe which is in catching position. As soon as a number of convolutions (rings) are wound during the coiling process, tension is built up for winding and the laying pipe begins to operate in vertical direction. The coil is formed in layers from inside to outside. When the product tail end exits the last mill stand, the idling back-tension pinch rolls are switched to braking mode to produce the tension which is needed for winding the bar tail end. With the reeling plate in raised position, the finished coil can be removed while the spooler is at rest. Even coils being 'shrunk' due to cooling easily can be withdrawn when the coiling arms are collapsed.

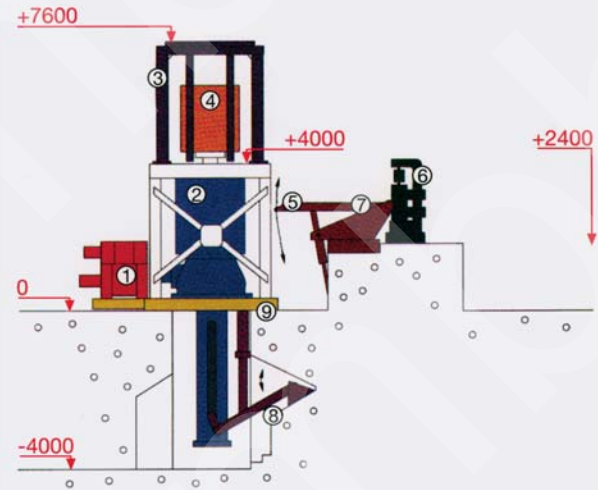
To ensure continuous mill duty at minimum idle times, at least two spoolers, through switches alternately fed with rolling material, are required for each product strand.

MWE rolling mills - Equipped with spoolers

Take-up reels by MWE satisfactorily are used in steel bar mills. In all applications, the spoolers have been found to operate with consistent reliability.



Typical installation of a spooler for 2,500 kg coils



- | | | | |
|---|-----------------------------|---|--------------------------|
| 1 | Main Drive | 5 | Oscillating laying pipe |
| 2 | Spooler with reeler gearing | 6 | Back-tension pinch rolls |
| 3 | Coil transfer | 7 | Laying mechanism |
| 4 | Raised coil | 8 | Lifting drive |
| | | 9 | Base frame |

Specifications

Sizes Rounds	Ø 8 - 42 mm
	as well as equivalent squares and hexagons
Min. temperature	550°C
Coil dimension	ID 850
	OD 1250
Max. coil weight	3,000 kg
Space factor	0.6 - 0.8
Max. reeling speed	30 m/s

A method that offers many advantages

Expertise and machines for economical and efficient production

The employees at MWE are entirely familiar with the conditions and requirements involved in the manufacturing of coiled steel rounds, squares and hexagons.

This expertise is reflected by the spoolers we make. They give reliable and economical service and are characterised by high operating speeds.

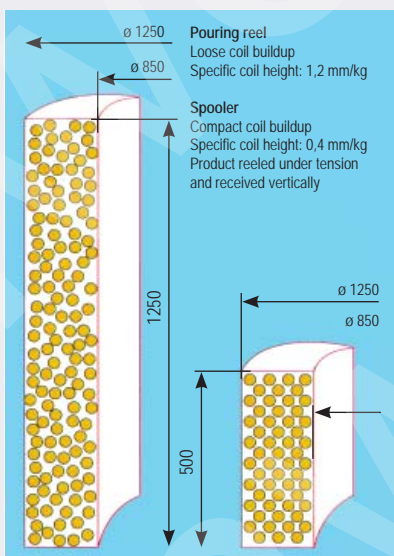
MWE engineers are in close touch with rolling mill users to prepare the optimal approach for the particular reeling or coiling application and they also resolve finishing problems.

Just rely on the advice you get from MWE engineers.

Spooler

Spoolers produced by MWE specifically are designed to be used in tonnage steel and rebar coiling mills where high throughputs and large coil weights are involved.

They are suited to reel cooled and uncooled rolling material. Adopting the winding method with variable tension, these reels wind hot-rolled steel bars into compact coils.



High space factor (reel package)

Also referred to as occupancy rate, the space factor is substantially higher when compared to the 'pouring' approach. It ranges from 0.6 to 0.8.

Smaller coil sizes

Wound coils are more compact and thus smaller than 'poured' coils of identical weight. Therefore, they can be handled more reliably in a non-fastened condition. Moreover, less storage area is needed.

High reeling speed

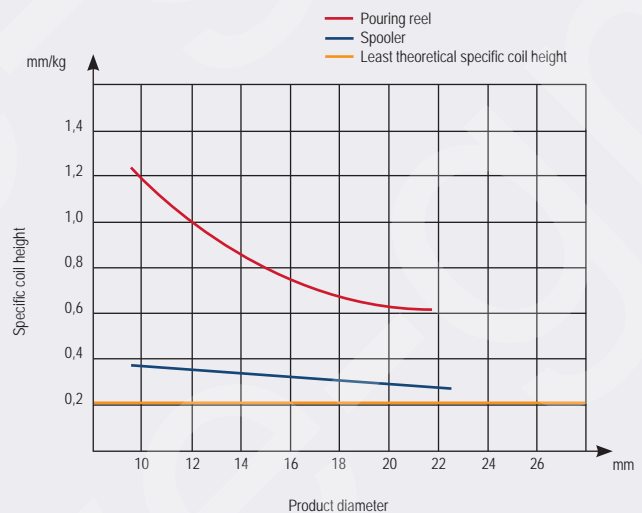
The final rolling speed can be as high as 30 m/s.

Low final rolling temperature

Reeling under tension permits coils to be formed from thermally treated, highly cooled products. Depending on the bar diameter, a final rolling temperature as low as 550°C is acceptable. In addition to the desired effect on the microstructure, the degree of scale formation can be kept low.

Easier uncoiling

Finding and 'catching' the tail end of the coil for uncoiling are substantially facilitated.



Based on SKET's expertise in building long-product rolling mills, MWE supplies small-sized and medium-sized equipment and installations for the rolling mill and metallurgical industries and revamps existing plants.

The scope of supply and services includes

- Rod mills
- Bar mills
- Small and medium section mills
- High-grade steel rolling mills
- APROCS cooling technology
- thermocoil®
- Mill stands
- Bar & light-section reels
- Shears
- Cooling lines
- Plant revamping

Moreover, MWE offers competence in engineering, design, support in manufacturing, supply and commissioning of plant sections for bar, light-section and rod mills.



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