

## Segment roll coating Solutions for each strand position



# Extra coating for longer service life

Segment rolls in continuous casting plants are subject to heavy wear because of the high thermal and mechanical stresses they undergo. That's why SMS group extensively researched into roll body and welding materials. Here is the result they came up with: extremely wear-resistant segment rolls for all strand positions. Now you benefit from an optimal solution for every position – ensuring top product quality and long service life.

The basic materials for the roll bodies are high-alloy CrMoV steels. What makes these grades ideal is their good corrosion resistance as well as excellent bending strength and weldability.

There is even more innovation involved in SMS group segment roll coatings. Their advantages are based on both newly developed welding materials and intensive research into high-performance basic materials. Also new in this context is precise roll geometry tailored to the strand position.

These are the coating welding processes used in all workshops worldwide:

- SAW submerged-arc welding
- Open-arc welding
- Gas-shield welding

Depending on your strand position, we offer you the right type of coating welding with either special alloys or hard or soft martensitic basic microstructures. Whichever solution you choose, they all guarantee a long service life of the wear layer and high product quality – for each roll position.

## **The advantages of our custom segment rolls and welding materials:**

- Long service life of the segment rolls
- Reliable product quality, even in operation without secondary cooling water
- Multiple use of the segment rolls



*Submerged-arc welding (SAW).*



*Open-arc welding.*

## Expertise from first hand

As an original equipment manufacturer, we know exactly what counts when it comes to segment rolls. That puts us in a position to offer every customer the best solution for any position of the segment in the strand guide system. And, due to the close networking of our global service branches, we draw on the necessary maintenance know-how. Also available for you is the very latest in machine stock for applying welded coating wear surfaces. So you can be sure of quality services performed by experts using ISO-certified welding plants and precision-calibrated measuring and inspection equipment.

Wherever you are in the world, you too can benefit from our know-how:

- Longer service life thanks to newly developed roll and welding materials
- Short maintenance times and lower maintenance costs for your entire continuous caster
- Custom roll designs with the right type of coating welding
- Advice on the introduction of steel grades with a sophisticated cooling strategy
- Standardized welding on state-of-the-art plants
- Global service network



### Specialist workshops for segment roll coating

- Taylor, Michigan, USA
- Gary, Indiana, USA
- Washington, Pennsylvania, USA
- Hogansville, Georgia, USA
- Zhangjiagang, China
- Mariupol, Ukraine
- Gebze, Turkey
- Bhubaneswar, India
- Chelyabinsk, Russia
- Vespasiano, Brazil

Roll position	Corrosion resistance	Thermal load	Bending strength	Microstructure of the coating welding
Foot roll	+++	+	+	a) Martensitic microstructure b) Special alloy
Roll segments 0-1	++	+	+	Soft martensitic microstructure
Arc roll segments	+	++	++	Soft martensitic microstructure
Horizontal roll segments	+	+++	+++	a) Soft martensitic microstructure b) Martensitic microstructure

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