

# UNIROLLS

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ROLLS FOR  
METAL  
INDUSTRY



## ABOUT US

**UNIROLLS** was established in 1968, one year after the first steel was produced in Flanders (Belgium).

We have been a respected name in the steel industry since our early days, working together with well-known steel mills of the time, such as Sidmar, Cockerill Sambre and Fafer.

Since day one, when we started our mechanical workshop in Ghent, we have worked closely with end users to improve existing parts and develop innovative solutions.

Today we are proud to be a continued and trusted partner of many of our early customers, and our customer base is constantly growing worldwide.



*Our customers trust us because they recognize that our experience and knowledge of the industry is diverse and our long-standing customer relationships are testament to this.*

*Patrick Meganck, CEO of Unirolls*

# PRODUCTS

**UNIROLLS** has more than 50 years of experience in the manufacturing of various types of premium quality rolls for the ferrous and non-ferrous metal industry, for coil finishing lines as well as coil processing lines.

**At UNIROLLS size doesn't matter!**

We can produce rolls from  $\varnothing$  20 mm up to  $\varnothing$  1500 mm with a maximum length of 8000 mm.



**SURFACE HARDENED ROLLS**



**BACK-UP ROLLS**



**LASER CLADED ROLLS**



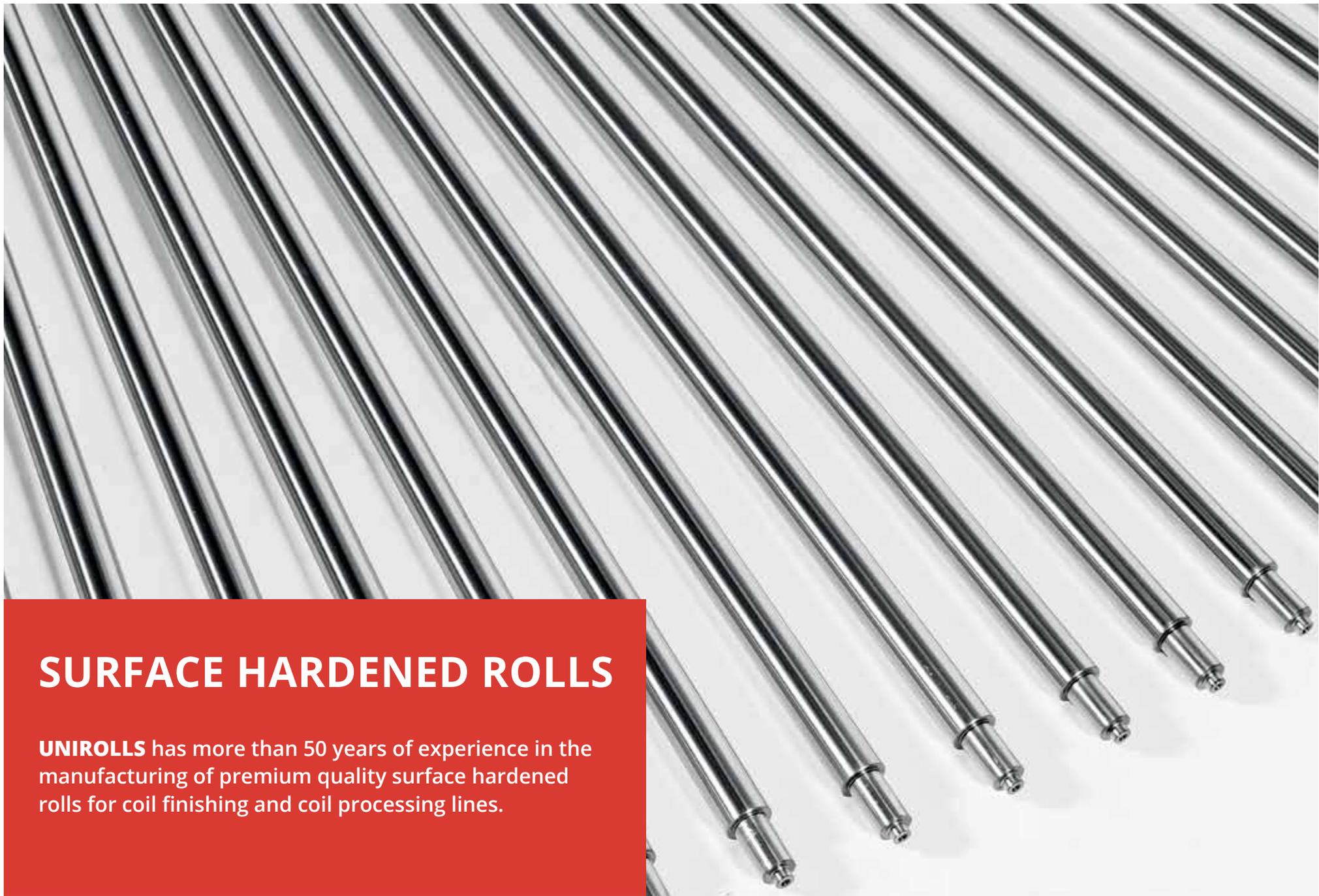
**THERMAL SPAY COATED ROLLS**



**CENTRIFUGAL CAST ROLLS**

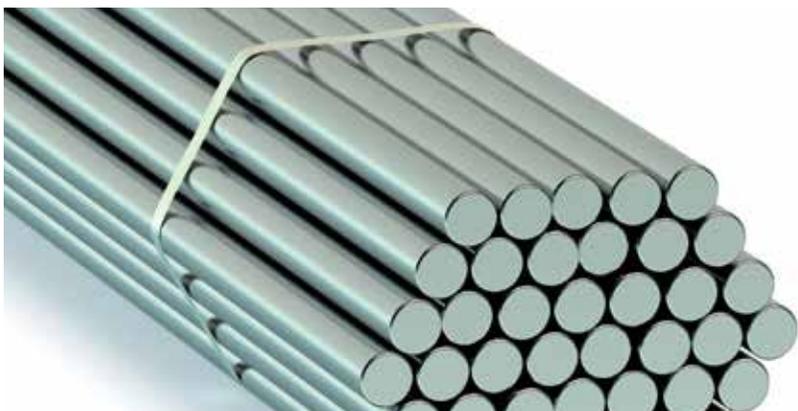


**POLYMER COVERED ROLLS**



## **SURFACE HARDENED ROLLS**

**UNIROLLS** has more than 50 years of experience in the manufacturing of premium quality surface hardened rolls for coil finishing and coil processing lines.



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## Raw Materials

**UNIROLLS** uses only selected European raw materials, quenched and tempered, US tested, containing Chromium, Molybdenum and Vanadium, in order to obtain the best micro-structure and mechanical properties.

This will increase the output tonnage and lifetime of the rolls, through improved hardness, wear resistance, toughness and compressive strength.

Most used steel grades:

SAE 50CrMo4 / 51CrV4 / 58CrMoV4 / 86CrMoV7 / 100Cr6 / 100CrMo7



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## Heat Treatment

**UNIROLLS** has a large availability of high and medium frequency induction hardening machines in order to obtain a hardening depth from 1 to 15 mm in radius.

After induction hardening the rolls are tempered at low temperature to remove internal stress. An inspection test report is released at the end of the thermal process.

A homogeneous hardness as well as the correct ratio in hardness between the work rolls, intermediate rolls and back-up rolls are essential to guarantee a long lifetime of the rolls.



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## Finishing and Coatings

**UNIROLLS** products are finished by grinding and polishing between centers.

This results in a perfect geometry, particularly in terms of roundness and concentricity.

We guarantee a perfectly smooth surface, free of any defects such as feed or chatter marks. Roughness varies between Ra 0,05 and Ra 0,4 depending on your application.

Chrome plating and super finish on request. A chrome layer gives a higher hardness, better wear resistance and protection against corrosion.



BACK-UP ROLL WITHOUT SHAFT

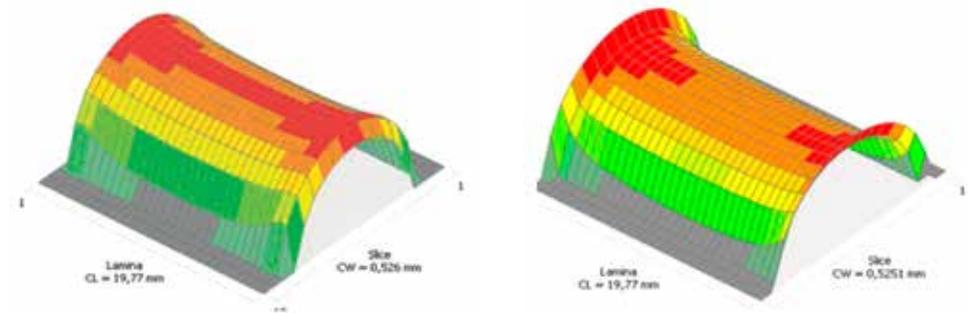


BACK-UP ROLL WITH SHAFT

## BACK-UP ROLLS

**UNIROLLS** offers a complete range of back-up rolls up to a maximum OD of 800 mm, standard type or custom-made, suitable for the heaviest working conditions such as contamination and vibrations.

We improve existing designs in order to increase the productivity of your machines.



The outer ring can be finished with a crown in order to ensure a better alignment and distribution of the Hertzian pressure.



## SERVICES

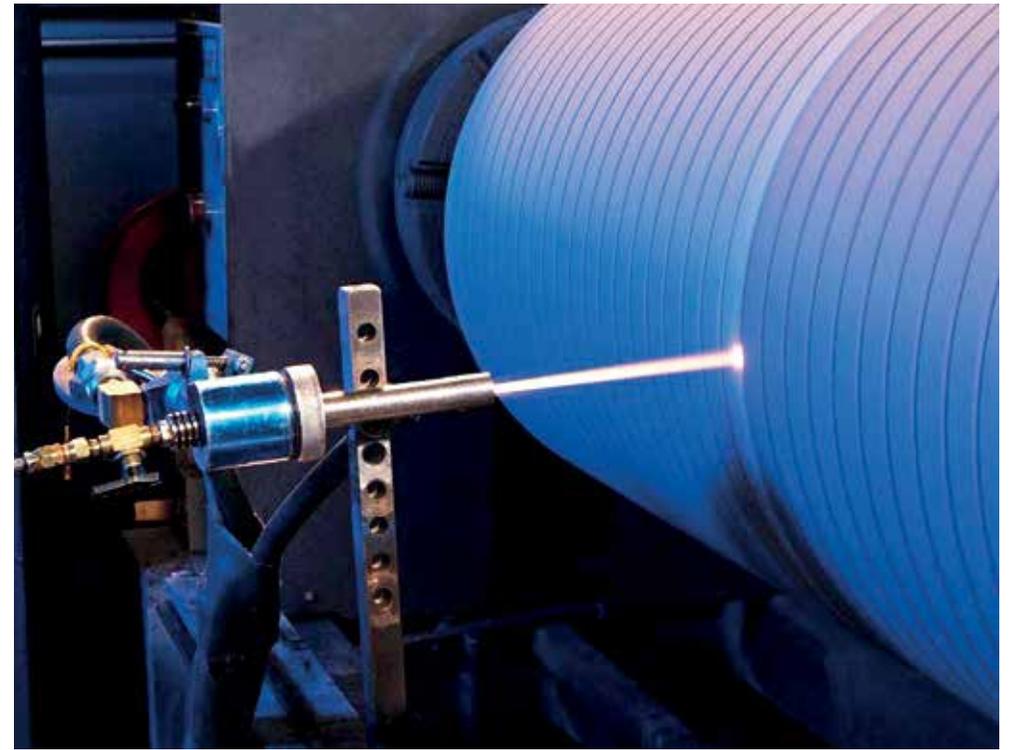
**UNIROLLS** offers maintenance and repair services for your leveling and tension leveling cassettes or roll sets in our professionally equipped service workshops in Belgium, Poland and Turkey.

### **The works consist of:**

- Disassembly of cassettes and rolls
- Professional cleaning
- Detailed inspection
- Roll grinding or replacement
- Replacement of bearings and seals
- Installation and adjustment

**UNIROLLS** repairs your rolls 'as good as new' and guarantees a perfectly smooth surface, free of feed or chatter marks.

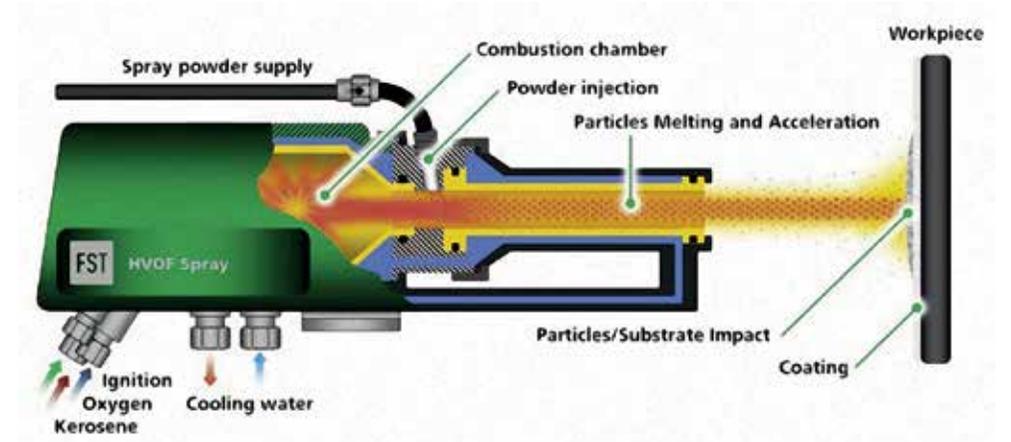
In addition we have a team of highly trained service technicians available for maintenance and repair work on your machines in your factory.



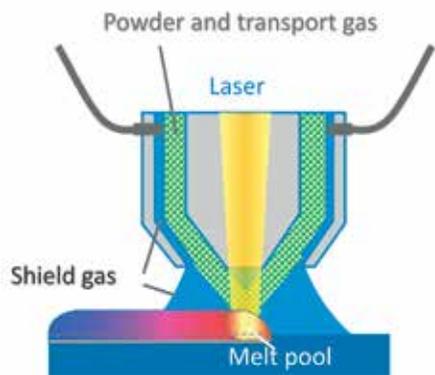
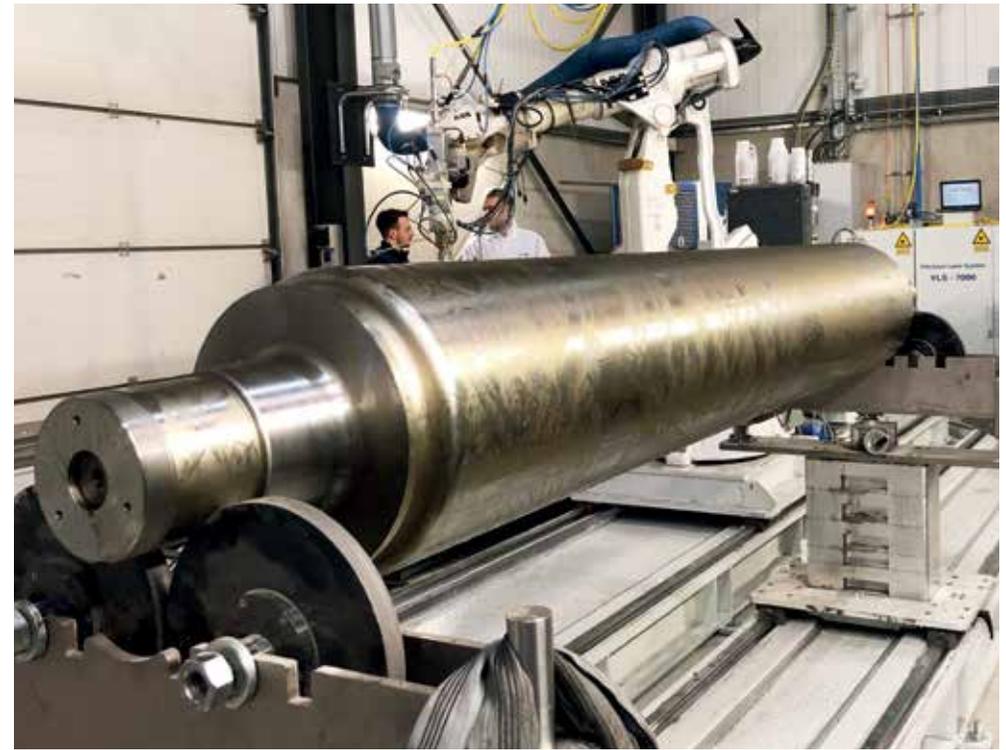
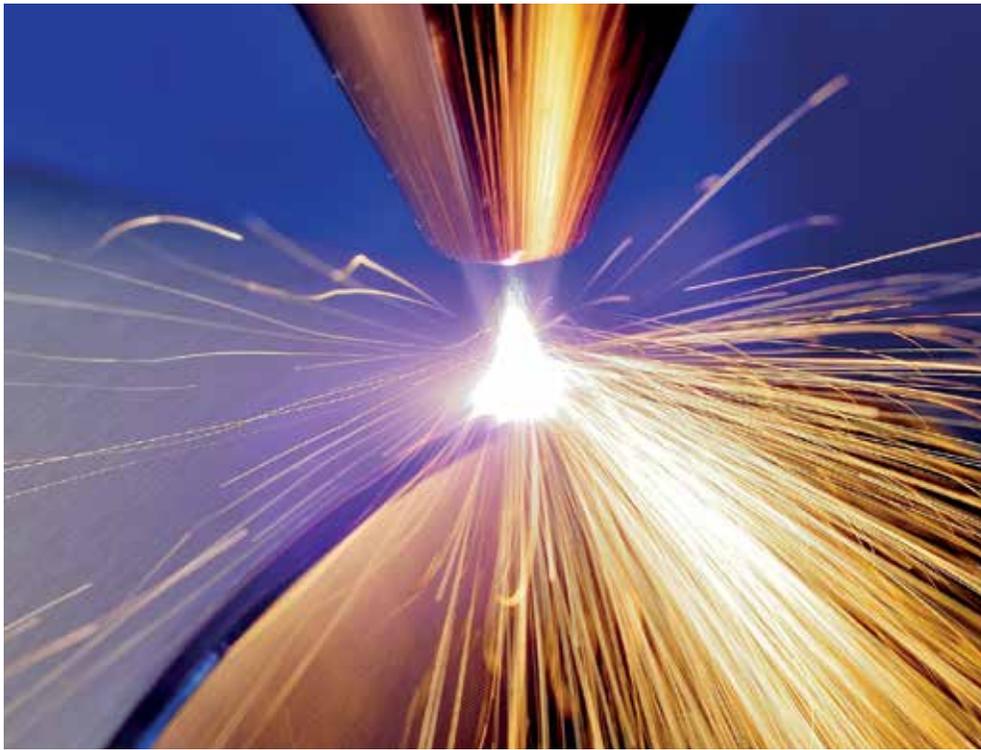
## THERMAL COATED ROLLS

**UNIROLLS** delivers thermal coated rolls with the highest quality of HVOF/HVAF surfacing solutions to prolong the lifetime and improve the quality of your processing rolls.

Additional post-treatment sealing, oxide layering, and polymer-based enhancements can be applied to further improve thermal spray roll coating performance.



**HVOF - HIGH VELOCITY OXYGEN FUEL**



Laser cladding creates an atomic bond between substrate and top layer. Metallurgical they become one. This makes the cladding layer super strong.

The applied layer is metallurgically bonded to the underlying material (5-10% mixture) and shows little or no porosity.

## LASER CLADED ROLLS

**UNIROLLS** offers laser cladded rolls that extend the operational service life by increasing resistance to wear, corrosion and erosion in a wide variety of applications.

Traditional cladding techniques often require excessive heat input, which may result in negative effects on the performance of the roll.



## CENTRIFUGAL CAST ROLLS

**UNIROLLS** delivers premium quality centrifugal cast rolls, fine structured, perfectly homogeneous, free from blowholes or inclusions and with very high mechanical properties.

Our products meet the highest standards for material, heat treatment and finishing.





## POLYMER COVERED ROLLS

**UNIROLLS** provides premium quality polymer covered rolls, from rubber and polyurethane to thermoplastic or composite materials.

To improve the lifespan and performance of the roll coverings, we are constantly developing new compound formulations.

# UNIROLLS

YOUR PARTNER IN PREMIUM QUALITY ROLLS

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