

# WR-ROLLS Q1 2026 Roll Heat Treatment Production Report

## Q1 2026 Production Overview

During Q1 2026, WR-ROLLS maintained stable operations across its roll heat treatment division while continuing to advance the Company's transition toward high-alloy tool steel and precision vacuum heat treatment applications.

Driven by the increasing demand for high-performance materials such as Cr12, SKD11, and H13, WR Group officially initiated a specialized equipment upgrading and process optimization program focused on high-alloy tool steel heat treatment during the beginning of 2026.

As part of this strategic adjustment phase, the Company introduced new vacuum heat treatment equipment and further optimized furnace loading structures, quenching stability, and tempering control procedures in order to improve dimensional stability, hardness consistency, and long-term service performance of high-end roll products.

Due to equipment installation, process calibration, and stricter production quality standards implemented during the quarter, the Company intentionally reduced part of its overall production throughput in favor of higher process stability and improved product quality consistency.

Despite the temporary production adjustment, the proportion of high-alloy tool steel materials continued to increase during the quarter, reflecting the Company's long-term transition toward high-end precision heat treatment manufacturing.

## Total Output

Total Heat Treatment Output	1,528,000 kg
-----------------------------	--------------

## Q1 2026 Sales Summary Results

During Q1 2026, WR-ROLLS recorded a total roll heat treatment output of approximately 1,528,000 kg.

Compared with previous production periods, the Company continued to optimize its product structure toward high-performance alloy tool steel applications while maintaining stable furnace operation throughout the quarter.

The material composition ratio for Q1 2026 is summarized as follows:

Cr12	31%
65Mn	20%
SKD11	19%
GCr15	13%
9Cr2Mo	9%
H13	6%
Other	2%

Among processed materials, Cr12 remained the primary material category during the quarter, mainly applied in ERW forming rolls, sizing rolls, and high wear-resistant roll applications.

The proportion of SKD11 and H13 continued to increase compared with previous production periods, reflecting the Company's ongoing transition toward high-end vacuum heat treatment and precision alloy tool steel processing.

At the same time, the proportion of conventional materials such as 65Mn gradually declined as production resources were increasingly allocated toward high-performance and high-stability roll manufacturing applications.

## Newly Added Vacuum Heat Treatment Equipment

During Q1 2026, WRD Group continued to expand the vacuum heat treatment capacity of its WR-ROLLS division through the introduction of two newly upgraded vacuum heat treatment systems focused on high-alloy tool steel and precision roll applications.

HRC2-966	Vacuum Double Chamber Oil Quenching Furnace	1
HRQ-966	Vacuum Gas Quenching Furnace	1

### HRC2-966 Vacuum Double Chamber Oil Quenching Furnace

The HRC2-966 system is mainly applied in the vacuum heat treatment of high-carbon and high-alloy tool steels including Cr12, SKD11, and GCr15.

The double chamber structure allows the heating chamber and quenching chamber to operate independently, improving vacuum stability, furnace cleanliness, and heat treatment consistency. Technical Specifications

Working Zone	900×600×600 mm
Maximum Temperature	1350°C
Temperature Uniformity	±2°C
Ultimate Vacuum Level	1×10 <sup>-4</sup> Pa
Pressure Rise Rate	0.4~0.67 Pa/h
Oil Quenching Pressure	25 bar

The system is particularly suitable for large ERW forming rolls, sizing rolls, and high wear-resistant roll applications requiring strong quenching capability and stable hardness performance.

## HRQ-966 Vacuum Gas Quenching Furnace

The HRQ-966 Vacuum Gas Quenching Furnace is primarily utilized for precision vacuum heat treatment applications requiring low deformation, stable dimensional control, and clean surface quality.

Compared with conventional oil quenching systems, the gas quenching process provides improved dimensional stability and lower thermal deformation, making it suitable for high-precision roll components and advanced alloy tool steel processing. Technical Specifications

Working Zone	900×600×600 mm
Maximum Temperature	1350°C
Temperature Uniformity	±2°C
Ultimate Vacuum Level	1×10 <sup>-2</sup> Pa
Pressure Rise Rate	0.4~0.67 Pa/h
Gas Quenching Pressure	10 bar

The addition of the HRQ-966 system further strengthened the Company ' s capability in advanced vacuum heat treatment and precision thermal processing technology.

### Overall Upgrade Impact

Following the installation of the new vacuum heat treatment systems, WR-ROLLS significantly improved its process stability, furnace efficiency, cooling capability, and high-alloy tool steel heat treatment performance.

The equipment expansion also supports the Company ' s continued transition toward high-end precision roll manufacturing and long-life wear-resistant applications.

### Management Commentary

Management believes that the global roll manufacturing and precision heat treatment industry is continuing to transition toward higher-performance alloy materials, longer service life requirements, and more advanced thermal processing technologies.

During Q1 2026, WRD Group continued to prioritize process stability, vacuum heat treatment quality, and high-alloy tool steel capability development within the WR-ROLLS division.

As the proportion of Cr12, SKD11, H13, and other high-performance materials continues to increase, the Company recognizes the growing importance of dimensional stability, hardness consistency, wear resistance, and long-term product reliability in modern roll manufacturing applications.

In response to these industry trends, WRD Group initiated a strategic equipment upgrading and process optimization program focused on advanced vacuum heat treatment technology and precision roll manufacturing capability enhancement.

Management believes that short-term production adjustments implemented during the equipment upgrading phase will contribute positively to long-term process stability, product quality consistency, and high-end manufacturing competitiveness.

## Future Outlook

Looking ahead to the remainder of 2026, WRD Group expects the roll manufacturing and heat treatment industry to continue moving toward higher-performance alloy materials, precision vacuum heat treatment technology, and longer service life requirements.

With the increasing application of Cr12, SKD11, H13, and other high-alloy tool steels, the WR-ROLLS division will continue strengthening its capability in precision roll heat treatment, large-scale vacuum processing, and high-alloy tool steel applications.

Following the completion of the 2026 equipment upgrading program, the Company expects further improvements in overall vacuum heat treatment stability, multi-stage tempering control, dimensional consistency of large roll applications, and long-life wear-resistant roll manufacturing capability.

At the same time, WRD Group is continuing to evaluate several long-term technology development initiatives for the WR-ROLLS division, including:

- ▶ Metallographic laboratory development
- ▶ Heat treatment traceability systems
- ▶ Furnace temperature uniformity optimization
- ▶ Cryogenic treatment technology applications
- ▶ Digital heat treatment process management

Over the next several years, the industry is expected to place increasing emphasis on:

- ▶ Furnace temperature uniformity
- ▶ Metallographic structure consistency
- ▶ Hardness distribution stability
- ▶ Dimensional stability
- ▶ Heat treatment process traceability

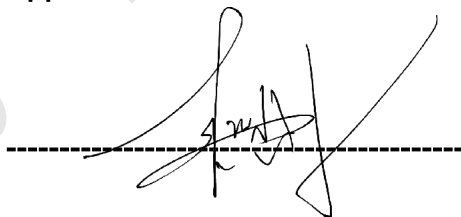
WRD Group believes these technologies will become increasingly important in the future development of high-end precision roll manufacturing and advanced vacuum heat treatment operations.

With the continued expansion of advanced vacuum heat treatment capability, WR-ROLLS is expected to further strengthen its position in the field of precision roll manufacturing and high-alloy tool steel heat treatment applications.

## For further information

For further information regarding WR-ROLLS and its roll heat treatment services, please visit [www.wr-rolls.com](http://www.wr-rolls.com).

### Approval & Authorization:



### Contact Information

WRD Group WR-ROLLS  
International Trade Department  
Tel: [+86 13290661997](tel:+8613290661997)  
Email: [info@wr-rolls.com](mailto:info@wr-rolls.com)  
Website: [www.wr-rolls.com](http://www.wr-rolls.com)



## Company Profile

WR-ROLLS is a specialized provider of roll heat treatment solutions for the ERW pipe industry, focusing on vacuum heat treatment services for tool steel rolls, high wear-resistant roll products, and precision tooling components.

The Company serves customers in the steel pipe, roll manufacturing, and industrial tooling sectors, with continued focus on product quality, hardness stability, and wear resistance performance.