WRD GROUP

HEAT TREATMENT REPORTS

H2 2024

1 H2 2024 —BUSINESS PERFORMANCE & MARKET BACKGROUND

During the second half of 2024, industrial manufacturing activity in China improved steadily as equipment utilization rates increased and export-oriented steel pipe demand gradually recovered. The ERW pipe industry showed stronger operating momentum compared with the first half of the year, particularly in higher-speed forming applications and precision roll requirements.

Demand for high-performance roll products and precision vacuum heat treatment services increased progressively during this period. Industrial customers began placing greater emphasis on roll service life, dimensional stability, and wear resistance under continuous production conditions, resulting in growing demand for high alloy tool steel materials and advanced heat treatment processes.

Period	Standard Tool Steel	High Alloy Tool Steel	Total Output
H2 2024	2,749.252 tons	991.841 tons	3,741.093 tons

WR-ROLLS continued to maintain stable production operations throughout the second half of the year while further strengthening its capabilities in precision roll heat treatment and high wear-resistant alloy processing. Total heat treatment output for H2 2024 reached 3,741.093 tons, including 2,749.252 tons of standard tool steel and 991.841 tons of high alloy tool steel materials.

The Company maintained consistent process quality across all production categories while gradually expanding its experience in higher-performance roll applications and precision vacuum heat treatment services.

2 H2 2024 —PRODUCTION PERFORMANCE

During the second half of 2024, the domestic manufacturing sector continued recovering gradually from the post-pandemic industrial adjustment cycle. Compared with the first half of the year, overall industrial activity across the steel processing and roll manufacturing industries showed a more stable recovery trend, supported by improving equipment utilization rates and the gradual recovery of export-oriented manufacturing demand.

During H1 2024, many industrial customers had maintained relatively conservative procurement strategies focused primarily on cost control, stable production operations, and reduced operational risk under a still-recovering market environment. However, during the second half of the year, industrial operating confidence improved progressively as manufacturing activity stabilized and downstream ERW pipe production demand increased steadily.

Compared with the first half of 2024, customer procurement activity became noticeably more active during H2, particularly in applications requiring improved dimensional stability, wear resistance, and longer roll service life under continuous high-speed production conditions. Demand for precision vacuum heat treatment services and higher-performance alloy roll applications also increased steadily during this period.

Standard tool steel materials continued to represent the majority of processed products throughout the second half of the year, primarily serving conventional ERW forming rolls, sizing rolls, guide rolls, and general wear-resistant tooling applications. At the same time, compared with H1 2024, the utilization rate of high alloy tool steel materials increased progressively as more industrial customers began adopting higher-performance roll solutions for high-speed ERW forming systems and precision wear-resistant tooling applications.

Total heat treatment output for H2 2024 reached 3,741.093 tons, compared with 3,180.698 tons during H1 2024. Standard tool steel output increased from 2,436.512 tons in H1 to 2,749.252 tons in H2, while high alloy tool steel materials increased from 744.186 tons to 991.841 tons during the same period, reflecting the gradual recovery of industrial manufacturing activity and the growing demand for higher-performance industrial roll applications.

Throughout the second half of the year, WR-ROLLS continued strengthening its capabilities in furnace operation stability, precision heat treatment control, dimensional consistency management, and high alloy material processing. The Company maintained stable production quality across all processed materials while gradually expanding its operational experience in higher-performance industrial roll heat treatment applications and precision vacuum heat treatment services.

3 H2 2024 —FUTURE OUTLOOK

Looking ahead beyond the second half of 2024, WR-ROLLS expects the domestic industrial manufacturing sector to continue stabilizing as post-pandemic recovery conditions gradually improve across the steel processing and ERW pipe manufacturing industries. Industrial operating confidence is anticipated to strengthen progressively entering 2025, particularly in export-oriented manufacturing sectors and higher-performance roll applications.

The Company expects 2025 to become an important transition period for the industrial roll heat treatment market, driven by increasing demand for high-speed ERW forming systems, longer roll service life requirements, and higher production efficiency standards across modern pipe manufacturing operations. As industrial customers continue upgrading equipment performance and operational stability requirements, demand for precision heat treatment services and higher-performance alloy roll applications is expected to increase steadily.

WR-ROLLS also anticipates continued growth in precision vacuum heat treatment applications during 2025, particularly in projects requiring improved dimensional stability, higher wear resistance, and more consistent hardness performance under continuous production conditions. Compared with conventional roll applications, higher value-added alloy roll products are expected to represent a progressively larger proportion of future industrial demand.

In response to these industry trends, the Company plans to continue strengthening its capabilities in precision heat treatment process control, furnace operation stability, high alloy material processing, and advanced wear-resistant roll applications. Additional efforts will focus on improving production efficiency, expanding technical process consistency, and supporting the increasing industrial demand for higher-performance ERW roll manufacturing solutions.

WR-ROLLS believes that the gradual recovery experienced during 2024 will establish a more stable operational foundation for stronger industrial growth entering 2025, while the long-term development trend of the industry will continue moving toward higher-performance materials, precision heat treatment technologies, and more advanced industrial roll manufacturing applications.

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