

EVRAZ North America Becomes First North American Pipe Producer to Complete Testing on Hydrogen Transporting Steel

CHICAGO, Ill., July 11, 2022 – EVRAZ North America (ENA or the Company) today announced a major step towards full qualification of its High-Frequency Welded (HFW) line pipe for high-pressure, 100 percent hydrogen transmission.

In June 2022, the Company became the first vertically-integrated and the first North American pipe producer to successfully complete fracture toughness testing in a 100 percent gaseous hydrogen environment on its API 5L X65 Sour Service line pipe, according to ASME B31.12, the only currently available code for the design of hydrogen pipelines.

After 1,000 hours under 100 percent hydrogen conditions at 100 bar (1,500 psi), the 20" x 0.500" X65 SS pipe samples demonstrated good, long-term fracture toughness and resistivity to hydrogen embrittlement in both pipe body and weld, with K_{1H} values for fracture toughness meeting ASME B31.12 criteria under Option B.

By the fourth quarter of 2022, ENA will also complete full qualification testing, under ASME B31.12, of new X65 pipe grades designed for 100 percent hydrogen and high-impurity CO₂ transmission, at pressures up to 100 bar. Upon successful qualification, ENA will be the first North American line pipe producer qualified for high-pressure, 100 percent hydrogen pipeline transportation.

Testing is being conducted at a RINA-CSM S.p.A, a leading independent European research center specializing in hydrogen and fracture mechanics. All pipe samples are produced in Regina, Saskatchewan and made from steel at ENA Regina Steel, the Company's EAF-based steel mill.

Hydrogen is a core component of ENA's alternative energy strategy, which also includes carbon capture, utilization and storage (CCUS) and geothermal energy. In 2021, the Company expanded its research and development (R&D) capabilities with the establishment of its Alternative Energy R&D group dedicated to the advancement of ENA's steelmaking, line pipe and OCTG for hydrogen and CO₂ transmission and storage and geothermal drilling applications. The new R&D team includes senior research engineer, Dr. Eun Jung Seo, who recently joined the Company from the Department of Metallurgical and Materials Engineering at the Colorado School of Mines in Golden, CO.

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About EVRAZ North America

EVRAZ North America is a leading North American producer of engineered steel products for rail, energy and industrial end markets. Headquartered in Chicago, IL, the company has six production sites located in the United States (Portland, Oregon; Pueblo, Colorado) and Canada (Regina, Saskatchewan; Calgary, Camrose and Red Deer, Alberta).

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