

October, 2022

NAS TOA Co.,LTD

Duplex stainless steel welded tubes, jointly manufactured by Nippon Yakin Kogyo Co., LTD. and NAS TOA Co.,LTD., have been adopted for use in the geothermal power generation facilities of Electric Power Development Co., LTD. (J-POWER).

Welded tubes manufactured by NAS TOA Co.,LTD., using NAS64 (SUS329J4L: 25Cr-6.5Ni-3.3Mo-0.17N), a duplex stainless steel originally developed by Nippon Yakin Kogyo Co.,LTD., have been adopted for the Onikobe Geothermal Power Plant operated by Electric Power Development Co., LTD. (J-POWER).

A total of approximately 110 tons of welded tubes have been delivered.

Geothermal power generation utilizes the thermal energy extracted from two-phase flow (steam and hot water) that erupts from deep underground in volcanic zones. As a domestically sourced renewable energy, it offers a stable power supply throughout the year, unaffected by weather conditions.

J-POWER has been operating the Onikobe Geothermal Power Plant in Osaki City, Miyagi Prefecture, for over 40 years since 1975. Drawing on its extensive operational experience, the company is currently upgrading the plant with state-of-the-art facilities, scheduled to commence operation in April 2023.

Among the fluids handled in geothermal power generation, the two-phase fluid from production wells, particularly hot water, is the most corrosive due to its high temperature, flow velocity, and the presence of various chemical species. The welded tubes made from NAS64 duplex stainless steel offer excellent corrosion resistance in this demanding environment, meeting the performance requirements specified by J-POWER.

As a result, the tubes have been selected for use as two-phase flow piping, transporting steam and hot water from the production wells.

Leveraging the combined strengths of the Nippon Yakin Group, we will continue to expand the application of our materials and contribute to the realization of a decarbonized society by providing solutions that meet the evolving needs of our customers.

Project Overview (Honorifics omitted for clarity)

Client: Electric Power Development Co., LTD. (J-POWER)

Location: Onikobe Geothermal Power Plant, Osaki City, Miyagi Prefecture

Scheduled Start of Operation: April 2023

Supplied Product: NAS64N (SUS329J4L) Duplex Stainless Steel Welded Tubes – Approx. 110 tons



Rendering of the completed Onikobe Geothermal Power Plant
(courtesy of J-POWER)

For inquiries regarding this project:
Steel Tube Sales Division, NAS TOA Co.,LTD.
TEL: +81-3-6895-1370