

**Duplex Stainless Steel Welded Pipes Manufactured
by Nippon Yakin Kogyo and Nastoa
Were Selected for Use in J-Power's Geothermal Power Plant Facility**

Welded stainless steel pipes manufactured by Nastoa Co., Ltd. (Nastoa), a Group company, using Nippon Yakin Kogyo Co., Ltd's NAS 64 duplex stainless steel (SUS329J4L: 25Cr-6.5Ni-3.3Mo-0.17N) as raw materials were selected for use in the Onikobe geothermal power plant managed by Electric Power Development Co., Ltd. (J-POWER). (Approximately 110 tons)

Geothermal power generation is a system that generates power from the steam extracted from the two-phase flow (steam and hot water) that erupts from deep underground in volcanic regions. It is an entirely domestically produced type of renewable energy that is not affected by weather and can provide stable power all year round. J-POWER has continually managed the Onikobe geothermal power plant in Osaki city, Miyagi Prefecture for over 40 years, starting in 1975. Now, using the operating experience and knowledge they have gained over that long period of time, they are upgrading the facility with the latest equipment (expected to go into operation in 2023).

In geothermal power generation, the two-phase flow drawn from the production wells, particularly the hot water, contains various chemical species and flows fast at a high temperature, making it the most corrosive fluid handled at a geothermal power plant. The welded steel pipes manufactured by Nastoa using our duplex stainless steel are highly resistant to corrosion in such environments and fulfill the product features required by the client. As a result, they were selected as two-phase flow pipes (pipes to transport the two-phase flow from the production wells) in this geothermal power plant.

Our Group companies will commit to expand applications by leveraging the Group's strengths and contribute to the realization of a decarbonized society by providing products that meet the needs of our clients.

Project summary

- Client: Electric Power Development Co., Ltd. (J-POWER)
- Installation site: Onikobe Geothermal Power Plant, Osaki city, Miyagi Prefecture
- Start of operations: April 2023 (planned)
- Quantity used: Approx. 110 tons of NAS 64 (SUS329J4L) welded steel pipes



Conceptual drawing of the Onikobe Geothermal Power Plant at completion (provided by J-POWER)

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