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Nippon Yakin Kogyo Co., Ltd.

Expansion of application of heat-resistant high nickel alloy NASH38X to polycrystalline silicon manufacturing devices

Recently, there has been an increase in the use of heat-resistant high nickel alloy NASH38X (ASME SB-409 UNS N08120) in the reaction vessels that are used to manufacture polycrystalline silicon, the raw material of solar cells.

With NAS800H (ASME SB-409 UNS N08810), conventionally used for the such purpose, when reaction vessels is increased in size in order to improve polycrystalline silicon production capacity, the sheet thickness of the reaction vessels has to be increased, resulting in increased costs for the reaction vessels manufacturers. For this reason, NASH38X, which has excellent high temperature strength and can be produced in thinner sheets, was considered a candidate alternative. However, there were welding issues in the initial stage. Leveraging many years of experience, Nippon Yakin was able to solve the welding issues, leading to an expansion in the application of NASH38X, and contributing to lower costs for reaction vessels manufacturers.

With the acceleration of the global trend of decarbonization, the demand and social expectation of solar powered electricity and other forms of renewable energy are growing all the time.

Nippon Yakin is currently moving ahead with the inclusion of environment-related initiatives in the "Mid-Term Business Plan 2020".

In the future, Nippon Yakin will continue to work to meet our customers' needs and to contribute to "the realization of a sustainable society".



Courtesy of Jiangsu Sunpower Heat Exchanger & Pressure Vessel Co., Ltd.

[Inquiry about this article] Overseas Sales Dept. (Tel: 03-3273-4618)