CURTISS-WRIGHT

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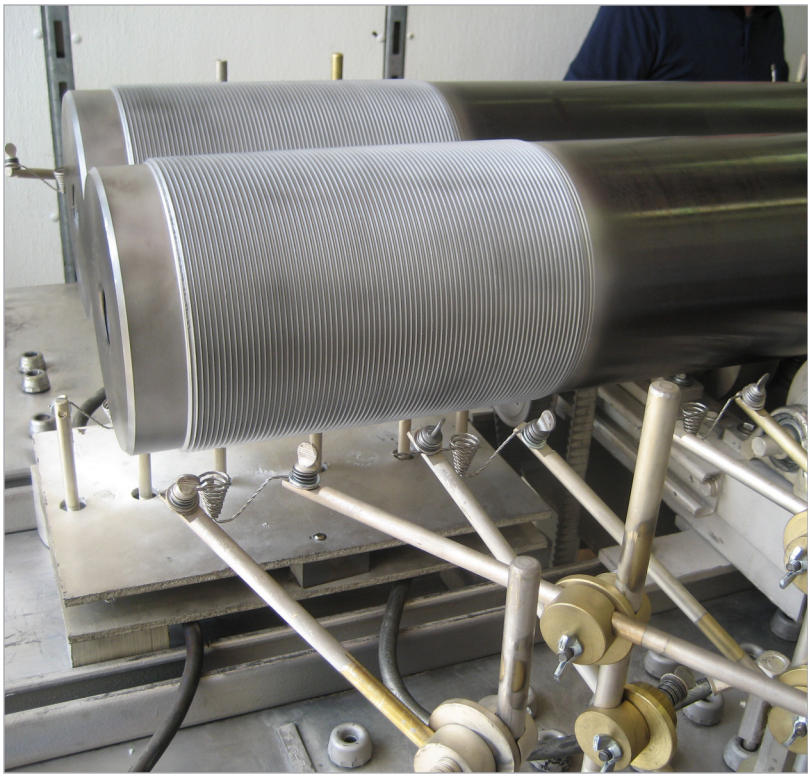

Bolting Solutions Brochure

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Bolting Solutions - HydraNut High-Temperature Hydraulic Nut

Application	Valves	RCP	Heat Exchanger	Steam Generator
Design				
Description	The HydraNut® is a high-temperature hydraulic nut that is a self-contained tensioning unit. It replaces the existing hex nut that remains on the flange during plant operation. The HydraNut bolt tensioning system is designed to tension all studs simultaneously to save time on installation and removal, and improve the accuracy, reliability, and repeatability of bolting any critical flange.			
System Components	Hoses, fittings, manifolds, and pumps suitable for pressurizing HydraNuts up to 36,250 psi (2,500 bar). Various hydraulic pump options are available: pneumatic, electric, and manual.			
Temperature Rating	700°F (371°C)	700°F (371°C)	700°F (371°C)	700°F (371°C)
Basic Material	Materials: B23 Class 3 / 4340, stainless steels. Others available upon request.	Materials: B23 Class 3 / 4340, stainless steels. Others available upon request.	Materials: B23 Class 3 / 4340, stainless steels. Others available upon request.	Materials: B23 Class 3 / 4340, stainless steels. Others available upon request.
Quality	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial
Thread Size	7/8" to 5+" (M22 to M125+)	7/8" to 5+" (M22 to M125+)	7/8" to 5+" (M22 to M125+)	7/8" to 5+" (M22 to M125+)
Typical Applications	Safety relief valves, safety valves, isolation valves, governor valves, control valves, check valves, and bonnet valves	Reactor coolant pumps; other pump applications are reactor feed pumps and boiler feed water pumps	Residual heat removal, and excess letdown	Steam generator primary manways, secondary manways, hand-holes, and supports

Bolting Solutions - PlasmaBond Fasteners

Application	Bolts	Double-End Studs	RVH Studs	Screws
Design				
Description	PlasmaBolts are Curtiss-Wright's threaded fasteners equipped with a proprietary PlasmaBond® engineered surface. PlasmaBond is superior to conventional lubricants in that it does not migrate away from the working surface of the substrate. It provides a dissimilar material barrier on the PlasmaBolts that is not affected by heat, load, or longevity during the interval between maintenance service periods and reduces the major factors of thread galling.			
Surface Treatment Process	PlasmaBond is an engineered surface consisting of high-purity metals - Nickel (Ni), Silver (Ag), Palladium (Pd) - that are applied to the substrate (< 1 micron thick) by an electrical charge in a clean vacuum which ensures superior bonding strength. The process applies a thin metallic layer without affecting the mechanical, dimensional, and metallurgical properties.			
Temperature Rating	1,100°F (593.3°C)	1,100°F (593.3°C)	1,100°F (593.3°C)	1,100°F (593.3°C)
Material	Nickel (Ni), Silver (Ag), Palladium (Pd)			
Size	Any threaded fastener material or design up to 7" (17.78 cm) in diameter and 8' (2.44 m) in length	Any threaded fastener material or design up to 7" (17.78 cm) in diameter and 8' (2.44 m) in length	Any threaded fastener material or design up to 7" (17.78 cm) in diameter and 8' (2.44 m) in length	Any threaded fastener material or design up to 7" (17.78 cm) in diameter and 8' (2.44 m) in length
Quality	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial	ASME Code Section III (N-Stamped), Safety-Related, NQA-1 (DOE), Commercial
Typical Applications	Hex bolts, shoulder bolts, and countersunk head bolts	Fully threaded studs, double ended studs, manway studs, turbine coupling studs, steam generator studs, pump casing studs, valve in-body studs, valve through studs, and main flange studs	Reactor vessel head studs	Jacking bolt screws, hex screws, hex cap screws, set screws, and socket head cap screws

Contact Information

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