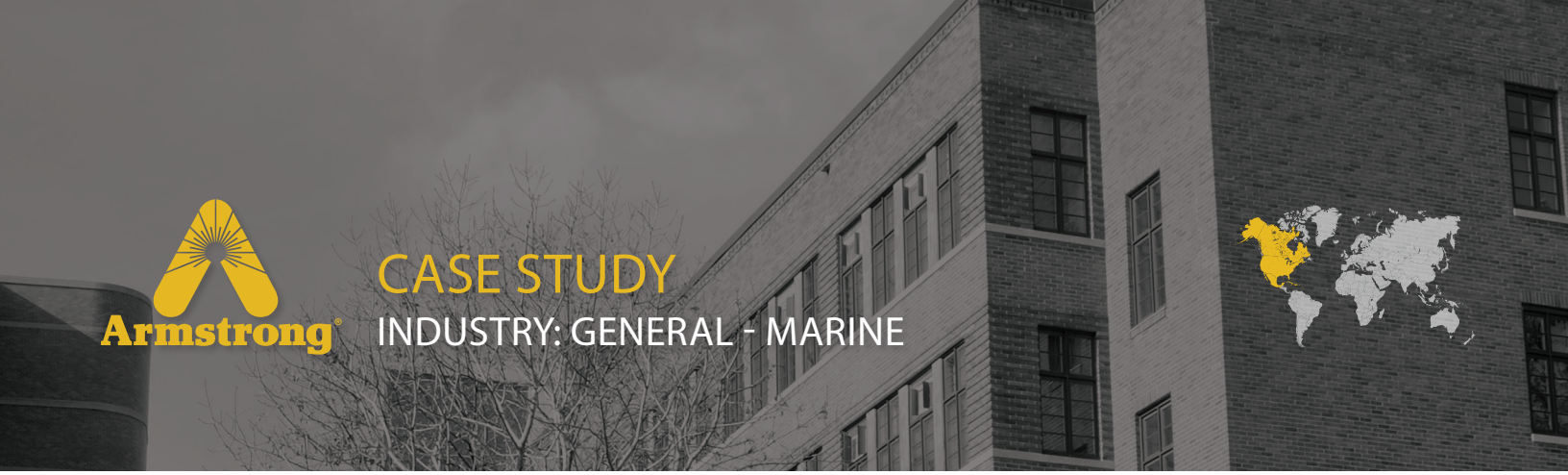

CASE STUDY

INDUSTRY: GENERAL - MARINE

CUSTOMER: De Nora Water Systems

LOCATION: Houston, Texas, USA

BACKGROUND: De Nora Water Systems required a bi-directional flow meter for their ballast water treatment system. Their BALPURE® system treats ballast water for bacteria that sea freight ships dump overboard while taking on load. This dumping usually occurs in multiple ports such that the ballast water that is being dumped is of foreign origin.

Global regulation requires treatment of potential bacteria contained in ballast water that may be harmful to local marine life and pollute local water systems

SCOPE OF WORK: The BALPURE® system required a flow meter that would be resistant to various levels of brine and sea water and could operate in a bi-directional flow situation. The VERIS Flow Measurement Group designed a model V800 VERIS Verabar® capable of bi-directional measurement and constructed of Nickel-Aluminum-Bronze alloy. This is the same material used frequently for marine engine propeller shafts.

The VERIS Flow Measurement Group also became certified to weld and machine this special alloy. The flow sensor, flanges, and connection nipples were manufactured from raw bar stock and flat plate. This V800 model is now shipped to various sites around the world for installation.

BENEFITS: Armstrong's VERIS Flow Measurement Groups used its nimble engineering and manufacturing capabilities to provide a functional solution. De Nora Water Systems now has confidence when installing the VERIS Verabar®on their water treatment skids. The special design of the flow sensor met the necessary flow conditions and provided a robust, long-lasting flow measurement element.