

Case Study: Marine Dredging - ABRA-LINE® Expansion Joints



INDUSTRY

Marine

CUSTOMER

Dredging Company

BACKGROUND

Trailing Suction Hopper Dredgers (TSHD) are utilized to maintain navigable depths in harbors and other waterways and for delivery of sand for land reclamation/beach nourishment. Suction pipes fitted with trailing drag heads descend to the floor of the waterway for the collection of silt, sand and other loose materials. TSHD are fitted with dredge gate valves in their low hulls to handle the high-velocity abrasive sand slurries generated by these maintenance activities.

CHALLENGES FACED

Replacement of a dredge gate valve can take upwards of 8 hours, it is critical that component parts in the piping system be selected with an eye to long service life. The abrasive nature and high-velocity of the media naturally restrict material options for the system.

OPERATING CONDITIONS

Size - 27"

Temperature - Ambient

Application - Sea dredging

Media - Saltwater/sand slurry

Pressure - Full vacuum up to 75 psi

SOLUTION AND BENEFITS

Garlock Style 204HP with an ABRA-LINE tube and customized drill pattern were put in place of traditionally used metallic spool pieces to facilitate more timely change out of dredge gate valves. The superior abrasion resistance of ABRA-LINE® allows the expansion joint to handle the system's sand slurry and the distinctive yellow color of the tube provides an easy preventative maintenance check during valve replacement - as the tube color darkens, maintenance teams will see that expansion joint replacement is needed.

For more information, please visit:
<http://www.garlock.com>

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