Bibby Turboflex
Altra Industrial Motion

Application Profile

Photos courtesy of the National Trust

Product 42-Year-Old Grid Coupling

Application **Steam Yacht Gondola**

Highlights

- Proven long-lasting performance
- Accommodates misalignment
- Absorbs vibration

In 1980, Great Britain's National Trust recommissioned *Gondola*, an 1859 steam-powered vessel for 86 passengers styled after a Venetian gondola, on Coniston Water in Cumbria, England. The 86 ft. long vessel is powered by a twin cylinder, 'V-90' configured double-acting steam engine that generates a maximum torque of 8,000 Nm (5,900 lb.ft.) with a service speed of approx. 8 knots.

To bring the boat back to life, a Bibby Resilient Series grid coupling was installed between the steam engine crankshaft and the propeller shaft. The coupling was an excellent choice for the propulsion drivetrain since torsional flexibility and alignment damping were primary concerns for steam engines, which have very high-torque, and significant expansion/contraction characteristics.

Over four decades later in 2022, operators noticed a knocking noise at higher RPMs, and shortly after a change of speed. The grid coupling was suspected to be a possible source of the noise. The boat's manager sent photos of the coupling to Bibby for help in determining whether he needed to replace the coupling.

Upon viewing the photos, a Bibby engineer identified the coupling as a Type C and Size 212. While the coupling's hubs and cover remained in good condition, the gridmember was corroded and worn. It has since been found that the coupling was *not* the source of the knock, but the gridmember was replaced as a precaution anyway.

Fortunately for *Gondola*, Bibby still manufactures a standard issue RC212 coupling, and was able to quickly ship a replacement gridmember. Bibby was also able to confirm the availability of parts and support for the future.

Europe
+44 (0) 1924 460801
bibbyturboflex.com

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