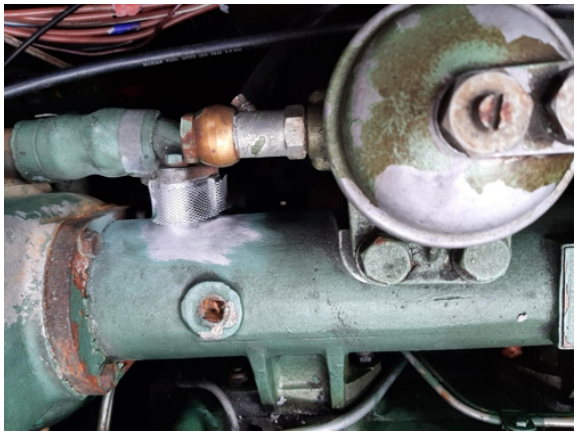
SUPERFAST TITANIUM

Case Study

Narrowboat Engine Heat Exchanger Manifold Repair

A narrowboat owner makes a high temperature repair to a 15mm x 15mm hole which appeared in the engine heat exchanger manifold of the vessel

The narrowboat owner noticed the 15mm x 15mm hole in the engine heat exchanger manifold whilst moored on a canal 30 miles from London



Aluminium mesh was placed over the hole as a precautionary measure to prevent any Superfast Titanium entering the manifold exchanger

The hole was sealed by total encompassment with Superfast Titanium

Defect

The narrowboat had a raw water system for cooling its engine. Canal water was pumped into a tank on the exhaust manifold containing a series of pipes.

These pipes circulated coolant around the engine block. As the water passed over the pipes, it cooled the coolant before being expelled via the exhaust.

Whilst moored on a canal 30 miles north of London, the narrowboat owner noticed a 15mm x 15mm hole had appeared in the heat exchanger manifold.

Solution

The narrowboat owner chose **Superfast Titanium Epoxy Putty** for the repair because of its high temperature resistance up to 280°C.

Before the repair, the area around the hole was cleaned and rubbed down to improve adhesion between the epoxy putty and the manifold.

Aluminium wire mesh was placed over the hole as a precautionary measure to prevent any Superfast Titanium entering the manifold exchanger.

The putty was mixed by hand and applied over the mesh and surrounding area. It was pushed firmly onto the manifold for maximum contact, smoothed off with a little water and then left to harden.

Result

Superfast Titanium began to set after 90 minutes, reached working strength in eight hours and was fully cured after 72 hours.

The engine could have gone back into service after eight, but the owner was in no rush to set sail again and so remained moored for the full cure time.

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