

Surveyors beware some diesel heater marine installations

By Geoff Waddington, IIMS President

Recent contact with someone has brought to attention a problem regarding a fault causing potentially life-threatening fumes from his boat's diesel heater. The heater in question is an Eberspacher for which cheap imported spares are available on the internet. The part in question was a replacement fuel pump which he bought online. The part was manufactured in China and on the face of it appears to be very much the genuine article, but there was no CE marking identifiable. The product description stated, "Good replacement – Based on the original factory specifications, a direct replacement for the old or broken one."

The local Eberspacher agent advised that the owner should remove the pump and replace it with a genuine Eberspacher pump because the one he had fitted would supply too much fuel to the unit causing it to produce a smoky exhaust with a high percentage of unburnt or partially burnt fuel, which indeed proved to be correct and was the case.

Over the last few years, the marine industry, in particular, has suffered from a number of fatalities due to Carbon Monoxide poisoning, some caused by faulty or incorrectly installed diesel heaters. At a price of only 10% of the manufacturer's replacement part, the low cost of this alternative replacement part will undoubtedly attract market attention.

Furthermore, it has also come to light that complete diesel heater installation kits are available online for DIY installation which are sold at a fraction of the price of genuine certificated installations. These heaters are made in China and have no brand identification. It seems from different sources that these have become very popular due to the cost, some costing as little as £98.00. They are being fitted by owners of boats, many of whom will not be aware of the strict requirements for correct installation. This gives cause for even more serious safety concerns.

Examples of these heaters can be found on a well-known buying and selling site.

Diesel heaters must be installed in such a way that they have a correctly fitted and insulated exhaust system as there have been instances of fires caused by heater exhausts. They also need to be installed in compartments separate from the accommodation. They require combustion air to be supplied direct from the atmosphere. They need circulating air to be supplied direct from the atmosphere from a position remote from the exhaust and any other form of contamination including saltwater spray. They also need to be accessible for maintenance.

The concern is that these diesel heater units are predominantly used for the purposes of heating sleeping accommodation when the vessel's main engine is not running and, therefore, could eventually cost more lives through Carbon Monoxide poisoning.

In addition, the hazards are also that contaminated air through other sources is being circulated. This could be a leaking engine exhaust if the heater is within an engine space, petrol fumes from a cockpit locker, or, as was recently the case, a heater installed in a vessel's lazarette that was blowing the gasses from overcharged batteries (hydrogen) into the boat's forward cabin. Fortunately, the owner had installed a carbon monoxide sensor which was activated as a result.

There are several points here for surveyors to be aware of and alert to, including the installation of the correct and compatible battery charger for the type of battery installed. Gel batteries require a

different type of charger than those used for other types of batteries. Please keep your eyes open for these issues and report accordingly.