New engines for the Research Vessel Heincke

Environmentally friendly exhaust-gas aftertreatment reduces emissions

Bremerhaven, 9 February 2015. The Research Vessel Heincke, one of the ships operated by the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI) recently received three new main engines. With the addition of particle filters and downstream exhaust-gas filter systems, the ship is now both more economical and environmentally friendlier.

The 54.5-metre-long Heincke has been in service since 1990, and until recently was still running on its original engines. “The engines were essentially worn out and were no longer economical, because they burnt too much fuel and were starting to produce more and more costs for maintenance and replacement parts,” explains Marius Hirsekorn, the Logistics Coordinator for the AWI’s research vessels. In response to this problem, the ship has now been refitted with three new MAN diesel engines rated at 532 kW, essentially matching the output of the original equipment (KHD-MWM TDB-604 L 6 engines rated at 525 kW).

“In addition, we’ve now equipped each engine with a particle filter and downstream aftertreatment system,” explains the AWI logistician. The engine exhaust is filtered using an SCR system, in which a catalyst is used to remove the nitrogen oxides. Since the original design didn’t offer sufficient room for these additions, the entire smokestack had to be replaced. “We’ve also installed an air compressor and a urea tank, both of which are required for the SCR system,” reports Hirsekorn.
The time in dry dock was also used to carry out renovations in the laboratories and crew quarters, as well as regular maintenance and repair work. The total costs of the repairs amounted to roughly 1.5 million euros, which will be covered by the AWI’s budget.

As a result of the refit and repairs, carried out by Motorenwerke Bremerhaven (MWB), the Heincke spent over two months in dry dock. Following a number of test cruises, she is scheduled to depart for the North Sea on her first expedition with the new engines on 12 February 2015.

Joining the FS Mya II, which entered service in 2013, the Heincke marks the second AWI research vessel to utilise environmentally friendlier technology. “We’re very pleased that the new systems will allow us to reduce emissions, and we’ll soon also be equipping the Polarstern successor as environmentally friendly as possible,” says Dr Rainer Knust, a biologist at the AWI and Scientific Coordinator of the Heincke and Polarstern.

Notes for Editors:
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The Alfred Wegener Institute conducts research in the Arctic, Antarctic and in the high and mid-latitude oceans. The Institute coordinates German polar research and provides important infrastructure such as the research icebreaker Polarstern and research stations in the Arctic and Antarctic to the national and international scientific world. The Alfred Wegener Institute is one of the 18 research centres of the Helmholtz Association, the largest scientific organisation in Germany.

RV Heincke with three new main engines and additional particle filters and downstream exhaust-gas filter systems
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