

Successful debut for the 'Intelligent Engine'

The world's first 'Intelligent Engine' has entered service as prime mover of the Norwegian chemical carrier M/T Bow Cecil, an advanced 37,500 dwt vessel owned by Odffjell ASA, Bergen, Norway.

12 December 2000



This significant event in the development of the modern marine two-stroke diesel engine took place recently off Borneo. The vessel's MAN B&W Diesel 6L60MC main engine was converted from conventional camshaft operation to fully computerised fuel injection and valve operation in a mere 1½ hours. The engine was subsequently started up using the new system and run up to full load.

The next morning a comprehensive approval test and a repetition of the vessel's original sea trial was carried out in the presence of representatives of the classification society, Det Norske Veritas. Everything ran perfectly, and the engine furthermore demonstrated its ability to run smoothly at 13 r/min (some 11% of MCR speed!). The engine control system features a 'Fuel Economy Mode' and a 'Low Emission Mode', with a common rail type drive system using clean engine oil as the working medium. The fuel injection system is designed for quay-to-quay operation on heavy fuel oil.

The approval document from DNV states: *'All tests were passed and it is judged that the engine and associated systems perform equally as good or better with the Intelligent Engine system in operation as with the traditional camshaft system.'*

The vessel has now entered service as the world's first Intelligent Engine. To verify the efficient and reliable functioning of both the IE system and the engine proper, the operation of both units will be monitored over the next 10,000 service hours.

Prior to the above-mentioned sea trial, an 'Acceptance Test' of the new computer software and hardware for the engine control system was carried out for DNV on MAN B&W Diesel's 4T50MX research engine. This test was successfully completed in Copenhagen on



This event is the climax (so far) of ten years of dedicated development efforts to pave the way for a future generation of extremely reliable engines with comprehensive flexibility in terms of operating modes.

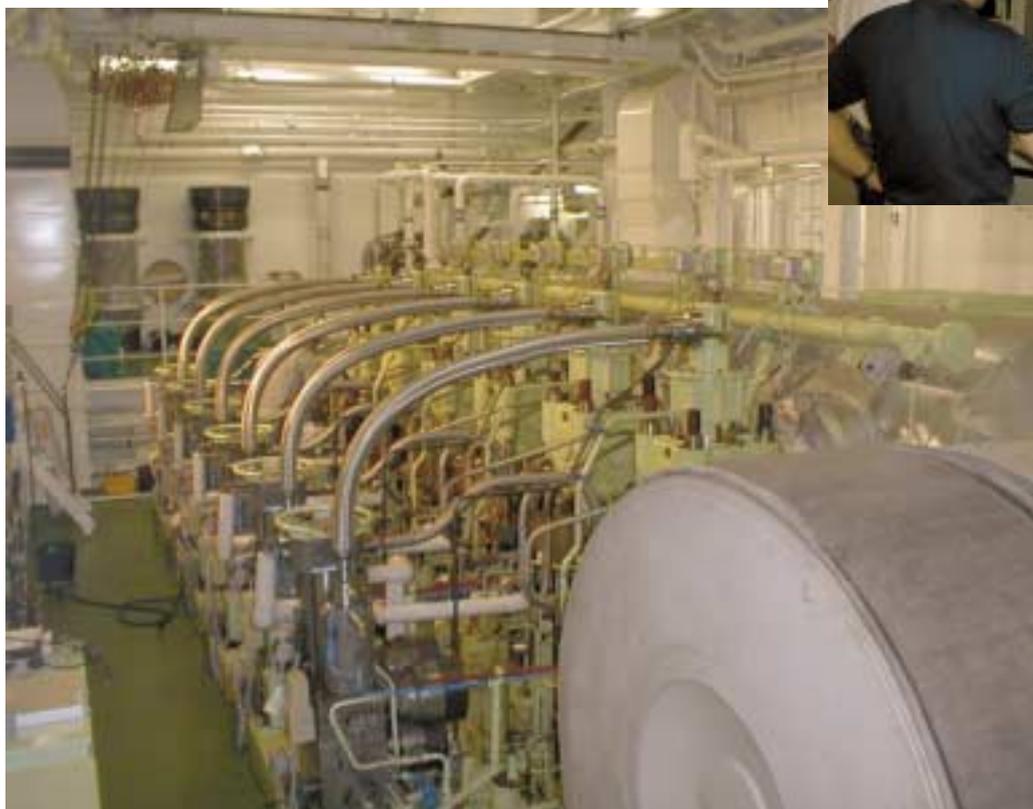
21 September 2000, after which the software and computer hardware were installed on the vessel, and a 'quay trial' was carried out outside Hamburg on 1 and 2 October 2000.

The engine was converted to the new system and tested for some ten hours at low load with the propeller at zero pitch, confirming that all systems functioned as intended and that the engine was ready for the official tests for DNV.

MAN B&W Diesel expects that the operational results of M/T Bow Cecil will stimulate widespread use of this technology in the marine sector. That there is considerable interest in the market for the concept is reflected in the orders already received for 4 x 7S60ME-C

engines for two 314,500 dwt ULCC newbuildings at Hyundai Shipyard in Korea for Concordia Maritime, a Swedish Stena Group company. The tankers will enter service during the spring of 2001, and the engines will be converted to Intelligent Engines during the first scheduled docking of the vessels.

*MAN B&W Diesel A/S
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Photos show the engine room of Bow Cecil

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