

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY

FILE NO. 573

NEWPORT NEWS, VIRGINIA

December 8, 1965

MEMORANDUM For Mr. L. C. Robertson

Subject: Single Screw Bulk Oil Tankers for Humble Oil & Refining Company, our Hull 573
Ventilation and Heating of Wheelhouse and Chart Room

Reference:

- (a) Humble Oil and Refining Company's letter O.3 438-7 P, dated November 30, 1965

In answer to reference (a), vessel specifications, Section 403, page H-80, requires Wheelhouse and Chart Room to be ventilated with mechanical supply and natural exhaust with a 15 minute rate of change. Section 415, page H-83, requires "Suitable convectors with guards are to be provided for the Diesel Generator Room, Steering Gear Space, Bridge and similar working spaces, which are not heated by the combined air conditioning and heating system."

Ventilation and heating for the Wheelhouse and Chart Room, our drawings 725-8735 and 265-3339, are strictly in accordance with the vessels' specifications and owner approved ventilation and heating diagrams and calculations. Convectors were selected to heat the wheelhouse to 60°F. and the chart room to 70°F, and this basis of selection was approved. There are four convectors in the Wheelhouse rated at 42,800 BTU/hr. total. There are three convectors in the Chart Room rated at 39,900 BTU/hr. total.

On previous Esso ships, our Hulls 540-41, the Wheelhouse (about the same size as on Hulls 573 and 576) was heated by two steam convectors rated at about 20,000 BTU/hr. total. Neither mechanical nor natural ventilation was provided. Fresh air was secured by opening doors or windows. The Chart Room on these vessels had mechanical supply air, but was heated by steam convectors rated at 8,000 BTU/hr. Both rooms were handled strictly in accordance with the vessels' specifications. Hulls 519-20 had similar arrangements with larger convectors. None of these ships have reported heating troubles.

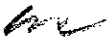
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In accordance with the specifications and with approved diagrams and plans, there were no filters provided for the ventilation system serving the Wheelhouse and the Chart Room on the ESSO HOUSTON. Also, the weather air intake is forward of the stack.

Any change from the installed ventilation and heating in the Wheelhouse and Chart Room is not contractor responsibility. However, if the owner is willing to pay for improvements, a filtered inlet box can be installed over the fan in its present location, by removing the mushroom and substituting a bellmouth.

The convection pattern for the two convectors on the forward bulkhead of the Wheelhouse can be improved by the addition of baffles in the joiner work enclosing the convectors, and by relocation of the inlets in the joiner work at the base of the convectors to allow a more unobstructed flow. We consider that if all four convectors are used, with steam supply valves either full open or partially open, enough circulation can be obtained to reduce the stratification problems which have been reported.


C. B. Coe

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- 1 - carbon duplicate herewith
- 1 - EDM-B, Mr. J. E. Harding
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