



Maritime and Coastguard Agency

LIFEBOAT ENGINES AND OTHER COMPRESSION IGNITION ENGINES USED IN AN EMERGENCY

Notice to Shipowners, Superintendents and Chief Engineers

This Guidance Note supersedes Merchant Shipping Notice No. M.1165

Summary

This Note advises of the importance of selecting fuel and lubricating oils for emergency engines which will not be adversely affected should the ship sail in areas of low ambient temperature.

Key Points:

- Fuel flow may be adversely affected by increased viscosity and the formation of wax crystals at lower ambient temperatures.
- Fuels with flashpoints down to 43°C (closed cup test) may be permissible but flashpoint is not necessarily a guide to suitability for use at low temperatures.
- Suitable fuels may not always be readily available in the United Kingdom.

1. Ships' motor lifeboats, emergency generators and emergency fire pumps are required to be put into service quickly in the event of an emergency and to be operated under a wide variety of climatic conditions. It is, therefore, essential that the correct type of fuel and grade of lubricating oil are used to enable the engine to be started and run whatever the ambient temperature.
2. With regard to lubricating oil, the problem is not generally acute. The number of running hours for such emergency equipment is relatively small and consequently renewal of the oil is infrequent and the procurement of suitable multigrade lubricating oils rarely presents a problem.
3. The selection of fuel oil, however, requires careful attention when low temperature operation is considered. Not only can fuel become more viscous at lower temperatures but there is also the problem associated with the formation of wax crystals which can stop the flow of fuel to the engine. Special fuel oils for low temperature operation are readily available in areas of the world where such temperatures are regularly experienced. However, where ships ply between different temperature zones, it is necessary to make sure that any fuel taken on board for emergency purposes would be suitable for use at the lowest ambient temperature the ship is likely to encounter in service. Suitable fuels are not always available from stock in the United

Kingdom and, therefore, orders should be placed with suppliers well in advance of the date by which the fuel will be required.

4. Merchant Shipping Regulations for the construction of both passenger ships and cargo ships permit the use of fuel oil having a flashpoint of not less than 43°C (closed cup test) in emergency generators. Machinery such as lifeboat engines and emergency fire pumps would be considered to fall within the same category and consequently be permitted to use such lower flashpoint fuel. However, it should be noted that the flashpoint of the fuel is not necessarily a guide to its suitability for use at low temperatures. It is, therefore, essential in all cases to specify the lowest temperature for which the fuel has to be suitable.
5. Requirements for particular applications are as follows:

- (a) *“Emergency Generators and Emergency Fire Pumps”* – the engine should be capable of being readily started in its cold condition at a temperature of 0°C. If this is impractical or if temperatures below 0°C are likely to be encountered, provision must be made for heating the engine so that it will start readily. The fuel oil provided should be suitable for use at 0°C or the lowest anticipated ambient temperature in the space containing the engine, whichever is lower.
- (b) *“Lifeboat Engines”* – the engine shall be capable of being started, using starting aids if necessary, at an ambient temperature of -15°C within two minutes of commencing the start procedure. The fuel oil supplied should be suitable for use at -15°C, unless the ship carrying the lifeboat is constantly engaged in voyages in the Tropics when a more appropriate fuel oil may be supplied.

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