

EXPLOSIONS IN CRANKCASES OF COMPRESSION IGNITION ENGINES

The following is an extract of a notice that has been issued by the Ministry of Transport to marine engine builders, shipowners and shipbuilders.

(1) The high standards of design and construction of compression ignition engines in the United Kingdom have resulted in a correspondingly high standard of safety, and explosions in crankcases have been relatively rare. Those recorded in the Ministry are few in number, though when they do occur they may be attended by more or less serious risk of injury ; in one case recently there were a number of fatalities.

(2) The Ministry have carefully examined the known facts of the explosions in the crankcases of compression ignition engines that have been recorded and have reached the conclusion that they have almost invariably been due to the overheating of an internal part and the consequent ignition of a particular mixture of lubricating oil mist and the atmospheric air present in every crankcase. The Ministry have come to the further conclusion that the risk of an explosion would be reduced if the following instructions were issued for the guidance of engineers in charge of this type of engine :—

- (a) Early detection of overheating and the prompt slowing down or stopping of the engine as circumstances permit will prevent the occurrence of conditions favourable to fire or explosion.
- (b) Crankcase doors or inspection doors should not be opened and the engine should not be restarted until the engine has cooled down.
- (c) Oil should not be sprayed on any surface the temperature of which is above blue heat (about 550 deg F), as risk of fire is caused thereby.

(3) Owners and masters will be in the best position to decide how these instructions should be brought to the notice of their engineers ; one method already adopted is to arrange for them to be printed on cards kept permanently and prominently displayed in the engine-room.