

Oil Mist Detection Technical Engineering References for Instrument and Fire & Gas Design Engineers

The following Oil Mist references are from sources which provide what ICEweb considers to be the best technical and educational information on the subject. We always acknowledge the author and source. Should there be any issue with ICEweb providing this information, please [contact us](#) and we will remove it immediately. We also welcome non-commercial technical documents (subject to editorial review) and post them free.

The following technical articles are from Quality Monitoring Instruments Ltd.

[Oil Mist Detection as an Aid to Monitoring an Engine's Condition](#) - Brian J. Smith - As diesel engines become progressively more efficient by burning fuel more effectively, the only remaining significant potential for operational cost saving to be exploited is to introduce features to ensure that unnecessary maintenance is reduced. Owners and operators of diesel power plants are increasingly seeking ways to replace preventive maintenance schedules based on operational hours by on-condition maintenance programmes that confine maintenance to the actual needs of the engine. Such a philosophy requires appropriate use of accurate health and condition monitoring equipment that not only tracks critical performance parameters, but also provides suitable protection against more serious damage being inflicted due to incipient seizures. Oil Mist Detectors are an important component part of this changing philosophy.

[Oil Mist Detection in the Atmosphere of the Engine Room](#) - Brian J. Smith - You may be aware MCA and IMO, together with other Societies, are very concerned about the number of fires that start in machine room spaces. Places most at risk are engine and purifier rooms. However, other areas have their own problems and these include bow thruster rooms, steering gear and hydraulic pumps. Figures produced suggest that up to 65% of machine room fires are the result of oil mist. An oil mist detection system should be considered for use alongside a smoke detection system. If reliance is placed solely on a smoke detector as a form of protection against fires taking hold, a situation can arise where it may be too late to avoid damage and even loss of life.

[Oil Mist and Machinery Space Fires](#) - Dr MH Holness - A review is presented of the role of oil mist as a principal agent in machinery space fires. The ways in which oil mist can be produced are described and the distinction between mist and spray. The contrast between the oil mist conditions inside crankcases and that in the general atmosphere in machinery spaces is discussed. Methods of measuring oil mist and spray are described and equipment suitable for monitoring conditions inside machinery and in machinery spaces is discussed.

Recommendations are made to improve safety on board ship and in industrial plant.

[IMO Code of Practice for Atmospheric Oil Mist Detectors](#) - International Maritime Organisation - In an ideal world, the simple solution for preventing oil mist fires is to ensure

no leaks occur in the first instance, but the harsh reality is that oil mist fires do occur and the problem needs to be addressed. One practical answer is to install an oil mist detection system that will detect an oil mist before it can reach levels where it saturates the atmosphere to such an extent that there is a risk of fire.