

**F43**

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## Installation requirements for analysing units for continuous monitoring of flammable vapours

This UR applies to gas analysing units of the sampling type located outside gas dangerous zones and fitted on board gas carriers or on board oil/chemical tankers.

Gas analysing units with non-explosion proof measuring equipment may be located in areas outside cargo areas, e.g. in cargo control room, navigation bridge or engine room when mounted on the forward bulkhead provided the following requirements are observed:

1. Sampling lines shall not run through gas safe spaces, except where permitted under 5.
2. The gas sampling pipes shall be equipped with flame arresters. Sample gas is to be led to the atmosphere with outlets arranged in a safe location.
3. Bulkhead penetrations of sample pipes between safe and dangerous areas shall be of approved type and have same fire integrity as the division penetrated. A manual isolating valve shall be fitted in each of the sampling lines at the bulkhead on the gas safe side.
4. The gas detection equipment including sample piping, sample pumps, solenoids, analysing units etc. shall be located in a reasonably gas tight enclosure (e.g. a fully enclosed steel cabinet with a gasketed door) which is to be monitored by its own sampling point. At gas concentrations above 30% LFL inside the enclosure the entire gas analysing unit is to be automatically shut down.
5. Where the enclosure cannot be arranged directly on the bulkhead, sample pipes shall be of steel or other equivalent material and without detachable connections, except for the connection points for isolating valves at the bulkhead and analysing units, and are to be routed on their shortest ways.

