

Luxury yachts

# Optimum fire protection for luxury yachts with **SEM-SAFE®** high-pressure water mist system

Danfoss Fire Safety A/S



## History

The SEM-SAFE® high-pressure water mist system is a highly efficient fire fighting system for luxury yachts.

The SEM-SAFE® system is a true high-pressure water mist system operating at a 100 bar nozzle pressure. Its unique spray technique is very efficient in fire fighting for both accommodation, service areas, duct, deep fat fryers and as total flooding and local application systems for engine rooms.

The unique high-pressure technology, with probably the best spray system available anywhere, provides efficient fire fighting in spite of its very low water consumption. Consequently, a fire can be extinguished without causing serious water damage to furniture or equipment.

In addition, the low water consumption makes it possible to use very small pipes; typically, 28 mm main pipes and 10 mm distribution pipes. This means that the piping is easily installed and also easily hidden. The low weight and small dimensions, in conjunction with the beautifully designed nozzles, very often make the SEM-SAFE® system the preferred choice of architects and owners.

Yards and fitters like the system's easy installation, with its modular format, compact pump skids and the SEM-SAFE® installation system. The modular pump skid system offers great flexibility in fitting the pump units into the available space during construction. The flexibility of the system also includes specific nozzle designs and other customer based demands.



### SEM-SAFE® high-pressure water mist system

The SEM-SAFE® system is a total protection system for yachts, and conforms to the regulations IMO A 800 (19) and MSC/circ. 265 (84) for accommodation areas, IMO resolution MSC/circ. 1165 for engine rooms, IMO resolution MSC/circ. 1387 for local application, deep fat fryer and duct. All areas are served by a common pump unit.

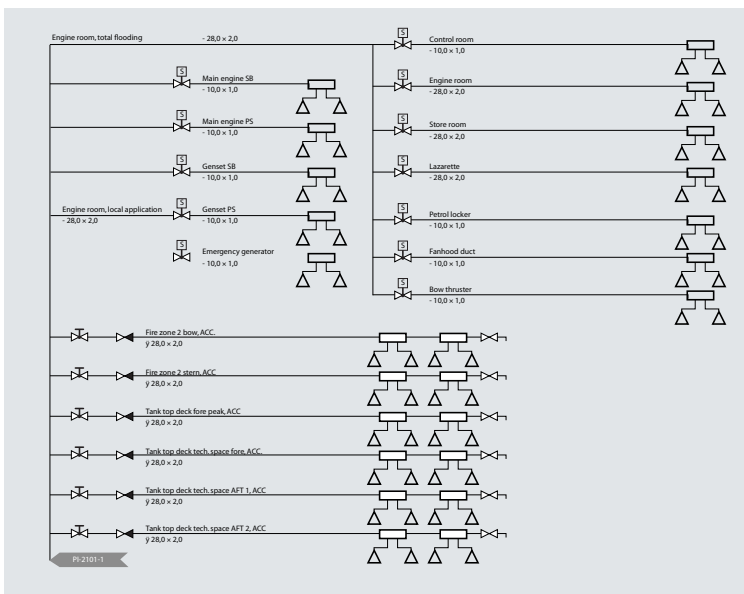
The system consists of a pump unit, which serves all areas via section valves. In accommodation areas, the nozzles are activated only if the heat-sensitive glass bulb is broken. Full pressure is then activated and only nozzles with a broken bulb are released. Consequently, only the heat-affected area will be actively sprayed.

Engine rooms are covered by open nozzles for both local application and total flooding, which means that the nozzles in one section will be activated, either manually (for total flooding and local application) or by a detection system (for local

application only). The fine mist created by the high pressure is so gentle to the hot surfaces and electrical equipment that there are no reasons to worry about major water damages if the system is released.

### Approval levels and experience

Danfoss has gained valuable experience in the yacht market, where we have provided many specialised solutions. SEM-SAFE® solutions are approved by all major classification bodies.



A typical SEM-SAFE® high-pressure unit fitted to yacht applications.