Engineered Suppression Systems

Design Guide

Your Onboard Safe Choice *www.sea-fire.com*

A Division of Metalcraft, Inc. 9351 G Philadelphia Rd. Baltimore, MD 21237 Tel: 1-410-687-5500 Fax: 1-410-687-5503

Date Completed: _____ Date quote requested by: _____

Boat Builder / Distributor _____ Contact Name: _____

Vessel Name: _____ Contact Phone No.: _____

Vessel Hull No.: _____ Contact E-Mail: _____

Flag Authority: _____ Home Port: _____

HAZARD AREAS INFORMATION:

Engine Compartment							
Length:		Width:		Height:		Or Total GROSS Volume	
If Fuel Tanks or any permanently installed tankages are included in the above Engine Compartment (Gross Volume), please fill in the below:							
Length:		Width:		Height:		Or Total Volume	
If the Bilge Area is separated from the Engine Compartment and is not included in the above Engine Compartment Volume, please fill in the below:							
Bilge Area							
Length:		Width:		Height:		Or Total Volume	
Other area to be protected such as Lazarette, Garage, Pump Room, Paint Locker, etc.							
Please indicate the Area:							
Length:		Width:		Height:		Or Total Volume	
Please indicate the Area:							
Length:		Width:		Height:		Or Total Volume	

Volume of free air in air receivers: $P_1xV_1=P_2xV_2$ or $V_2=P_1xV_1/P_2$ = V (tank, gal) = _____ P (tank max.) _____

Hazard area temperature range: Minimum Temp _____ Maximum Temp_____

Will agent cylinders be located inside the protected space? ☐ Yes ☐ No

Approximate distance from the cylinder storage to the protected space: _____

APPROVALS:

Check type of approval(s) required.

TC (Transport Canada) ☐	**Maritime New Zealand** ☐	**BV** (Bureau Veritas) ☐	**CE** (Certified European) ☐	**DNV** (Det Norske Veritas) ☐	**GL** (Germanischer Lloyd) ☐
Lloyds/MCA (Maritime Coastal Agency) ☐	**Australia** (National Marine Safety Committee) ☐	**RINA** (Registro Italiano Navale) ☐	**ABS** (American Bureau of Shipping ☐	**USCG** (United States Coast Guard) ☐	**MED** (Marine Equipment Directive) ☐

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DRAWING REQUIRED:

In order to preform System flow calculations, the following information must be provided.

1. Provide the following sketches of each area to be protected.
   (A. Plan View B. Elevation C. Cross Sections D. Potential Piping Isometric)
2. Place the cylinders(s) location(s) on the sketch and complete the piping isometric.

NOTE: If moisture is present, place the cylinders at least two inches off the deck.

3. Locate all hatches and vents that need to be closed with pressure trip devices.

OPTIONS:

Suppression Agent:	☐ HFC-227ea ☐ FK-5-1-12	☐ Required ☐ Required	☐ Preferred ☐ Preferred	☐ Quote Both

Is a time delay necessary?

NO ☐

YES ☐ 32 second time delay (pneumatic) ☐ 30 second time delay (electric) ☐

Audible devices required?

NO ☐

YES ☐ Horn Strobe via pressure switch ☐ or Siren via N_2 pressure operated ☐

Please choose a method of system actuation:

- ☐ a. Automatic via Heat Actuated Devices (HAD) and Manual Remote Pull Station
- ☐ b. Manual ONLY – via manual remote pull station
- ☐ c. Automatic via Electric Release Panel (with 30 second time delay) (NOT USCG approved)
- ☐ d. Manual ONLY via Electric Release Panel (with 30 second time delay) (NOT USCG approved)

Determine the length of the manual release cable and the location of the manual release station:

Length required: _____ Location: _____

If second manual release station is required, please indicate below.

Length required: _____ Location: _____

Specify the Engine Shutdown Restart System: number of devices to shutdown.

a. Type of Engine: _____ 12 V ☐ 24 V ☐ Number of Engines: _____

b. Type of Generator: _____ 12 V ☐ 24 V ☐ Number of Generators: _____

c. Air Intakes: _____ 12 V ☐ 24 V ☐ 110 V ☐ 220 V ☐ Numbers: _____

d. Other Devices: _____ 12 V ☐ 24 V ☐ 110 V ☐ 220 V ☐ Numbers: _____

If above devices are not located in the Engine Room, please indicate the location. _____