

Checklist for Retrofit of a Sample Extraction Smoke Detection System

Project:	Date:
Contact:	

	Question:	Answer:
1.	Name of the vessel	
2.	Owner of the vessel	
3.	Type of the vessel	
4.	Responsible classification society	
5.	Type of old smoke detection system	maker: type:
6.	Location of the smoke detection panel (please take photos of it)	
7.	Is a repeater panel required ? (please take photos of it)	yes/no if yes, location:
8.	Main power supply for smoke detection system	Voltage: frequency:
9.	Emergency power sup. for smoke detection system	Voltage: frequency:
10.	Is a new fan unit required? (please take photos of it)	yes / no if yes, location:
11.	If the old fan unit shall be kept: - values of fan motors are very important to know for safetec - photos of the name plate from the fan motors are very helpful	one phase / three phase motors: voltage: frequency: rated current: power consumption: internal overload protection: yes / no
12.	No. of protected cargo spaces	
13.	Total number of sampling pipes to be connected	
14.	Available installation space for smoke detection panel (height, width, depth)	
15.	Size of pipe between smoke detection panel and fan unit (inch / outer diameter)	
16.	Size of pipe between fan unit and free air (inch / outer diameter)	
17.	Size of fittings at 3-way-valves for connection to smoke detection panel (inch or outer diameter / take photos of it)	

Comments to the Questions:

Question 6: Location of the smoke detection panel

Nowadays nearly all new sample extraction smoke detection systems will be installed in the CO₂-room. This installation location saves costs for the installation of pipes between CO₂-room and the bridge. Older systems had been mounted on the bridge. Consequently one will encounter this situation more often for retrofit projects. Sample extraction smoke detection systems installed on the bridge normally don't require a repeater panel. However the fan unit mostly requires an additional enclosure, because it must be installed on the top deck due to noise prevention on the bridge. The additional enclosure for the fan unit can be delivered by safetec.

Question 7: Is a repeater panel required ?

Sample extraction smoke detection systems installed on the bridge normally don't require a repeater panel. See comment to question 6.

Question 8: Main power supply for smoke detection system

The smoke detection system SDS-48 is available for main- and emergency power supplies of 220/230V AC 50/60Hz or of 110V AC 50/60Hz. If these power supplies for main- and emergency supply are not available, two transformers for main- and emergency supply must be installed to match the correct voltage level.

Question 9: Emergency power supply for smoke detection system

Many of the old smoke detection systems have a 24V DC emergency power supply source. Nowadays this voltage is not accepted by classification societies, because 24V DC are not capable to drive the fan unit. In this case a 220/230V AC or 110V AC power supply from the emergency switch board should be provided.

Question 10: Is a new fan unit required?

For sample extraction smoke detection systems installed on the bridge the fan unit will normally be mounted on the top deck and requires an additional enclosure. See comment to question 6.

Question 11: Values of motors for fan unit

This question is only relevant, if the old fan unit is in good condition and shall be operated with the new smoke detection system. The smoke detection system SDS-48 is prepared to drive a fan unit existing of two fans with one single phase motor each. The fan motors must have the same nominal voltage as the smoke detection system (220/230V AC or 110V AC). If the old fan unit is equipped with 3-phase-motors, or if the rated current of the old fan unit is greater than 6.3A, or if the voltage of the old fan unit does not match the voltage of the smoke detection panel, a relay interface must be installed between the smoke detection panel SDS-48 and the old fan unit. Can also be delivered by safetec.

Question 13: Total number of sampling pipes to be connected

Each protected cargo space requires at least one sampling pipe. Not more than four accumulators shall be connected to each sampling pipe. No part of the overhead deck area shall be more than 12 m distant from an accumulator. Large cargo holds could require 2 sampling pipes to fulfil this rule. Normally the old system should match these requirements.

Question 15: Size of pipe between smoke detection panel and fan unit

The size of the pipe is important to prepare a suitable fitting/connection for the pipe or hose between smoke detection panel and fan unit. Only relevant, if old pipe or old fan unit shall be used for retrofit system.

Question 16: Size of pipe between fan unit and free air

See comment to question 15.

Question 17: Size of fittings at 3-way-valves for connection to smoke detection panel

The size of the fittings is important to prepare a suitable connection between the fittings at 3-way-valves and the flexible hose of the smoke detection panel. Our standard flex. hose has 13mm inner diameter, but other types are also available.