



NFF XFLOW[®] **LOCAL APPLICATION** FIRE FIGHTING SYSTEM



PROTECTION AGAINST MACHINERY FIRES

Machinery spaces onboard vessels are risk areas for fires. Locations such as main and auxiliary engine tops, fuel oil purifiers, fuel unites, boilers, inert gas generators and incinerator burners are identified as the major hazard areas. Fires in these areas can spread quickly, causing serious damage and putting the vessel and its crew at risk. Water mist local application fire fighting systems are the solution to solve this problem as they react quickly, effectively and are environmentally friendly.

ACCORDING TO IMO, all ships constructed after 2002 need water based local fire fighting systems in category A machinery spaces. The Novenco Fire Fighting XFlow® Local Application Fire Fighting system (NFF XFlow LAFF) can be applied to all vessels and offshore structures, and is approved by all major classification societies.

novenco
FIRE FIGHTING

XFlow®

- Complies with SOLAS requirements and approved by major classification societies (IACS)
- Extensively tested by recognized accredited laboratory according to IMO MSC/Circ.1387 and Circ.1165
- Nozzles approved according to Marine Equipment Directive (MED)
- Optional: Complies with DNV-FM class notation for dead ship condition

Protects equipment and personnel

The NFF XFlow LAFF system is designed as a fixed local fire fighting system for machinery spaces, installed to suppress or extinguish fires before the total flooding system is activated. The system effectively protects identified risk areas using max 16 bar water mist. When using the nozzles with XFlow technology, the system is able to suppress machinery fires effectively at an early stage. It can be deployed without shutting down the machinery, isolating the space, or evacuating personnel. This allows personnel to assist in fighting the fire during the release. Water is non-toxic, represents no danger to human life and is environmentally friendly.

Solution benefits

The system is able to suppress fires effectively using less water than most systems. This means the dimension of the fresh water pump, section valves and pipelines are small in size which simplify the design and installation. Modular skid based units provide easy installation and reduced footprint. The system can use either fresh or sea water.

Lowering total costs

The system is designed for optimal system performance and easy maintenance, keeping both installation and operational costs low.



System description

The NFF XFlow LAFF system utilises 16 bar water mist nozzles, located above the equipment, and is using standard piping between the pump station and nozzles. Separate protected objects or areas have individual dry piping leading from section valves to the nozzles. This ensures that the piping only contains water during the operation of the system.

In both attended and unmanned machinery spaces, release of the NFF XFlow LAFF system can be activated by a detection system. It is also able to be manually released from either central or localised cabinets. The system can be delivered with two indication panels in accordance with the upcoming FSS Code.

The valves, one for each protected object or area, will effectively release the water in the case of a fire. The valves can be remotely operated from a centrally located main control panel at a

continuously controlled manned station or from manual release boxes near the protected objects or areas. Emergency manual starting of pump and opening of valves is possible. Pump, valves and control panels can be delivered on skid units to reduce installation costs and footprint.

Suppressing fire using water

As a fire fighting agent, water is non-toxic, safe for the crew, environmentally friendly and has good cooling capabilities which effectively reduce the level of damage during a fire. The system effectively suppresses fire, depletes the oxygen and reduces the temperature by evaporation upon contact with the flame. It also absorbs and extracts energy from the fire to prevent further outbreak.

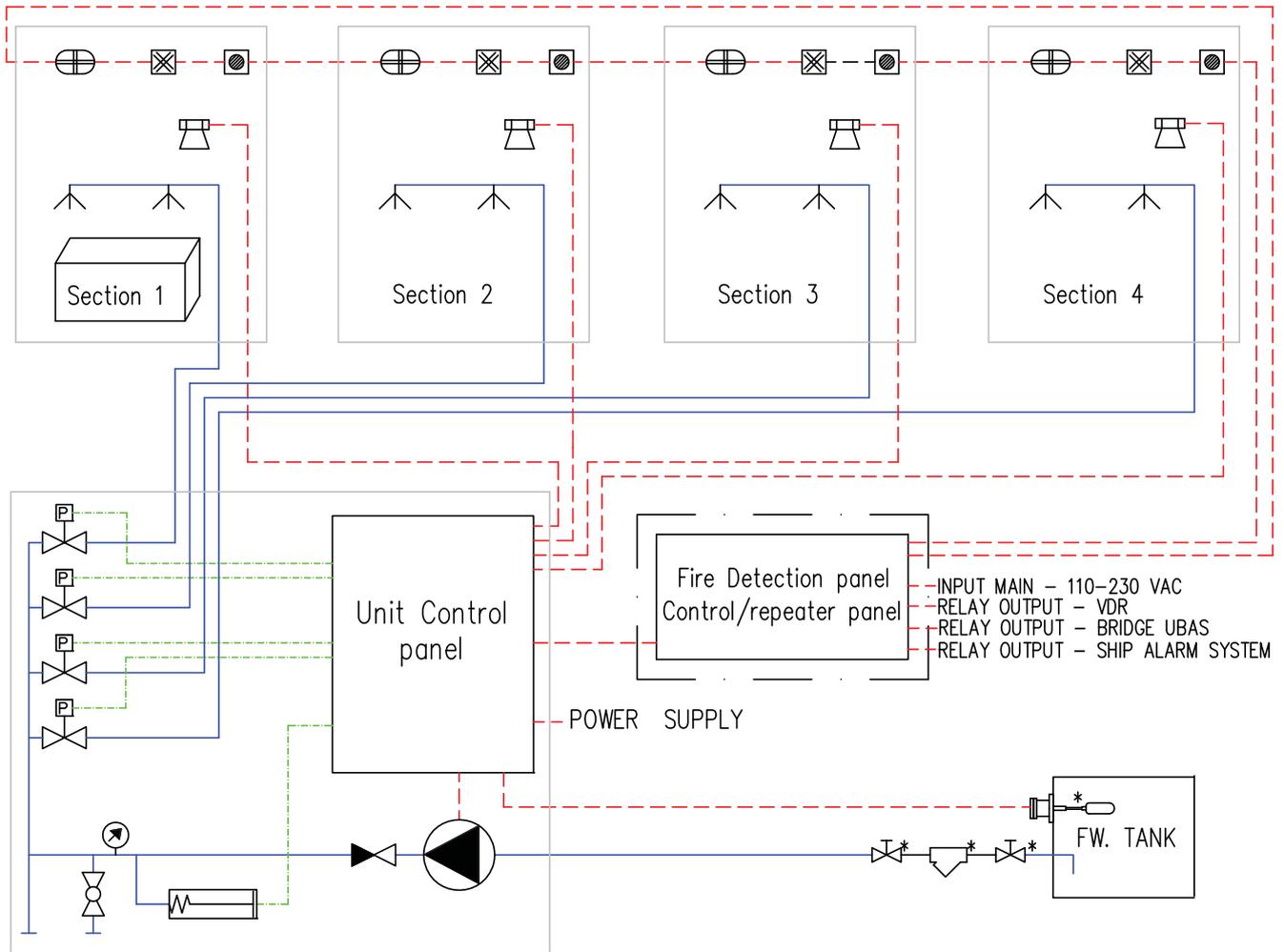
Using water to suppress fire, the NFF XFlow LAFF system can be released immediately to reduce fire and heat damage.



XFlow nozzle for machinery spaces



Standard configuration



Technical data

NOZZLE

Types	NHP 2	NHP 4	NHP 5	
Installation height	0.5 - 5.0 meters	4.7 - 16.5 meters	0.5 - 8.0 meters	8.0 - 14.5 meters
Material	nickel brass	nickel brass	nickel brass	nickel brass
Water capacity and pressure	4.9 l/min @ 6.6 bar	12.9 l/min @ 7.7 bar	9.5 l/min @ 3.5 bar	15 l/min @ 9 bar

PUMP

Type	centrifugal multistage – class certified
Material	cast iron
Voltage/frequency [V/Hz]	3 x 400/ 50 and 3 x 440/ 60 (or on request)
Insulation and enclosure	Class F, IP55



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