

RIM SEAL FIRE PROTECTION SYSTEM

TS-RS150

The Rim Seal Fire Protection system is designed for early detection and fast suppression in floating roof tanks fires.



Guaranteeing reduced shutdown times and inhibiting the phenomenon of re-ignition.



Completely ecologic and non-toxic



Effective up to -28°C



Protects the tank thanks to a mixture of water and the wetting-agent Firefive®



Firefive®: 5 products in 1.



The FireFive® wetting agent is able to maximize the water power by lowering about three fold the water surface tension, penetrating the fire more deeply and quickly. It encapsulates the hydrocarbon molecules inside “chemical cocoon” called micelles and thanks to its exceptional cooling power it rapidly reduces fire’s heat, extinguishing it in a few seconds.

ITS ADVANTAGES

With a very low percentage of additive, FireFive® is able to enhance about three fold the extinguishing power of water with immediate suppression of fire.

FireFive® minimizes operation costs thanks to:

- 🔥 Less damaged caused by the fire and the agent
- 🔥 Lowest quantity of additive needed
- 🔥 Business down time reduction
- 🔥 Shortest time of fire brigades stay for the intervention
- 🔥 No expiry date of the product
- 🔥 Eco-friendly solution

The Tank

40lt FireFive® (15 bar working pressure)

Pressure Switch

Shut-off Valve

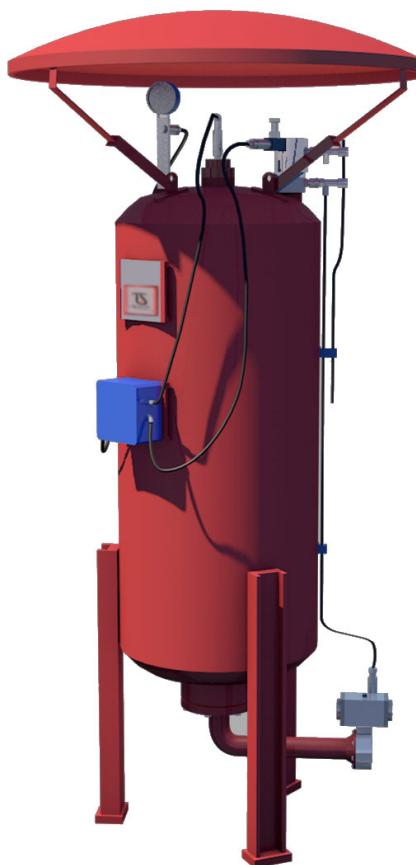
Level Switch

Pressure Gauge

Junction Box

Sunroof and Support Skid

No welding and bolts needed for installation

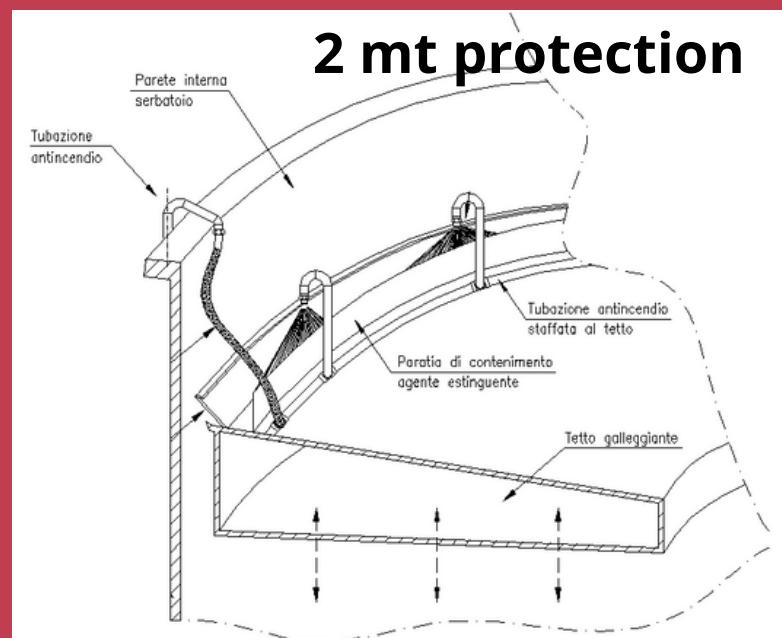


Weight Data

Tank weight - 65 kg

Total weight of the system (40mt of rim seal fire protection) - 99 kg

The nozzle



Tot.: 40 Nozzles

Pipes: 12 mm Ø

Response Time: 24 ms \wedge 1/2

Temperature: 93°C / 200°F (Other temperatures available)

Nozzle activation: max n. 2

Certification and tests



CERTIFICATE OF COMPLIANCE

Certificate Number 20160128-EX26849
Report Reference EX26849-20160128
Issue Date 2016-JANUARY-28

Issued to: ZELIG SRL
Via della Transumanza, 5
74123 Taranto TA ITALY

This is to certify that representative samples of

WETTING AGENTS
Fire Five Encapsulator wetting agent concentrate, when added to water in concentrations of not less than 0.25% for Class A fires and not less than 2% for Class B fires.

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: NFPA 18 - National Fire Protection Association Standard on Wetting

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.


Bruno Mazzoni, Director South American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at www.ul.com/contactus.



RINA SERVICES

classification, certification, inspection & testing

STATEMENT N° 201600189

Following to the request of Messrs. Zelig Srl, P.zza Fontana 46, 74123 – Taranto (Italy)

IT IS STATED THAT

The agent named FireFive produced by Zelig Srl, P.zza Fontana 46, 74123 - Taranto (Italy) can be used as an additive in the water based fire-fighting systems listed below to be used on board of all passenger ships, cargo ships, fishing vessels and yachts classed by RINA:

- Sprinkler systems for accommodation, service spaces and control stations other than those certified according to Res. A (800);
- Drencher systems for special category spaces other than those certified according to MSC.I/Circ. 1272

Drawings relevant to components and piping arrangement necessary to supply the agent to the fire-fighting systems are to be sent for approval for each single ship.

Genoa, April 26, 2016

Head of ITMA Section



20 lt Diesel Oil with 20 cl gasoline trigger

120" Preignition time

Firefive 3%

Branchpipes flow rate 400lt/min

Pressure 10 bar

Extinguishing time: 4 sec



Watch video! -> [RIM SEAL](#)
-> [FIREFIVE TEST](#)

Tema Sistemi SPA produces Rim Seal fire protection system both with FireFive agent and CF3I gas. Here below differences of the two systems:

	Firefive®	CF3I System
A. Extinguishing Performance	★★★★★	★★★★★
B. Easy Maintenance	★★★	★★★
C. Eco - Sustainability	★★★★★	★★
D. Shelf Life	★★★★★	★★★★★
E. Money Saver Agent	★★★★★	★
F. Maintenance cost in 20 years	★★★★★	★★
G. Detection System reliability	★★★★★	★★★★★



extinguishing agent, as per UL certification.

As any chemical gas, CF3I, due to its composition, can in the future be banned for causing Hozone Reductions. This can generate a problem for future refillings.

Chemical Gases, furthermore, are very sensitive to hot temperatures. Hot temperatures above 100°C can react with water, forming hazardous residues such as hydrogen fluoride (HF), hydrogen iodide (HI) and carbonyl fluoride.

Costing ratio of CF3I is very high. About 25:1 Liter/kg

Maintenance cost in 20 years time is very different. Hypothesizing 1 refilling in the 20 years, the cost is much higher in CF3I systems.

References

ENI, Taranto - Design and supply of Rim Seal fire protection system.

N° of tanks: 2

Extinguishing agent: Water plus Firefive

Capacity: 80.000 T.

ENI VERSALIS, Ravenna - Water spray system to cool storage tank. Design and supply of Rim Seal fire protection system.

N° of tanks: 2

Extinguishing agent: Water plus Firefive

Capacity: 30.000 T.

TOTAL, Corleto Perticara - Design and supply of Rim Seal fire protection system.

N° of tanks: 2

Extinguishing agent: Water plus Firefive

Capacity: 40.000 T.

LUKOIL, Kaliningrad - Design and supply of Rim Seal fire protection system.

N° of tanks: 11

Extinguishing agent: Water plus Firefive

Capacity: 20.000 T. 30.000 T.

NAOC, Nigeria - Design and supply of Rim Seal fire protection system.

N° of tanks: 15

Extinguishing agent: Water plus Firefive

Capacity 20.000 T. 30.000 T.

ROMANO PORT, Durazzo Albania - Design and supply of Rim Seal fire protection system.

N° of tanks: 2

Extinguishing agent: Water plus Firefive

Capacity: 30.000 T. 40.000 T.

INA, Croazia - Design and supply of Rim Seal fire protection system.

N° of tanks: 1

Extinguishing agent: Water plus Firefive

Capacity 30.000 T.





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