One of the most common fire scenario for floating tanks is a rim fire.

The NFPA 11 standard require foam cambers/pourers on the perimeter of the tank.

This way of protection has been proven effective. However two weak points can be identified:

a. The rim fires, in the early stages, are relatively small and may be managed by a smaller water/foam application.

b. The foam chamber system are often fed by the general tank-farm foam system, that is normally quite large. This means: inertia, delay, damage to the rim and unnecessary waste of foam.

In other words: a fire that may be extinguished by a small and quick system, causes a larger and slower system to go in operation.
FLOATING ROOF RIMSEAL SYSTEM

- To address these negative points, **RIMSEAL** protection systems were introduced.

- "First strike" system that is designed to extinguish small fires avoiding main foam system discharge and rim damage.

- It must be **SELF-STANDING** (automatic operation without interaction with Control Systems).

- It must be **EFFECTIVE** on fire.

- It must be virtually **MAINTENANCE FREE**.

- ... and it must be **CHEAP**.
SYSTEM DESCRIPTION

Floating roof tank protected by float foam system
RIMSEAL SYSTEM

- Employs a **pre-mixed AFFF foam solution** contained in the vessel (AFFF is preferred to FFFP for fastest performance and solution lifetime)

- The tank is pressurized with **Nitrogen** to nominal 25 barg

- Completely self-standing: the fire detection is made by specifically designed detection pipe, synthetic material, that bursts at a given temperature. The pipe is **UV resistant**, chemical agent resistant, not subject to decomposition with time

- The pressure loss causes the main valve to open

- Designed to be gas tight for years under intermittent pressure condition (day-night)

- Modular design: a 250 l vessel covers 40 m rim circumference
TECHNICAL DATA

LEGEND:
1. Foam solution tank capacity 250 lts.
2. Pressurization valve
3. Detection line (plastic tube)
4. Isolating valve
5. Pneumatic discharge valve
6. Pressure indicator (note 2)
7. Monitoring pressure switch
8. Drain valve
9. Foam solution discharge line
10. Selector valve
11. Fire detection pressure switch
12. Vent valve

CHARACTERISTICS:
AFFF tank:
- Design pressure 28 bar
- Foam solution 150 lts
- N2 pressurization 10 to 25 bar
  for correct operation of the system

Notes:
1. System working temperature range: +10…+80°C
2. Pressure indicator isolating valve must be kept closed all the time and opened only for inspection pressure
RIMSEAL SYSTEM

STORED PRESSURE VERSION (STANDARD)

EXTERNAL BOTTLE VERSION (OPTIONAL)