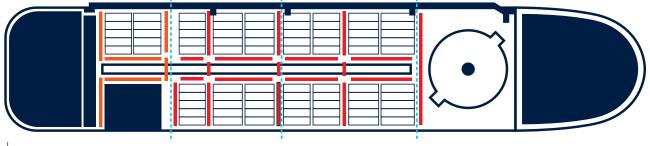


Drain gullies & Fire walls

Flexible fire protection solutions for floating offshore installations

Product & Service Highlights

For maintaining barriers between modules on FPSOs, LNGs, FLNGs and other floating installations



Example of an FPSO seen from top showing typical locations for fire- and explosionsafe drain gullies (red/orange lines) and flexible fire walls (blue dots).

The Firesafe Drain Gullies and Fire Walls

are designed to withstand Hydro Carbon fires and 350 kw/m² Jet fire in addition to explosions upto 1,4 barg pressure.

The drain gullies are consisting of flexible multi layers and wire meshes giving both the necessary flexibility needed to absorb both horizontal and vertical movements between the modules. The surfaces are made of smooth and extremely strong PVC. Colours at customers request. Drains in stainless steel (SuperDuplex Cr25 or other by request) are welded into the top and bottom layers to lead the water off the deck to the piping system. The fire walls have the same internal layers but have a slightly different configuration of outer layers and given a slightly different design where the profile may have the shape of an "S" to allow even more movement and flexibility.

Designed for extreme environments

and for long life. The drain gullies and fire walls have been tested and are guaranteed flexibility in temperatures as low as -30°C and have passed accelerated life expectancy tests for more than 30 years.

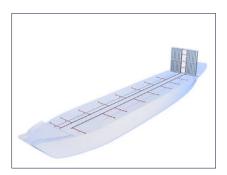
Tested and approved for:

- 350 kw/m² Jet-fire.
- Hydro Carbon fire (H_0) .

Other properties:

- Oil resistance.
- UV resistance.
- Easy maintenance
- Quick and efficient mounting.
- Robust design for use in a harsh environments.
- Excellent robustness against falling objects.
- Stop contaminations/spill between decks.

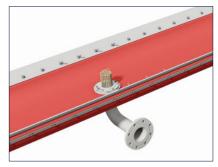
Design and Features



STRUCTURE

Maintaining fire/blast barriers between modules

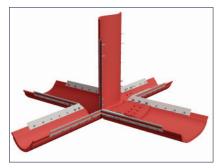
Example of FPSO structure seen from the side showing typical locations for fire- and explosion safe drain gullies.



DRAINAGE

Leading water away from deck to drains

The drain gullies are consisting of flexible multi layers and wire meshes and leading water from deck to open drain systems.



EXTREME ENVIRONMENTS

Temperatures as low as -30°C

The surfaces are made of smooth and extremely strong PVC and has passed accelerated life expectancy tests for more than 30 years.



FIRE AND EXPLOSION SAFE

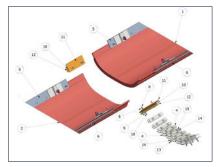
Extensively tested by 3rd party

First 10 minutes of Jetfire 350 kw/m^2 directly to 110 minutes of H_o poolfire. If necessary this can be increased with moderate design changes and new tests.



FLEXIBLE DESIGN Tailor made for movement

A ship moves due to weather and waves. The fabrics are chosen to allow flexible extraction and contraction caused by movement between modules and hull.



EASY ASSEMBLY

Upto 80 % on land

The design and layout are prepared for allowing as much as possible assembly work to be done before the topside modules are loaded onboard the hull.

FIRESAFE ENERGY AS

Erik Ulevik Managing Director

Mobile: +47 98 20 50 00 Switch board: +47 22 72 20 20 E-mail: erik.ulevik@firesafe.no Postal address: P.O. Box 6411 Etterstad NO-0605 Oslo NORWAY

FIRESAFE Energy / www.firesafeenergy.no