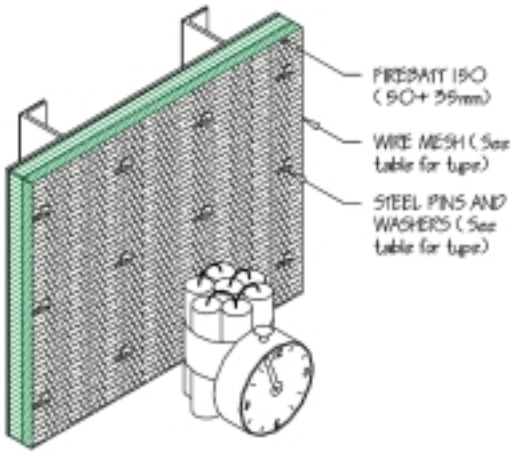
General arrangement prior to testing — explosion resistance - class H



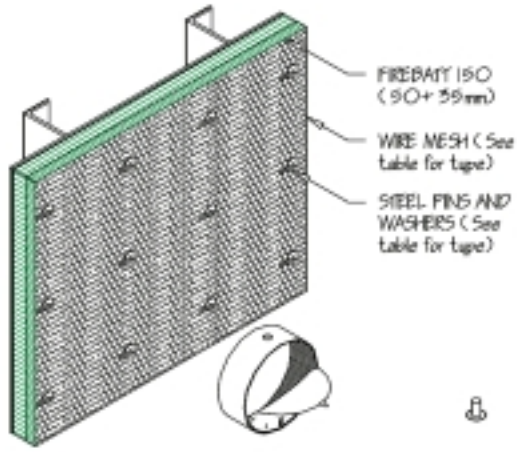
- The regulatory requirements for the blast behaviour of fire rated bulkheads are not normally well documented. It is considered a general requirement that all parts of fire divisions maintain the same fire and explosion resistance, and proof of this must be documented through physical testing.
- Rockwool, in association with SINTEF (NBL) in Norway have performed extensive testing on H-rated Rockwool insulation systems, using controlled gas explosions. The test results below refer to the same insulation construction with various types of wire mesh.

Test results on H-0 rated insulation

Test construction 50+35mm Firebatt 150 with:	Load characteristics P_{max}(bar)	 U^{xx}(m/s)	 t_a(m)	Critical damage
Heavy duty stainless steel mesh with pins bent over washers	0.34	240	54	None
Heavy duty stainless steel mesh with pins bent over washers	0.68	300	33	None
Galvanised wire mesh with pins bent over washers	0.33	240	50	None
Galvanised wire mesh with pins bent over washers	0.58	300	35	None
Galvanised wire mesh with standard pins and washers	0.37	270	49	None

- All the above tests were carried out without any significant damage to the insulation material. According to the Norwegian Fire Research Laboratory (SINTEF) a fire will not affect the fire integrity or stability of the insulation.
- Due to the test methods used, SINTEF have assessed the above results to be conservative.

General arrangement after testing — recommended design limits



Rockwool Firebatt 150 with:

- Heavy duty stainless mesh and bent pins:

Peak overpressure:	0.7 bar
Duration (positive phase):	35 ms
Explosion wind:	300m/s

Galvanised mesh and bent pins:

Peak overpressure:	0.6 bar
Duration (positive phase)	35 ms
Explosions wind:	300 m/s

Galvanised mesh and standard pins:

Peak overpressure:	0.4 bar
Duration (positive phase):	50 ms
Explosions wind:	300 m/s