



Project Description

- Keybridge House, London was a Firemac FM Blue project that required the installation of a building service enclosure, mechanical ventilation ductwork and a ceiling.

System Specification:

- Basement Substation Ventilation Duct with blast resistance
- Building Service Cable Enclosure with a requirement to maintain the cables circuit integrity
- Ceiling with load-bearing capacity when combined with the performance of the concrete floor slab.

Performance Summary

- General ventilation ductwork is generally required to fulfil the requirements of BS 476: Part 24: 1987 (ISO 6944: 1985) to provide the required period of stability and integrity (and where required, insulation). Within basement substations where there is a generator room, there is generally a concern with risk of an explosion. In such instances, Firemac FM Blue may be used to provide a level of blast resistance, as well as evidence of suitability to exposure of greater temperatures in accordance with a hydrocarbon fire curve to correlate to the fuel types in which it may be exposed to.



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- Building service enclosures may be used to house integral services, required to perform as part of the fire strategy (e.g. cabling for emergency lighting). In such instances, Firemac FM Blue may be used to provide the required period of integrity and insulation and ensure the cable temperature does not exceed its critical range. This thus permits the cable to maintain its circuit integrity and thus function as intended for the required period during the fire.
- Within transformer rooms, the concrete slab alone may not provide the required fire resistance. In such instances, Firemac FM Blue (combined with the performance of the concrete slab) can be used to ensure the concrete slab maintains its required load-bearing capacity, integrity and insulation under fully developed fire conditions.

Testing

- The Firemac FM Blue ductwork system was designed and installed, to provide 120 minutes fire resistance (stability, integrity and smoke extract) to BS 476: Part 24: 1987, and the required blast-resistance.
- The Firemac FM Blue building service enclosure was designed and installed, to provide 120 minutes fire resistance (integrity and insulation), and 60 minutes cable circuit integrity following the principles of BS 476: Part 20: 1987.
- The Firemac FM Blue ceiling combined with the concrete slab, was designed and installed to provide 240 minutes fire resistance (loadbearing capacity, integrity and insulation) to BS 476: Part 22: 1987.