AFE
ANGUS FIRE ENGINEERING

ARGONITE

Fire protection systems

Until the early 1990s, Halon was the most widely used and effective extinguishing agent in fire protection – especially in occupied areas. It is now widely recognised, however, that its use destroys the earth's protective ozone layer and so its production has been banned in accordance with the latest revision of the Montreal protocol.

The Argonite system has been developed as a viable but environmentally friendly alternative to Halon. Tested and approved by regulatory bodies throughout the world, Argonite is effective against fires in almost all combustible materials and flammable liquids and is particularly suitable for use in areas where the use of water, foam or powder would be unacceptable.

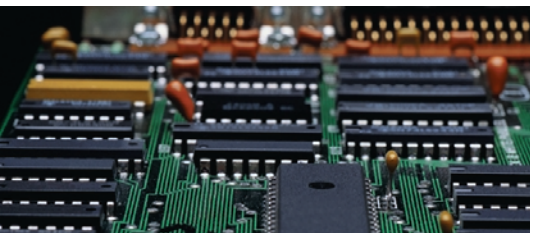
Benefits of the Argonite system

- Fast acting and effective against nearly all fire hazards
- Environmentally neutral – zero ODP, zero GWP
- Low installation and maintenance costs
- No post-fire residues or damage to protected equipment
- Electrically non-conductive
- Safe for occupied areas
- Can be integrated with existing detection and alarm systems
- Automatic or manual release
- Total flooding or modular design
- Minimum downtime after a fire

System design

In a closed space almost all fires are extinguished in less than 60 seconds when the oxygen concentration falls below 15%. The Argonite fire extinguishing system, based on a mixture of 50% Argon and 50% Nitrogen, reduces the oxygen concentration to 12.5% – a level acceptable to human exposure over short periods – thus eliminating the fire quickly and effectively without affecting personnel.

Knowing the size and complexity of the area to be protected, the fire hazard present and the requirements of the local approving authority, a dedicated computer program is used to specify the size and geometry of the Argonite system hardware. Generally one of two methods is used to protect an area with Argonite. These are total flooding, where the required amount of gas is released into a room, and modular or local systems that are designed to cover a particular piece of enclosed machinery, equipment, etc.



Applications

Argonite systems are ideally suited to the protection of fixed equipment and plant. They are particularly applicable for high value risks where fires can have devastating consequences way beyond the cost of damage and lost production.

Applications include:

- Computer suites
- Telecommunications facilities
- Archive stores
- Petrochemical plants
- Offshore oil and gas installations
- Gas turbines
- Control centres

Argonite systems

Argonite systems consist of one or more pressure cylinders connected via a common manifold. System actuation can be manual or automatic and the gas is dispersed through a pipe network and enters the protected area via nozzles. Valve design, the size and pressure of the cylinders used together with computer calculated pipe and nozzle dimensions ensure that the correct amount of Argonite is released effectively. Argonite's inerting and extinguishing properties act quickly to eliminate the fire.

If more than one area within a building is to be protected, a single Argonite system, designed to extinguish a fire in the largest room, can be used. Provided that there is no risk of more than one fire within the facility at any one time, the total cost of the fire protection system can be reduced significantly in this way.

Argonite cylinders

A range of cylinders is available offering a choice of fill and pressures to meet your specific needs and to ensure maximum cost effectiveness of the installation. Each cylinder is manufactured from high strength alloy steel and is supplied in accordance with the requirements of the various national authorities – inclusive of stamping and certification. They are mounted in rows and may be installed in any suitable location.

Argonite valves

Made of corrosion resistant brass, Argonite discharge valves are designed to ensure optimum system performance, reduced pipe sizes and low installation costs. They can be actuated by one of the following methods:

- Electrical
- Pneumatic
- Manual

The valve design allows a worldwide network of distributors to recharge the cylinders without the need for replacement parts. An easy-to-read gauge enables convenient inspection of the agent pressure and a pressure switch is fitted as standard to allow remote monitoring of the system's integrity.

Approvals

Argonite has been approved and/or verified by major international authorities and classification bodies.

These include the NFPA, DNV, Lloyds Register, Bureau Veritas, The Loss Prevention Certification Board, CNPP and the Environmental Protection Agency.

Reliability assured

Angus Fire Engineering works to the international ISO 9001 quality standard. The computer calculation program ensures rapid and accurate system design.

The company

Kidde has over 80 years experience in manufacturing, designing and commissioning fire protection systems for industrial, commercial and marine applications around the world. Backed by the worldwide technical and financial strength of Kidde Plc, the company is able to offer a total capability approach to fire detection, suppression and control.

Further information

Contact your local distributor or Angus Fire Engineering for further information about the Argonite fire protection system.

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