PROTEGO® and Lightning Master

A layered approach to Explosion Protection

PROTEGO® and Lightning Master have integrated their solutions to provide the highest level of explosion protection to customers around the world.

Explosion Protection

Many processes within the petro-chemical, industrial, oil and gas industries involve transportation, storage and ventilation of potentially flammable liquids, gas and vapor mixtures. When sufficient oxygen is present there is a serious risk of fires and explosions if ignition sources cannot be excluded. It takes only a little imagination to visualize the catastrophic effects which may result if these hazardous mixtures ignite; serious injury, loss of life, and damage to plant and property - not to mention the adverse effect on the environment. The best way to provide asset protection is to incorporate redundancy in safety systems. An integrated system must address the critical factors involved in tank explosion: ignition source, gas conditions (pressure, temperature, O₂ concentration), and the fuel source. A layered approach addresses multiple factors involved in an uncontrolled combustion (explosion) and is the best way to prevent protection-system failures. The principle of this layered approach is to reinforce redundant protection, this allows the system to minimize damage in the case of an emergency.
The PROTEGO®-Lightning Master explosion protection solution has two foci: protecting the asset and protecting the system.

Asset Protection

- Eliminate Source of Ignition
  - Lightning • Secondary Effect Arcing • In-Tank Static

- Control Fuel Source
  - Displace or Isolate Volatile Mixtures

- Vent Potentially Explosive Mixtures Safely
  - Pressure Relief
  - Vacuum Relief
  - with Integrated Flame Arresters

System Protection

- Preventing Combustion from Spreading Throughout the System
  - Flame Arrester
  - Detonation Arrester
  - Placement on Storage Tanks

About PROTEGO®

Since 1954 PROTEGO® has built and provided safety devices and tank equipment, now with the help of more than 450 employees worldwide. Within our area of expertise, we are the technology leader. We provide global services for our customers, which include research and development, application-specific engineering, and overall protection system design. Our customers know they can trust in our products and high quality and development standards for process engineering, the petroleum, chemical, and pharmaceutical industries and the bio-energy sector.

About Lightning Master

Lightning Master has been engineering static solutions and lightning and transient protection systems since 1984. We specialize in preventing tank ignitions in the oil and gas, and chemical industries. With patented products and systems, and principals who advise on the most relevant industry committees, Lightning Master is the world leader on lightning and static protection.

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