

Passive Safety Equipment



▲ April – Insulating cover on a long-bolt flangeless valve



▲ May – Damaged fireproofing on a pipe bridge support column



▲ June – A hole in the wall of a tank farm containment dike

Can you figure out what the April, May, and June 2010 issues of the *Process Safety Beacon* have in common? All of them discuss a type of safety equipment that can generally be described as passive. Passive safety devices do not have to detect an unsafe condition or take any action to perform their protective safety function. They have no sensors or moving parts. They do their job because of their construction — for example, the insulating characteristics and thickness of insulation or fireproofing, or the height and impervious material of construction of a dike wall.

Here are some other examples of passive safety equipment that you might have in your plant: containment buildings for toxic materials; blast-resistant control rooms or other buildings; blast-resistant buildings for storage of potentially unstable materials, such as organic peroxides; flame or detonation arrestors; insulation on storage tanks to limit heat exposure to a fire (standards for sizing relief valves to prevent overpressure of a storage tank engulfed in a fire allow credit for insulation on the tank).

Did You Know?

- Even though passive safety equipment does not have any sensors or moving parts, it does require ongoing inspection and maintenance. As shown in the previous three issues of the Beacon: insulation can be removed from equipment or it can deteriorate or be damaged; fireproofing can be damaged or removed; dike walls can have holes in them; and other types of passive safety equipment can deteriorate or be damaged.
- It is easy to forget about the importance of passive safety equipment because it is an integral part of the plant background. You see it every day as you go about your job, but you may rarely notice its condition.

What Can You Do?

- Find out what kind of passive safety equipment you have in your plant, and understand what safety function it performs.
- Find out what must be done to maintain the passive safety equipment in your plant, and make sure these maintenance activities are done. Ask the people responsible for maintenance to explain the required maintenance.
- Learn how to recognize damage to the passive safety equipment in your plant so you can report it and have it repaired.
- Periodically include inspection of passive safety equipment in your plant safety inspections.

What passive safety equipment do you have in your plant?

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