

LOSS LESSONS

VOLUME 9

ALLIANZ GLOBAL CORPORATE & SPECIALTY®

A RIDE-ON SWEEPER THAT MAKES A BIG ... MESS

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Occupancy:

Manufacture of automobile parts

Property Damages:

€ 8,000,000

Business Interruption:

€ 500,000 (additional costs)

CIRCUMSTANCES

On October 10th, during a period of low production prior to departing for the weekend, only 9 people were present at the site when a demolding agent leak occurred in a supply hose located in the foaming workshop.

The hose in question supplies the demolding agent spray gun. The agent consists of a 98 % solvent mixture with a flash point of 26 °C. Despite the slow flow of the leak, it ended up creating a large puddle (30-40 m²) since no staff were in that zone. Following discovery of the accidental leak, the team leader requested that it be cleaned up. A ride-on sweeper was put into use but a spontaneous fire broke out underneath it.

The emergency action plan was immediately set in motion. Since the fire spread very quickly, the staff was unable to use the primary fire-fighting equipment and evacuated the building. All fluids and energy sources were cut off.

The absence of a sprinkler system favored worsening of the situation. Uncontained, the fire quickly became intense and spread to the nearby production equipment. In addition, production stocks at the line heads fed the fire with combustible material.

Members of the secondary fire-fighting team who lived near the site immediately came and quickly attacked the fire while awaiting the arrival of help from the outside. The fire brigade arrived in 30 minutes, which allowed the fire to be brought under control within one hour, thus limiting the damage to only the foaming workshop.

EXTENT OF THE DAMAGE

- There were no injuries or deaths
- The 1,600 m² foaming workshop was severely damaged (nearly 30 % of overall site production facilities)
- Production equipment (foaming, thermal molding) is largely unusable. It will take a long time to replace the machines. However, all of the moulds were recovered, immediately repaired and sent to other Group sites
- Inventory located beside the lines was totally destroyed
- Massive amounts of smoke invaded the other production workshops and the offices, thus causing major soot damage
- Interruption in the delivery of finished products was avoided by using the repaired moulds installed at other sites
- The cost of damage to the production machines is estimated to be €7Mn
- The cost of damage to the buildings is estimated to be € 1Mn
- Various additional costs, such as for special transportation, are estimated to be at less than €500,000

CAUSE OF THE LOSS

The poor condition of the spray hose led to a solvent leak.

The use of a ride-on sweeper on the puddle of demolding agent containing 98% solvent set off the fire, whereas absorbent material was available in the workshop to sop up accidental spills of combustible liquids or other contaminant liquids.

WHAT HAS WORSENERED THE LOSS

- The presence of combustible material along the lines
- The absence of a sprinkler-type automatic water extinguishing system

WHAT HAS LIMITED THE LOSS

PROPERTY DAMAGE

- A workshop devoted to production, no storage of finished products, little inventory on hand other than a small amount along the lines
- Immediate enacting of the emergency action plan
- Quick action by site staff to cut off fluids and energy sources
- Quick intervention by secondary intervention teams who lived close to the site

- Effective intervention by outside help
- The fire hoses present at the site and appropriate equipment used by the fire brigade, the diesel and electric pumps and the water tank
- The fire walls with cable pass-throughs caulked using non-combustible materials that protected the various utilities

BUSINESS INTERRUPTION

Interruption in the delivery of products was limited due to major mobilization by the other Group sites. All of the moulds were repaired and sent to other sites in order to provide uninterrupted fulfilment of client orders.

COMMENTS AND LEARNINGS

Various safety recommendations should be followed in order to prevent this type of fire from starting:

- Replace, if possible, the demolding agents containing solvent with water-based ones in order to substantially reduce the risks resulting from solvent-laden vapors (ATEX zone); otherwise, automatic fire-protection systems will be required
- Hoses should be checked regularly and included in a preventive maintenance program to control the risk of rupture
- Signage must be placed on the cleaning machines with wording prohibiting their use to clean up inflammable liquids
- All staff, including temporary personnel and those from outside companies, must be, depending on the activity carried out, informed of or trained for:
 - The risk of explosive environments (inflammable substances in the form of gas, vapors, mists or dust that can cause an explosion under certain conditions) and the danger of using unsuitable equipment and materials in certain zones, such as the ride-on sweeper, in this case
 - The fact that chemicals cannot be cleaned up using a cleaning machine. Work station instructions should be established to this effect, including this risk, and be initialed by those people using the machines. In addition, the same directives should be included in the work permits granted to outside companies
 - The fact that chemicals such as demolding agents must be cleaned up using non-combustible absorbents, e.g. sheets, rollers, sausage barriers or powders specifically designed for this purpose. In the present case, the procedure and the equipment were present, but the staff were not necessarily sufficiently informed, whence the need for regular reminders

- Effective compartmentalization (cable pass-throughs caulked with non-flammable materials) of strategic areas helps limit the effects of a fire to restricted zones. This is why the fire did not affect utilities room. For this reason, the other production sectors were not affected

The scope of the incident is related to the absence of a sprinkler-type automatic fire protection system. The site was identified as critical due to the absence of an automatic fire extinguishing system. This recommendation had been documented during assessments conducted, and a project to install a sprinkler system was under study. The factory will be rebuilt equipped with a sprinkler protection system.



↑ ... after!



↑ Before ...

QUESTIONS OR COMMENTS?

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