



Loss Bulletin: Warehouse

Introduction

Industry:	Logistics (food warehouse)
Source of Incident:	Pallet of food produce in bottom level of racked storage
Potential Loss:	Circa £30 million
Extent of damage:	Approximately £70,000 comprising destroyed pallets, pallets requiring reworking, loss of sales, loss of productivity and clean-up costs
Cause of Incident:	Deliberate or accidental ignition of food pallet by smoking materials

Background Information

550,000 square foot warehouse of steel framed construction with a mixture of claddings: part brick walls and asbestos roof and part LPCB approved composite claddings (walls and roof). There was a full fire detection system at roof level comprising part point smoke detectors and part aspirating detectors but no sprinkler protection in this leased warehouse. There were no on-site hydrants; public hydrants were unlikely to provide sufficient quantities of water to tackle a well-developed fire within a warehouse of this size. At the time of the incident two 20,000 litre water storage tanks were in the process of being installed to provide water for fire-fighting.

A fire was detected (by the fire detection system) at 3.05am initiating the practised emergency response procedure including the removal of mechanical handling equipment (LPG powered forklifts). The fire marshals investigating the alarm activation discovered a developing fire and proceeded to tackle it. Four persons were involved in this first response effort setting up a relay and fetching extinguishers from around the warehouse. 22 extinguishers were discharged onto the burning stock before the fire service took over and extinguished the fire.

A subsequent interrogation of the automated picking system was used to track individuals, although no conclusions were reached. Impromptu fire tests (using both cigarettes and a lighter) on a pallet of similar product following the incident revealed that ignition by cigarette alone was quite difficult and suggesting that a lighter may have been used. However, there is no firm conclusion as to whether a discarded cigarette or a lighter was the cause. Other potential causes have been disregarded.

The company operate a very strict smoking policy with designated smoking areas established externally: there would be no doubt as to the consequences of being found smoking inside.

Lessons Learnt & Issues for your consideration

- Without the intervention of the fire marshals it is highly likely that the whole warehouse would have been destroyed. If there is no threat to life safety then the fire service will usually take defensive action only. It was reported that there was a significant amount of smoke throughout the warehouse despite the relatively low amounts of stock on fire.
- The fire marshals had all received training and significant work had been carried out over the previous 18 months to improve the incident response procedures. There was liaison with the fire service and they were provided with a site information pack when they arrived. A site information pack for a warehouse should contain details of: construction; types of goods stored; fire-fighting provisions; service isolation points; hydrant locations; and specific hazards (e.g. LPG use and storage). Emergency response procedures should ensure that a call is made to the fire service (regardless of whether there is an automatic signal from the fire panel).
- The powder extinguishers were not suitable for a fire in goods of this nature. In fact powder was responsible for the majority of the damage having been blown quite a distance through the warehouse and being almost impossible to clean up. It also hampered the initial fire-fighting efforts as it made breathing very difficult. Had water (or foam) extinguishers been available the fire may well have been extinguished prior to the arrival of the fire service. This issue should be considered as part of the Fire Risk Assessment to ensure that the types of extinguisher match the types of goods being stored. Any change in the nature of goods stored should trigger a reassessment. Post-loss investigations are essential to ensure lessons are learned.
- The emergency response team were able to confirm that all LPG powered forklifts had been removed from the premises thus making it safer for the fire service to enter.

Additional Comments

The swift and brave action by members of staff averted a potentially disastrous loss for the company. Despite apparently having inappropriate appliances, they were able to control the fire until the fire service arrived thus saving the business. All had received training to enable them to do this. Whilst Protector would never advocate members of staff putting themselves at risk; with the appropriate levels of training, for selective members of staff, this incident demonstrates the benefit of training and rehearsed incident response procedures.

The importance of correct fire extinguisher selection and placement through suitable and sufficient fire risk assessment cannot be overstated. However, had the warehouse been sprinkler protected there would have been no need for anyone to put themselves at risk. Sprinklers are essential for storage risks of this size.

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