

Preventing warehouse fires

Are you taking the necessary precautions to protect your premises from fire?

Warehouse fires are devastating when they occur - which is far too frequently. The primary causes of fires include electrical failures or malfunction, hot works, maintenance related issues and poor enforcement of no smoking policies. Many incidents can be avoided entirely by periodic risk assessments, effective maintenance and training, enforcement of policy and good housekeeping.

Whether you own or lease your warehouse(s) and the equipment used in and around them, due consideration should be given to fire risk. If you are leasing a warehouse, it should not be assumed that these responsibilities rest with the landlord. Indeed, in many instances, the maintenance and repair of a warehouse will be the responsibility of the lessee. This TT Brief considers loss prevention measures you could take to mitigate fire risk.

What are the risks?



How can you mitigate these risks?

There are numerous risk assessment criteria to consider. While not exhaustive, we highlight primary areas of concern below.

HANDLING EQUIPMENT

Most handling equipment and vehicle fires are caused by hydraulic leaks or electrical faults.

- Procure well designed equipment (e.g. hydraulic hoses away from exhaust manifolds and maintain with quality spare parts)
- Install fire suppression technology in engine compartments and electrical cubicles
- Implement predictive and preventative maintenance
- Safety procedures relating to equipment charging – equipment should not be unattended when charging



HAZARDOUS CARGOES

Hazardous cargoes present a heightened risk of fire and explosion. Take the following actions:

- Follow regulatory requirements and best practice for the safe storage, segregation and handling of dangerous goods
- Ensure staff are trained and competent in dangerous goods matters – this is a mandatory requirement of the IMDG Code
- Conduct thorough due diligence – know your customer and ensure that cargo is correctly declared
- Follow the storage safety guidelines supplied by the manufacturer of the goods you are storing
- Ensure compatibility of commodities when packing and storing goods
- Assess the inherent properties of bulk cargoes (risks of spontaneous combustion, oxidation, production of gases, dust explosion etc) and ensure adequate controls
- Be alert to flash or ignition point of stored cargoes and take appropriate steps to maintain chemical integrity and stability
- Establish plans for monitoring and, as necessary, safe removal/disposal of goods that have been uncollected, misdeclared or stored for an extended period of time



FIRE RISK AND RESPONSE ASSESSMENT

Ongoing risk assessment

- Appoint a Fire Control Officer
- Safety measures should include:
 - Enforced no smoking policy (and provision of designated smoking area)
 - Regular testing and review of fire alarm, fire detection and firefighting equipment and placement
 - Thorough risk assessment of sources of ignition and fire escape routes
 - Record preventive work completed
 - Fire response training (drills/muster points)
 - Testing of water pressure and flow
 - Statutory and thermographic inspections of electrical installations
 - Installation of thermal cameras to detect fires and (also valuable for security)
 - Consider an annual assessment conducted by an external fire expert
 - Emergency services response
 - Pumps tested and run periodically
 - Fire fighting water retention
 - Constant vigilance to ensure fire doors remain closed
 - PAT (portable appliance testing)
 - Avoid (through use of LED) or protect lighting that generates heat



ARSON

According to the National Fire and Protection Association (US) around 15% of warehouse fires are intentionally started.

- Implement strong security (such as perimeter fences, lighting, CCTV, access controls)
- Install thermal camera technology to detect fires and people
- Monitor all third parties entering the site
- Carry out due diligence and screening on all staff and contractors
- Remove readily available fuel sources such as industrial refuse bins and pallets to prevent opportunist attacks



WATCH OUT FOR RED FLAGS

- Hazardous cargoes – adhere to manufacturers' storage instructions
- Be alert to the risks of misdeclared shipments
- Assess security vulnerabilities
- Ensure all property and equipment is well maintained
- Maintain good housekeeping

