

FIRE SAFETY INSPECTIONS

Risk Control Guide

Introduction and Scope

Most of us give little thought to our surroundings until an accident occurs. “Who left the power switch of the kettle on?” “Who left those timber pallets against the building?” “Who left those boxes in front of the fire hose?” “Who left that fire door open?” “Why was that sprinkler valve closed?” We all notice what should have been done after an accident has occurred.

We tend to assume that our premises are safe, and that any hazardous condition or activity will be dealt with accordingly. Have you ever asked yourself if a knot of extension cord shorts out and causes a fire, would you be able to use the nearest fire extinguisher? What if the extinguisher is empty or unreachable or is not even there? What if you are in an unfamiliar building and cannot find your way out because the exit sign is burned out or missing? What if the emergency exit is blocked or locked? Who checks on these things and makes sure that they are in proper condition?

To ensure that premises are maintained as a safe environment, all building owners and/or tenants should conduct inspections of the premises on a regular basis using a checklist. These should be completed by a responsible and adequately trained Fire/Safety Officer. Inspections should be at least monthly for industrial premises and at least quarterly for a less hazardous occupancy. This document provides tables that can be used to assist this process and can be modified to suit each sites individual needs or circumstances.

The majority of sprinkler system inspections and tests should be completed weekly. Appendix A at the end of this guide provides specific best practice guidance on the frequency of user inspection and testing for automatic sprinkler systems.

Specific guidance on sprinkler system impairment management and reporting is provided in a separate Risk Control Guide: RCG004 – Impairments to Fire Protection Equipment.

Detailed guidance on the control and management of hot work activities is also available in Risk Control Guide: RCG003 – Hot Work.

Management or individual departments should routinely review the completed checklists and take appropriate corrective measures within a specified period of time depending on the importance of the deficiency identified. **Any sprinkler system or sprinkler system water supply faults identified should be rectified as a matter of urgency.**

Completed checklists (including sprinkler system test records) and records of corrective actions should be held for at least 12 months for future review.

SITE:	BUILDING :
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FIXED FIRE EXTINGUISHING SYSTEMS

N°.	Location	Type (Gaseous, Water Mist etc.)	Functioning (Y/N)	Last Maintenance Date

Comments:

EXTINGUISHER, HOSE REELS, HYDRANTS and DRY RISERS

	Functioning (Y/N)	Loaded (Y/N)	Maintenance Completed (Y/N)	Accessible (Y/N)
Fire Extinguishers				
Hose Reels				
Hydrants				
Dry Risers				

Comments:

FIRE DOORS/SHUTTERS				
Good condition?	Yes	No	Blocked doors/shutters? Yes No	
All doors/shutters functioning properly?	Yes	No	Automatic closing devices operating? Yes No	
<u>Comments:</u>				
FLAMMABLE LIQUIDS/GASES				
Stored in designated areas?	Yes	No	Safe storage systems? Yes No	
Adequate grounding?	Yes	No	Daily amount limit only within production	
Gas cylinders supported?	Yes	No	areas? Yes No	
Gas fittings/hoses in good condition?	Yes	No	Adequate bunding/containment Yes No	
<u>Comments:</u>				
SMOKING POLICY				
Signs in all areas?	Yes	No	Designated areas (external)? Yes No	
Evidence of poor smoking discipline?	Yes	No		
<u>Comments:</u>				
HOUSEKEEPING				
Generally satisfactory throughout site?	Yes	No	Oil soaked rags kept in self closing metal bins & regularly cleared to open? Yes No	
Storage clear of lights, electrical, heating systems?	Yes	No	Storage area passageways clear? Yes No	
Appropriate clear space below sprinkler heads?	Yes	No	N/A	Process areas clear of debris? Yes No
Longitudinal and transverse flue spaces kept clear in storage racks?	Yes	No	Combustible/explosive dust levels controlled with regular cleaning at high and low levels? Yes No	
<u>Comments:</u>				

BUILDING MAINTENANCE			
Gutters & drains in good condition and clear?	Yes	No	Walls & roofs in good condition? Yes No
Yard areas maintained and safe?	Yes	No	Smoke vents maintained in working order? Yes No
Penetrations from plant and switch rooms fully fire stopped to same fire rating as the room?	Yes	No	Foam insulated sandwich panels maintained in good condition with no exposed insulation? Yes . No
<u>Comments:</u>			
ELECTRICAL EQUIPMENT			
Temporary wiring tested/maintained?	Yes	No	Motors, fuse panels, switch boxes clean? Yes No
Wiring/equipment in good condition?	Yes	No	Unauthorised portable equipment? Yes No
Storage in switchgear rooms/cupboards?	Yes	No	Switch/plant rooms, service ducts locked? Yes No
Portable equipment tested & logged?	Yes	No	No combustibles within 1.5m of electrical equipment? Yes No
<u>Comments:</u>			
PLANT MAINTENANCE			
Plant maintenance schedules up to date?	Yes	No	Safety controls/alarms tested & working? Yes No
Repairs completed promptly?	Yes	No	
<u>Comments:</u>			
HOT WORK CONTROLS			
Permits being used where required?	Yes	No	Includes dedicated fire watch during work and for at least 60 minutes post work completion? Yes No
Final area inspection and permit sign off completed?	Yes	No	Use of permits monitored/audited? Yes No
<u>Comments:</u>			

SPACE HEATING						
Unauthorised portable heaters?	Yes	No	Clear space maintained around heaters?	Yes	No	
Fusible links/fire valves in good condition?	Yes	No	Any fuel oil leaks?	Yes	No	
<u>Comments:</u>						
FORK LIFT/ELECTRIC VEHICLE CHARGING AREAS						
Kept clear of storage and clean/tidy?	Yes	No	Cables/connectors off floor and undamaged?	Yes	No	
<u>Comments:</u>						
EXTERNAL AREAS						
Pallets, skips & bins at least 10m from buildings?	Yes	No	Waste contained/controlled?	Yes	No	
Tank pits/bunds clear of waste?	Yes	No	N/A	Fire hydrants identified and unobstructed?	Yes	No
Perimeter fence secure?	Yes	No	Substations unobstructed and accessible?	Yes	No	
<u>Comments:</u>						
FIRE ALARMS						
Weekly tests completed & logged?	Yes	No	Automatic detectors unobstructed?	Yes	No	
Interlocks with other critical building and plant systems tested and operational?				Yes	No	N/A
Fire Alarm signalling to the security gatehouse or Alarm Receiving Centre received?				N/A	Yes	No
<u>Comments:</u>						

WATER DAMAGE					
Main water stop valve location highlighted?	Yes	No	Stop valve accessible & maintained?	Yes	No
Pipes vulnerable to frost lagged and/or trace heated?	Yes	No	N/A	Frost thermostats operational?	Yes No N/A
Trace heating operational?	Yes	No	N/A	Water tanks maintained?	Yes No N/A
<u>Comments:</u>					

Survey by:	Date:	Reviewed by:

PUMPED FIRE WATER SUPPLIES											
Pump Room	Pump Suction & Delivery Valves	Pump Room Temperature	Water Storage Tank(s)						Pump Priming Tanks (if any)	Jockey Pump	
Secure	Secured Open	Minimum required 4°C electric motor 10°C diesel engine	Confirm water level full	Outlet valves (if any) secured open	Tank infill secured open	Infill float valve operational	Trace heating functional	Immersion heater functional	Full & ball valve functioning	Auto start pressure	Auto stop pressure
(Y/N)	(Y/N)	(°C)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(bar)	(bar)
Comments											

ELECTRIC MOTOR DRIVEN PUMPS							
Pump Ref.	Check control panel for fault indications	Automatic start	Record start pressure	Record closed valve pressure	Confirm pump relief flow	Manual start (if applicable)	Alarm indications (local and remote)
	(Y/N)	(Y/N)	(bar)	(bar)	(Y/N)	(Y/N)	(Y/N)
Comments							

DIESEL PUMPS															
Pump Ref.	Pre Test Checks					Function Tests					Post Test Checks				
	Control panel fault indications	Engine oil (level & condition)	Battery condition	Automatic start	Record start pressure	Record closed valve pressure	Confirm pump relief flow	Manual start	Adequate pump room ventilation	30 minute engine run	Alarm indications (local and remote)	Record total hours run	Adequate engine cooling	Confirm batteries charging	Top up fuel
	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(bar)	(bar)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(hours)	(Y/N)	(Y/N)	Record level
Comments															

PRESSURE TANKS						
N°.	Is the tank charged to correct levels?					
	<table border="1"> <tr> <td>Required water ratio correct?</td> <td>Required air pressure correct?</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	Required water ratio correct?	Required air pressure correct?			
Required water ratio correct?	Required air pressure correct?					
Comments						



Completed by:	Date:	Reviewed by:
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Appendix A – User Inspection & Testing Frequency for Sprinkler Systems

	Activity	Frequency	Comments
Sprinkler Systems & Water Supplies			
Sprinkler control valves	Inspect	Weekly	Correct position, locked
Pressure gauges	Inspect	Weekly	Record and monitor pressures
Water motor alarms	Test	Weekly	Sound for at least 30 seconds
Water supply storage levels e.g. tanks, reservoir, river, lake	Inspect	Weekly	Include any pump priming tanks & pressure tanks
Trace heating and localised heating systems	Inspect/Test	Weekly	Check for correct function to prevent freezing including water tank and valve houses
Remote alarms to alarm receiving centre	Test	Weekly	Prove correct operation and signal receipt
Water storage tank security	Inspect	Monthly	Check security of access ladders and tank covers
Antifreeze (if applicable)	Test	Annually	Specific gravity
Fire Pumps			
Automatic start	Test	Weekly	Via pressure drop
Start pressure	Test	Weekly	Record and monitor pressure switch set points
Cooling water	Inspect	Weekly	Check for flow
Diesel pump oil pressure	Inspect	Weekly	Check and monitor
Diesel engine fuel & lubricating oil level	Inspect	Weekly	Check and monitor
Pump room ventilation systems	Inspect/Test	Weekly	Inspect and prove for correct operation
Batteries	Inspect	Monthly	Check & monitor electrolyte levels & charging voltage

Diesel Engine Driver (run for 30 minutes)	Test	Weekly	<p>Monitor water levels in closed circuit cooling systems</p> <p>Monitor oil pressure (where gauges are fitted), engine temperatures and coolant flow throughout the test.</p> <p>Oil hoses should be checked and a general inspection made for leakage of fuel, coolant or exhaust fumes</p>
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NB – In relation to sprinkler systems. Most companies will have comprehensive maintenance and service contracts in place with approved sprinkler system contractors which will supplement these recommended inspections and tests. Such maintenance and service contracts should fully comply with the specific guidance in place within the relevant sprinkler standards that apply, e.g. LPC Technical Bulletin 203 – Care and Maintenance of Automatic Sprinkler Systems or NFPA 25 – Inspection Testing and Maintenance of Water Based Fire Protection Systems. Such maintenance and service contracts should also ensure full water supply testing and proving at least 6 monthly with all any repair works considered necessary carried out within recommended timelines.

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