



Philippine Society of Mechanical Engineers

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PSME ALERT # 2018-01

FIRE PROTECTION CHECKLIST

The Philippine Society of Mechanical Engineers' (PSME) Fire Protection Technical Division is publishing this "PSME Alert" to help the public avoid fires.

To ensure that the building fire protections are working properly, owners, facility managers and occupants are advised to use the following checklist.

E-mail alert@psme.org.ph to request clarification about the checklist.

1. FIRE-RATED CONSTRUCTION

- Is fire-rated construction maintained?
- Walls, shafts, fire stops, shaft enclosures, partitions and floors are repaired, restored or replaced when damaged, altered, breached, or penetrated?
- Are fire doors and smoke barrier doors not blocked, open or made inoperable?
- Do fire doors close from the full open position and latch automatically?

2. FIRE PROTECTION SYSTEMS

- Has the required annual service of the fire sprinkler system been performed in the last year by a qualified sprinkler contractor?
- Never paint any fire sprinkler head part
- Never hang anything from any part of a fire sprinkler system
- Never stack items close to fire sprinklers
- Always report damages to any part of the fire sprinkler system
- Always make sure control valves supplying water to the system are in the open position
- Ensure pressure gauge indicate the working system pressure.
- Sprinkler systems must be tested, and maintenance records kept on a monthly basis.
- Are all fire detection, alarm, and extinguishing systems inspected tested and maintained in accordance with reference standards?
 - Portable fire extinguishers NFPA 10;
 - Carbon dioxide fire-extinguishing system NFPA 12;
 - Dry-chemical extinguishing system NFPA 17;
 - Wet chemical extinguishing system NFPA 17A;
 - Sprinklers NFPA 25;
 - Fire alarm NFPA 72;
 - Water mist systems NFPA 750;
 - Clean agent extinguishing system NFPA 2001
- Are records of all inspections, test, and maintenance of fire protection systems available for the past 3 years?
- Are valves controlling the water supply for automatic sprinkler systems and water-flow switches on sprinkler systems electrically supervised?
- Are fire extinguishers in conspicuous locations, readily accessible, and immediately available for use? Not obstructed or obscured from view?
- Type of extinguisher should be appropriate to the main risk in the area it is installed. e.g. Dry Chemical Powder, CO₂, Water, Wet Chemical, Foam, Vaporising Liquid, Kitchen fire.

3. FIRE SUPPRESSION SYSTEMS FOR SPECIAL HAZARDS

- Storage: Is the top of storage maintained a minimum of 18" below sprinkler head deflectors in fire-suppression areas?
- Commercial Kitchen Hood Suppression System: In commercial cooking applications, has the hood suppression system been serviced in the last 6 months and is the hood cleaned at intervals to prevent the accumulation of grease?

4. FIRE HOSE

- Installed Fire Hose must be tested/checked by an appropriately qualified person every quarter, tag in place and current.
- Area around fire hose to be kept clear and unobstructed.

5. FIRE HYDRANT & HYDRANT BOOSTER SYSTEMS

- Are the hydrant & hydrant booster systems maintained?
- Hydrants are to be tested/checked tag in place by qualified person every 6 months.
- If hydrant booster pumps are installed, they are to be tested monthly and maintenance records kept.
- Hydrant systems to be hydrostatically tested every 5 years.

6. FIRE EXITS

- Are exit doors fitted with Public Safety Hardware?

- Required exit doors are to be fitted with public safety hardware. Exit doors must open from the inside at all times without a key by a single hand downward/pushing motion on a single device.
- Exits and paths of travel are to be kept clear at all times.
- No non-approved or secondary locking devices are to be fitted to exit doors.
- Fire and/or Smoke doors (if installed) are to remain unobstructed, maintained with door and frame compliance tags in place and function as designed.

7. MAINTENANCE RECORDS

- Stairwell Pressurization: To be tested by an appropriately qualified person every 3 months, maintenance and test results to be recorded in a log book.
- Mechanical Ventilation: To be tested by an appropriately qualified person every 6 months, maintenance and test results to be recorded in a log book.
- Standby Power Supply: To be tested by an appropriately qualified person every 6 months, maintenance and test results to be recorded in a log book.
- Emergency Lift: To be tested by an appropriately qualified person every 12 months, maintenance and test results to be recorded in a log book.

8. HOUSEKEEPING (all buildings)

- Fire Exit Stairway: Ensure fire exit stairways are kept clear at all times with no items placed or stored within them. Fire Doors are not to be chocked open and must function as designed.
- Storage: Ensure any flammable, combustible, hazardous materials or any other products don't accumulate causing a fire risk. Items stored in the building must not interfere or obstruct paths of egress or installed fire safety systems.
- Combustible rubbish: Is combustible rubbish that is stored in containers outside of vaults or rooms removed from the building a minimum of once each working day?
- Oily rags storage: Are oily rags or similar materials stored in metal, metal-lined or other approved containers equipped with tight-fitting covers?
- Combustible decorations: Are combustible decorations flame retardant?

9. EVACUATION PLANS & PROCEDURES

- Is there a fire and evacuation diagram displayed?
- All premises should have an evacuation diagram in place & displayed prominently and printed in photo luminescent paper.
- Evacuation Diagrams must show: "You Are Here", Date created/reviewed, Muster/Gathering Point, Fire Equipment, Exits and Orientation (e.g. North, street name and orientated correctly in line with building floor plan)
- All commercial visitor accommodation (Boarding Houses, Hostels, Hotels and short stay accommodation), are to have an evacuation diagram prominently displayed in each room.
- Multi story buildings with fire stairs and exits to display evacuation diagrams on each floor.
- Evacuation diagrams to be reviewed 12 monthly and after any certifiable building alterations.

For systems that work in conjunction with one another like "Automatic Fire Suppression System" (AFSS) and "Fire Detection and Alarm System" (FDAS) or FDAS and "Smoke Heat Evacuation and Ventilation System" (SHEVS), it is important to test them together to improve the odds of preventing catastrophic fire incidents.

PSME strongly advise tapping consultants or experts in the conduct of a fire safety audit.

A highly recommended safety practice is to have employees take turns sweeping the building for fire hazards daily. An ounce of prevention is worth a pound of cure.

PSME for public safety.

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