

Sauna Fire Safety

Introduction

Saunas are now found in a wide range of premises, typically constructed mainly of timber, housing a sauna heater (reaching temperatures of up to 95°C) which are usually electrically operated and thermostatically controlled. Some large fires have been attributed to saunas, so the risk to life, property, and business interruption resulting from such fires must be recognized. The precautions below apply to all types of saunas and heaters (including hidden varieties).

Main Hazards

1. The sauna itself
2. Management controls and housekeeping procedures
3. User operation and general abuse in use.

Causes of Fire

- Poor Housekeeping – combustible materials left in the vicinity of the heater e.g. robes or towels
- Heaters left 'on' and unattended for prolonged periods
- Failure to turn power to the sauna 'off' on cessation of business
- Thermostat failure
- Defective timer switches
- Inadequate inspection regimes during times of operation
- Deliberate interference - tampering with thermostats to stop the heater switching off once safe operating temperatures are reached. Often saunas are run at too high a temperature by bathers
- Lack of maintenance
- Close proximity of heating elements in a combustible structure
- Heater overheating, incorrect or insufficient stones or packing too tightly
- Electrical faults e.g. internal sauna lighting
- High temperatures for prolonged periods, resulting in the drying out of internal timber linings leading to fire
- Excessive water or incorrect water (e.g. chlorinated pool water) on the heater stones leading to thermal shock of the heating elements
- Using scented oils on the heater stones
- General wear and tear or abusive use

- Heaters or thermostats – not installed in accordance with manufacturers instructions
- Wiring, unsuitable for such temperatures.

Fire Safety Precautions

Try to remove or reduce possible hazards by:

Fire Risk Assessment (FRA)

Ensure the FRA includes the sauna and supports appropriate controls. Keep the assessment under review particularly if changes have been made.

Fire Action Plan

Provide clear and precise instructions covering:

1. Raising the fire alarm
2. Calling the fire department
3. Building evacuation
4. Tackling the fire - only if safe to do so!

Ensure:

- All employees including temporary staff or others, are aware of emergency procedures including who is responsible for calling the fire department
- Dependence is not placed on any fire alarm (automatic or otherwise), confirmation telephone calls are needed as well
- All staff, act on any fire alarm activation take the appropriate action.

Installation

Saunas need to:

Be constructed and installed in accordance with the manufacturer's instructions
Have Electrical installation strictly in accordance local electrical code and be done by a licensed electrician. Consider the provision of a remote 'ON/OFF' switch housed within a lockable safety cover.

Residual Current Device (RCD's)

Use RCD's to protect all sauna equipment.

Maintenance

Must be carried out in accordance with the manufacturer's instructions. Service periods of 6 or

12 months are usual, depending on usage and should include:

- Check general wear and tear of the structure

- Check the electrical installation (e.g. thermostats, high temperature safety thermostats, heating elements, timers, RCD's, fuses) - replacing as necessary
- Check and replace damaged or broken stones with similar or recommended stones.

Management Controls and Inspections

Provide signed/dated/timed recorded checklists to ensure equipment has been inspected and any remedial items have been fulfilled. Such inspections should take place by senior staff.

Start of day inspection

1. Always preform inspection prior to switching the sauna ON:
2. The sauna is empty of combustible items particularly on, around or under the heater e.g. towels, robes etc.
3. Benches, backrests and duckboards are correctly positioned clear of the heater.
4. Heater stones cover the heating elements but are not too tightly packed
5. The heater is fixed securely to the wall or if floor mounted is level, stable and the casing is in good condition
6. Heater guardrail is securely fixed in place
7. Timbers are in sound condition (not scorched)
8. Thermostat sensors inside the sauna are safely secured and clear of foreign items
9. Electrical connections are visually safe

Two hourly intervals

- Check during operation of the sauna that:
- No towels or any items have been left inside the sauna by previous bathers and particularly that no items are left on the heater or its guardrail
- Benches, backrests and duckboards have not been moved close to the heater.
- Thermostat sensors inside the sauna have not been tampered with.

End of day

- Preform inspection when the sauna is switched OFF:
- Confirm the power supply is switched 'OFF' and any timer is in the 'OFF' position
- Working thermostats are ideally turned to the low setting
- No items are left inside the sauna particularly on the heater or its guardrail
- Benches, backrests and duckboards have not been moved close to the heater

- Internal timbers are in good condition, not showing signs of scorching
- Thermostat sensors within the sauna have not been tampered with
- Electrical connections appear safe
- Leave the door to the sauna cabin open.

General housekeeping

Regularly clean saunas to remove any build up of dust or hair.

Education

Operators and all staff must all be trained and understand all the sauna hazards.

Bather Safety

Ensure all users are aware of safety instructions, fire safety issues and how to operate the sauna. Bathing guidelines should be read in conjunction with a 'Do' and 'Don't' list of safety instructions all of which should be clearly displayed at the entrance to the sauna cabin.

Fire Extinguisher

Provide an appropriate extinguisher in a suitable position to be used by trained staff.

Other Fire Protection Measures

Automatic Fire Alarm

Install a system or maintain an existing system using a competent firm with appropriate third party accreditation, Consider the provision of remote signaling to an approved Alarm Monitoring Centre.

Fire Suppression Systems

Consider protection of the sauna using a high pressure water mist system.

Compartmentation

The area of the premises where the sauna is located ideally should be in a room or enclosure that can provide 60 minutes fire resistance.

Key Action Points

- Ensure the sauna is in the Fire Risk Assessment for your premise and the assessment is up to date
- Review the Fire Action Plan
- Effectively communicate the Fire Risk Assessment and Fire Action Plan to staff
- Provide recorded inspection checklists
- Maintain saunas, associated equipment and fire protection measures regularly.

References

Hardfacts Sauna Health & Safety (A-5729)

Hardfact Swimming Pools and Hot Tubs (A-5730)