The Production of Reconditioned Fire-Fighting Equipment

This South African National Standard (SANS 1475-2:2024) specifies the procedures that apply to the effective reconditioning of fire hose reels and hydrants. Fire hose reels are considered major first-aid articles for commercial and industrial applications, while fire hydrants enable fire-fighters to tap into municipal water supplies during emergencies.

The standard aims to provide a sound maintenance system ensuring these critical safety devices are always readily available, usable, and in sound operating condition. This document is referenced in the Occupational Health and Safety Act and supersedes the previous edition (SANS 1475-2:2010).

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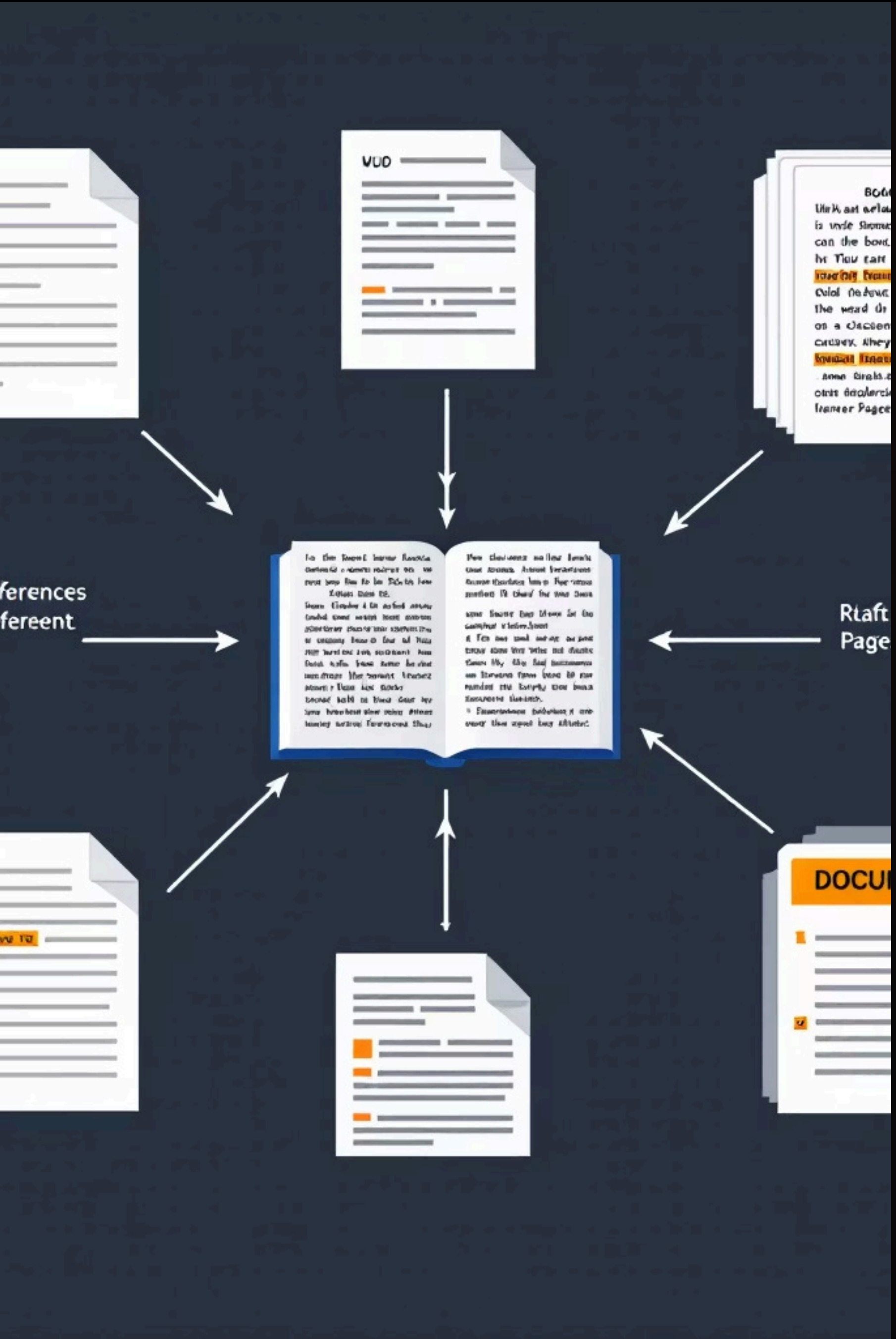

Scope and Normative References

Scope

This part of SANS 1475 specifies the procedures that apply to the effective reconditioning of fire hose reels and hydrants. It does not cover the supply or installation of these devices.

Normative References

The document references SANS 10105-2, "The use and control of fire-fighting equipment – Part 2: Fire hose reels and hydrants" as an indispensable resource for its application.

Application

For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document including any amendments applies.

Key Definitions for Fire Safety Equipment

Fire Hose Reel

A hose reel permanently connected to the fire-fighting water supply intended to provide an accessible and controlled supply of water in response to a developing fire.

Fire Hydrant

A device permanently connected to the fire-fighting water supply with a connection point located either above ground (above-ground hydrant) or below ground level (underground hydrant).

Maintenance

Combination of prescribed actions and measures carried out by a competent person, intended to retain a fire hose reel or hydrant in, or restore it to, a state in which it can perform a required function.

Additional Important Definitions

Reconditioning

Combination of all technical and administrative actions including supervision actions, intended to retain the fire hose reel or hydrant in, or restore it to, a state of full and effective operational readiness.

Competent Person

Person who has acceptable qualifications, training and practical work experience to carry out the effective reconditioning of fire hose reels and hydrants in terms of this part of SANS 1475.

Static Water Pressure

Actual pressure in the water system that supplies the fire hose reel or hydrant at any given time. The minimum required static water pressure of 300 kPa can fluctuate due to interruption or changes in demand.

Workshop and Facility Requirements

Permanent Workshop

Required premises situated on a business site that are acceptably constructed, protected, and permanently equipped to cater for the reconditioning of fire hose reels and hydrants in accordance with the requirements of this standard.

Mobile Workshop

Permanently equipped maintenance vehicle intended to operate away from a permanent workshop, without necessarily returning to the workshop every day, but required to return to the permanent workshop at least once every fortnight.

A mobile workshop cannot operate in place of a permanent workshop.

Maintenance Vehicle

Vehicle that is stocked and equipped with the appropriate equipment required to maintain a fire hose reel or hydrant effectively in terms of this part of SANS 1475.

General Requirements and Controls

Facilities

The reconditioning of fire hose reels and hydrants shall be done on site supported by a suitably equipped and managed permanent workshop, and when relevant, by a mobile workshop or maintenance vehicle. The use of a mobile workshop does not replace the requirement for a permanent workshop.

Training of Staff

All staff members involved in the reconditioning of fire hose reels and hydrants shall have been trained to ensure that each section of the work is carried out in accordance with this standard. They shall have been made fully aware of safe working practices and any dangers involved.

Protection of Workmen

Workmen shall be furnished with the necessary personal protective equipment. They shall have been warned of any actions and of the presence of any chemicals or operations conducted on the site where water may pose risk of injury or property damage.

Requirements for Reconditioning

Competent Person

Reconditioning of a fire hose reel or hydrant shall be carried out by a competent person.

Extent of Reconditioning

Reconditioning shall ensure that the fire hose reel or hydrant is restored to full and effective operational readiness and complies with the requirements of the original manufacturer.

Frequency

Maintenance of fire hose reels and fire hydrants shall be carried out annually in accordance with the relevant procedures given in the standard.

Modification

Modification to the fire hose reel or hydrant shall not be permitted. The use of performance enhancing items at the end of the hose is not considered a modification.

Rejection Criteria for Equipment

Unauthorized Modifications

Any fire hose reel or hydrant that has been modified in any way shall be rejected.

Excessive Damage

Equipment that exhibits excessive corrosion or damage shall be rejected during the reconditioning process.

Non-compliance

Any fire hose reel or hydrant that is not maintained in compliance with the performance requirements of the original manufacturer shall be rejected.

Fire Hose Reel Maintenance Procedures

Frame and Mounting

Check frame for corrosion or damage. Ensure mounting bolts hold the hose reel securely in position to allow for the designed use of equipment.

Component Parts

Check components to ensure they are fully functional. All component parts shall comply with the original manufacturer's requirements.

Water Control Fittings

Check inlet stop valve and shut-off nozzle to ensure they function as prescribed by the original manufacturer.

Fire Hose

Ensure hose is between 28-30m in length, free from joints, and examine for signs of damage or leakage.

Fire Hose Reel Maintenance Checklist

Item	Check	Corrective Action
Mounting bolts	Loose and binding	Adjust or replace
Frame	Corrosion or physical damage	Repair and refinish, or replace
Drum and discs	Damaged (bent, jammed, corroded)	Repair or replace
Component parts	Corrosion or damage	Repair and refinish or replace
Fire hose	Incorrect length or damaged	Replace or repair if possible

Above-Ground Hydrant Maintenance

Standpipe and Valve Body

Examine for signs of corrosion, damage or leakage

Component Parts

Check to ensure they are fully functional

Water Seals and Pressure

Check for damage and perform and record static pressure

Water Control Fittings

Check spindle assembly and clack washer to ensure proper function

The above-ground hydrant shall be opened during the maintenance procedure to ensure it is operative. Any leaks that develop after opening shall be the responsibility of the owner or user, as repair of leaks or replacement of the hydrant does not form part of the maintenance requirement.

Underground Hydrant Maintenance

Enclosure Clearance

Remove obstacles and debris

Component Inspection

Check valve body and water control fittings

Water Seals and Pressure

Check for damage and perform and record static pressure

Final Inspection

Complete maintenance and apply labels

Check the underground hydrant enclosure to ensure it doesn't have any obstacles covering or filling it (dirt, soil, paving, stones, debris) that may restrict opening of the enclosure or access to the hydrant. The valve body should be examined for signs of corrosion, damage or leakage.

Hydrant Maintenance Checklist

- Inspect hydrant body for damage, cracks, or deformation
- Check components for corrosion, damage, or missing parts
- Verify handwheel/handle condition and operation
- Test pawl assembly and ratchet mechanism function
- Examine lip seal washers for wear or leakage
- Check spindle assembly function and lubrication
- Confirm outlet caps are present, undamaged, and removable
- Inspect valve seats for damage or debris
- Check for water leakage at seals, joints, and valves
- Ensure proper drainage to prevent freezing
- Verify visibility of identification markings
- Test water flow pressure (minimum 300 kPa)
- Inspect connecting pipes for damage or leaks
- Test all valves through complete range of motion

Hydrant Pressure Testing Procedure

Fit Testing Equipment

Attach blank cap assembly with pressure gauge and ball-cock to the hydrant outlet

Open Hydrant

Open the hydrant slowly to allow water flow

Purge Air

Crack open ball-cock to drain small amount of water and remove air

Record Pressure

Close ball-cock, note static pressure, then close hydrant

This procedure provides an example of how testing can be conducted on a fire hydrant to determine whether the static water pressure in the water supply meets the minimum requirement of 300 kPa. The recorded pressure must be noted on the maintenance label.

Security Sealing Requirements

Security Seal Definition

A security seal is an item, usually a plastic pull-tite or a wire and lead seal, easily broken, that is applied to fire hose reels and above-ground hydrants to show they are in full operational readiness and that no tampering of the work conducted has occurred.

Hose Reel Sealing

Using an acceptable security seal, the hose reel shall be sealed in a manner that prevents use without breaking the seal. The seal should break on half a rotation of the inlet stop valve handle or handwheel and should only require the force exerted by a single hand.

Hydrant Sealing

Hydrants must be sealed in a manner that prevents use without breaking the seal. For tamperproof hydrants, seal in a way that prevents the key from being inserted without breaking the seal.

Water Supply Requirements

300 kPa

Minimum Pressure

Required static water pressure for all equipment

0

No Water

Equipment with no water flow must be marked

100%

Owner Responsibility

Ensuring adequate water supply is user's duty

Fire hose reels and hydrants with no water at the time of maintenance shall not be maintained and shall be indelibly marked "NO WATER", recorded and reported in writing to the owner or user. The owner or user shall ensure that the fire-fighting water supply meets the minimum static water pressure requirement of 300 kPa in accordance with SANS 10105-2.

Marking and Maintenance Labels

Required Information

- Name, address and contact number of reconditioning organization
- Initials of the competent person
- Date of maintenance
- Next maintenance due date
- Static water pressure at time of maintenance (hydrants only)

Label Positioning

Fire hose reels require two labels: one on the outside of the front disc and another visible when fully unwound. Hydrants require one label positioned near the device on the supply pipe, wall, or structure.

Underground hydrants need one label on the inside of the enclosure, on a nearby wall, or on the location indicator marker.

Reconditioning Records

Required Information

The reconditioning organization must provide the user with a record containing the name of the user, date of maintenance, next maintenance due date, and location of the equipment.

Non-conformance Records

The reconditioning organization shall keep records of all non-conformance and unresolved issues reported to the customer.

Record Retention

Both the reconditioning organization and the user must retain these records for at least 5 years. The organization must keep proof of providing these records to the user.

Summary

This standard establishes five critical requirements for fire-fighting equipment: proper specifications, minimum performance standards, security provisions, compliance documentation, and equipment integrity verification.

Proper Specifications

All reconditioned fire-fighting equipment must meet the dimensional, material, and functional specifications as outlined in the relevant Australian Standards.

Minimum Performance Standards

Equipment must consistently perform to established minimum standards for water flow, pressure testing, and operational functionality to ensure reliable performance during emergencies.

Security Provisions

Appropriate security sealing measures must be implemented to indicate equipment readiness and prevent unauthorized tampering while ensuring easy access during emergencies.

Compliance Documentation

Comprehensive maintenance records and appropriate labeling must be maintained for all reconditioned equipment, documenting testing dates, procedures performed, and technician details.

Equipment Integrity Verification

Regular inspection and testing protocols must be followed to verify the ongoing integrity and serviceability of all fire-fighting equipment throughout its operational lifecycle.

Adherence to these requirements ensures that reconditioned fire-fighting equipment remains reliable, functional, and ready for immediate deployment in emergency situations.

Thank You

Your commitment to maintaining these standards ensures the reliability of fire-fighting equipment when it matters most.