

Association of Building Compliance

Nova Flowtec Services Ltd

2022

OBJECTIVES

NZS4510 2008 - 2022.

To prevent loss of life and provide protection of property for all New Zealanders and enhanced safety for FENZ by ensuring the facilities to apply water for fire fighting are available.

To educate and improve the understand of our industry to help achieve the above.

- ▶ Fire Riser Mains. (What Are They)
- ▶ Appendix C - Low level Buildings.
- ▶ Common issues we find.

Fire Hydrant Systems for Buildings

Compliance Schedule - Specified System 6 (SS6)

- ▶ Riser Main
- ▶ Dry Riser NZS4510:1978
- ▶ Wet Riser NZS4510:1978
- ▶ Charged Riser - Fire Hydrant System NZS4510:1998
- ▶ Charged Riser - Fire Hydrant System NZS4510:2008
- ▶ **Charged Riser - Fire Hydrant System NZS4510:2022**

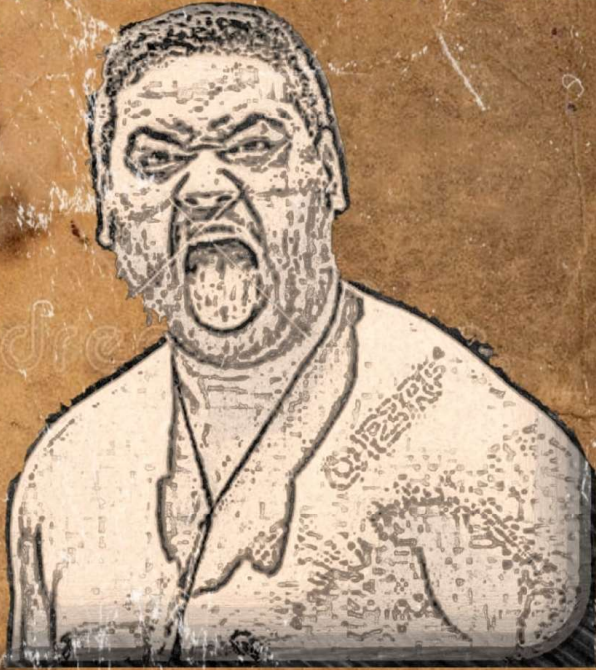
Dry Riser

- ▶ Simple
- ▶ Cheap to maintain and install
- ▶ Reliability issues
- ▶ Water ways have been confused for other types of pipe.

Wet Risers

- ▶ Very effective
- ▶ Operate on drop in pressure (is it really necessary ?)
- ▶ Expensive to instal and maintain
- ▶ Reliability (Brass Components)

THE BRASS BANDIT
WANTED
DEAD OR ALIVE



REWARD
\$ 5000.00

Brass Bandits

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Typical inlet manifold



Missing inlet manifold

MISSING INLETS



NZS4510 1998 Charged Risers

Starts with a draft in 1992 to address the needs of taller more complicated buildings.

Resilience, Reliability, Safety.

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NZS4510 2008 Charged Risers

- ▶ Recognition of reduced risk to sprinkler protected buildings.
- ▶ Design flow for hydrant systems is brought into line with PAS4509 2008 for buildings with sprinkler protection.
- ▶ Outlet assembly's are orientated at 45 degrees down to reduce pressure loss between the outlets the nozzles.
- ▶ Introduction of Riser main systems specifically designed to provide protection to Low Rise buildings. (Appendix C Systems)

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CHARGED RISER - APPENDIX C (Informative)

Low Rise Buildings NZS4510:2008



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- ▶ Typically large footprint buildings such as warehouses, shopping centres
- ▶ Increased hose runs required to achieve coverage 60M
- ▶ Increased operating pressure required to accommodate increased hose runs.

Low Rise Buildings

NZS4510 2022 Approach

- ▶ Low Rise buildings are now part of the main body of the Standard.
- ▶ Challenges of providing Hydrant systems in large footprint warehouses
- ▶ Hose runs required to achieve coverage still 60M
- ▶ Minimum operating pressure drops to 850kPa, and 750kPa in low Hazard Sprinklered Buildings.
- ▶ Buildings that cannot be made to meet these requirements will need to be approved under appendix A.

NZS4510 2022 Fire Hydrant Systems

- ▶ Appendix A
- ▶ Dry Risers are Back
- ▶ Combined Systems



ISSUES WE FIND DURING INSPECTIONS

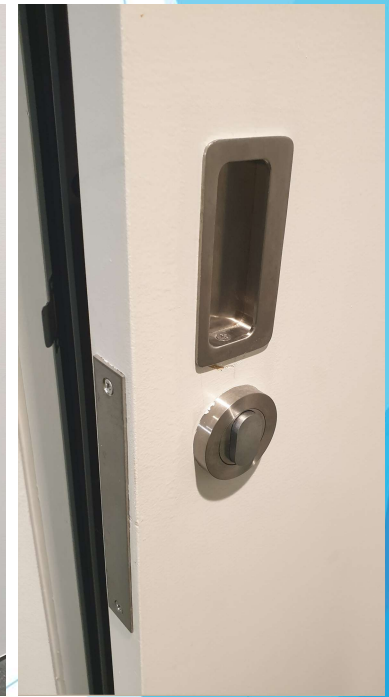
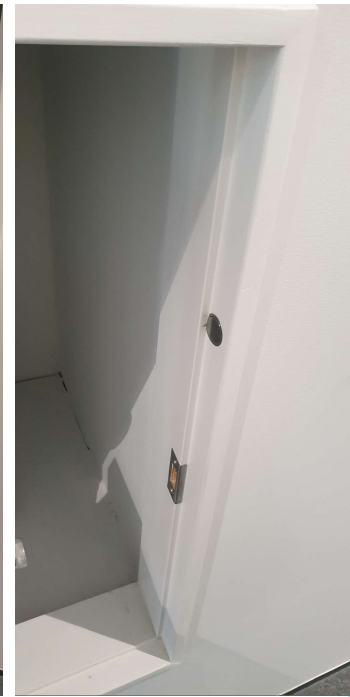
- ▶ Blanking caps under pressure
- ▶ Corrosion to:
 - ▶ Outlets
 - ▶ Valves
 - ▶ Bracing
- ▶ Pressure Reducing Valves (PRV) out of test

ISSUES WE FIND DURING INSPECTIONS

Enclosure Doors



Enclosure doors where fitted with a compliant lock shall be “frangible” or easily broken.



MISSING OUTLETS





CORROSION



CORROSION





PRV - testing

Summary

- ▶ Do what you can in your role to meet the value statement of 4510.
- ▶ To prevent loss of life and provide protection of property for all New Zealanders and enhanced safety for FENZ by ensuring the facilities to apply water for fire fighting are available.