

Hydrostatic Testing and Maintenance of Fire Hydrant Systems

Approval level: Fire Safety
First Issued: July 2007
Review date: February 2020
Version number: 1

Guideline No. 35

Author: FRV Fire Safety Advisory Group

Sponsor: BCA & Audits

Authorised by: Director, Fire Safety

1. PURPOSE

The purpose of this guideline is to provide industry with the Fire Rescue Commissioner's opinion relating to the issue of hydrostatic testing of fire hydrant systems that do **not** incorporate fire brigade booster connections within the Fire Rescue Victoria (FRV) fire district, therefore ensuring a consistent approach is adopted throughout industry when maintaining fire hydrant systems.

2. SCOPE

To ensure that a consistent approach is adopted throughout industry when testing and maintaining fire hydrant systems, FRV has identified issues regarding the hydrostatic testing of new and the maintaining of existing fire mains that do not incorporate a fire brigade booster. AS 2419.1-2005, together with AS 1851.4-2005, require the commissioning of new and the maintenance of existing fire mains; however there is no hydraulic differential between a fire main that does or does not incorporate booster connections. This guideline has been developed to advise industry of the position of the Fire Rescue Commissioner regarding this issue.

3. OTHER CONSIDERATIONS

Clauses 1.4.17 and 10.2.2 of AS 2419.1-2005 confirmed that the hydrostatic test requirement does not apply to fire hydrant systems that do not incorporate fire brigade booster connections or on-site pump sets.

This is largely due to the determination that Clause 1.4.17 of the hydrant code references the term "working pressure", which is defined within the hydrant design code as being:

"Working pressure – the maximum pressure achieved within the system by the fire authority, the system pumping equipment, or both, when the most hydraulically disadvantaged hydrant or hydrants are operated."

Based on this definition, and the non-provision of fire brigade booster connections and pump sets at a building, the pressure within public (reticulated) water mains cannot be construed as working pressure, as the pressure available within the public water main is not achieved through the use of on-site fire brigade booster connections and pump sets.

4. RECOMMENDATIONS

In the current legislative environment, the Fire Rescue Commissioner does not require building owners and developers to demonstrate that they have carried out hydrostatic tests of fire hydrant systems that do not contain fire brigade booster connections or on-site pump sets when assessing report and consent applications or when conducting safety measure audits.

5. REFERENCES

Australian Building Codes Board 2016, BCA 2016: Building Code of Australia, Australian Building Codes Board

Standards Australia 2005, Fire hydrant installations system design, installation and commissioning, AS 2419.1, Standards Australia, Sydney

Standards Australia 2005, Maintenance of Fire Protection Systems and Equipment, AS 1851.4, Standards Australia, Sydney

Note: *This is a controlled document and may only be modified by authorised personnel after review by FRV Fire Safety Advisory Group.*