

AON SPRINKLER CERTIFICATION



Aon New Zealand

Aon Sprinkler Certification
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| Aon Sprinkler Certification Technical Note | | |
|---|---|--------------------------------|
| Note Number: TN20-48 | Issue: 1.01 | Date: 22 September 2020 |
| Subject | Listing of gravity pipe supports | |
| Notice: Aon Sprinkler Certification Technical Notes provide guidance notes which may be used in certification of sprinkler installations by Aon New Zealand. If sprinkler installations are being certified by any other Sprinkler System Certifier, these Technical Notes may not apply. | | |

Refer NZS4541:2020 4.3.9.1.1. Except for generic items this clause requires all components that make up a pipe support assembly to be listed. Clause 4.3.9.1 gives the performance objective as five times the weight of water filled pipe plus 100 kG; see appendix A, table 1 for steel pipe.

The required test is a destructive strain test. The test shall be:

- a. Conducted on a calibrated test rig.
- b. Documented and include a stress stain curve with the yield point identified.
- c. Representative of how the component is installed. This may mean the test rig cannot directly attach to the component but instead an intermediate component used. This is to avoid deforming the component in a manner not illustrative of its application.

A passing grade is where the yield point exceeds the load given by 4.3.9.1.

Due to the imposition of additional load by 4.3.9.1 no further factors of safety are required to be applied.

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Appendix A

| Table 1 - Minimum Gravity Load for steel pipe | | | | |
|---|---------------------|-------------------------|--------|-----------------|
| Nominal bore (mm) | Maximum spacing (m) | Weight per meter (kg/m) | 100 kg | Total Mass (kg) |
| 20 | 2.4 | 1.95 | 100 | 123 |
| 25 | 3.7 | 3.05 | 100 | 156 |
| 32 | 3.7 | 4.19 | 100 | 178 |
| 40 | 4.6 | 5.03 | 100 | 216 |
| 50 | 4.6 | 7.37 | 100 | 270 |
| 65 | 4.6 | 10.3 | 100 | 337 |
| 80 | 4.6 | 13.7 | 100 | 415 |
| 100 | 4.6 | 21.1 | 100 | 585 |
| 150 | 4.6 | 38.8 | 100 | 992 |
| 200 | 4.6 | 62.6 | 100 | 1540 |