



BUILDING NOTE

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FIRE STOPPING OF PENETRATIONS THROUGH FIRE RATED ELEMENTS

Purpose

The purpose of this Building Note is to clarify the requirements of the Building Code of Australia (BCA) with respect to services that penetrate building elements that are required to have a fire resistance level (FRL).

Background

Concerns have been raised that some services are being installed through building elements that are required to have an FRL, without the appropriate protection thus compromising the FRL of the elements and increasing the risk of the spread of fire. It has been suggested that a lack of understanding of the BCA requirements by the purchasers and installers of fire collars is of a particular concern in this regard.

BCA deemed to satisfy requirements

Clause C3.15 of the BCA “Openings for service installations” deals with the requirements for services penetrating building elements that are required to have an FRL. It references AS 4072.1 and AS 1530.4 as the standards for testing of prototypes assemblies.

AS 4072.1 sets out the requirements for the testing, interpretation of test results, installation and certification of sealing systems around penetrations through separate building elements that are required to have an FRL, or if applicable, a resistance to the incipient spread of fire. The Standard provides minimum requirements and is intended to complement the fire protection requirements of the Building Code of Australia and must be read in conjunction with the appropriate clauses of AS 1530.4.

Clause 3.2 of AS 4072.1 provides that where a particular penetration sealing system is intended for use in both horizontal and vertical elements of construction, each orientation should be tested.

Clause 4.6.2 of AS 4072.1 specifically provides the requirements for testing floor waste applications in addition to the requirements of clause 3.2.

Clause 4.6.4 of AS 4072.1 provides for supplementary testing where fittings such as bends or branches are to be mounted within the fire stopping system.

Compliance with the BCA

It is not sufficient to claim that a penetrating element complies with AS 4072.1, rather, the building surveyor, builder and designer should also be satisfied that the penetrating element has been tested for the particular application for which it is to be used. In a floor waste application for example, evidence of compliance with both clauses 3.2 and 4.6.2 is required.

Building surveyors, builders and designers should be wary of assertions that a product complies with AS 4072.1 without seeking further application specific information. This may involve a review of the complete copy of a report from a testing authority such as CSRIO. In other words while a fire collar might have been tested and certified as complying with AS 4072.1, it does not necessarily mean that fire collar can be used in every scenario.

Builders must adequately supervise the purchasing and installation of fire collars to ensure only the appropriate fire collars are used.



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