

CHAPTER 6: TESTING

6.1 GENERAL

Tests and results evaluations should comply with general requirements of AS/NZS 1170.0 Appendix B. Tests should be conducted by NATA registered laboratories. Alternatively, test results should be verified by NATA registered laboratories.

Steel units designed by calculation in accordance with relevant Australian Standards are not required to be tested. Proof and prototype tests may be accepted as an alternative to calculations or may become necessary where:

- More accurate information is required for use in structural design.
- Specific design parameters and methods are not included in relevant standards.
- The situation is sufficiently unusual to require that limit states be checked by methods other than calculation.
- There is a history of structural failures.
- Necessary design data is not available from product manufacturers (connectors, cladding, etc.).
- Designers are looking to support calculations or to provide more efficient designs.

The unit to be tested may be a structure, substructure, member, connection assembly or connection.

6.2 PROOF TESTING

Proof testing should comply with requirements of AS/NZS 1170.0 Appendix B2. This test method establishes the ability of the particular unit under test to satisfy the limit state that the test is designed to evaluate. Proof tests can be also used to evaluate structural models such as stressed skin diaphragms.

Additional requirements for time-dependent materials do not apply to steel structures used in sheds.

6.3 PROTOTYPE TESTING

This test method establishes the ability of a population of units to satisfy the limit state that the test is designed to evaluate. This method is not applicable to the testing of structural models, nor to the establishment of general design criteria or data.

Prototype testing should comply with requirements of AS/NZS 1170.0 Appendix B2 and AS/NZS 4600 Section 8.2.

Testing of sheet and wall cladding system shall be in accordance with AS/NZS 1562.1.

Stressed skin diaphragms could be tested using the test setup and test procedure as given in the following international Standards:

- BS 5950: Part 9:1994 Section 11
- EN 1993-1-3
- ASTM E455-04

Test results evaluation should be done in accordance with requirements of this Design Guide.



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