

British Standard BS 8414 for the evaluation of cladding systems

British Standard BS 8414 comprises two parts:

BS 8414-1 sets out a method for assessing the fire performance of non-loadbearing external cladding systems applied to the masonry face of a building when they are exposed to an external fire under controlled conditions. This exposure is intended to be representative of both an external fire source and a fully developed internal fire that is being stoked via an open window or other external access, leading to the cladding being exposed to the effects of external flames.

BS 8414-2 allows for the assessment of curtain-wall systems or systems incorporating glass panels, etc., that are fixed to and supported by a structural steel frame.

The testing procedure is shown in the diagrams below. The fire is simulated by burning strips of wood in a combustion chamber, producing some 4500MJ of energy over the course of a 30-minute test.

In addition to observations regarding surface spread, release of incandescent or burning material, dripping, etc., integrated thermocouples enable temperature readings to be taken in predetermined areas. This latter piece of data permits system classification according to fire-spread criteria.

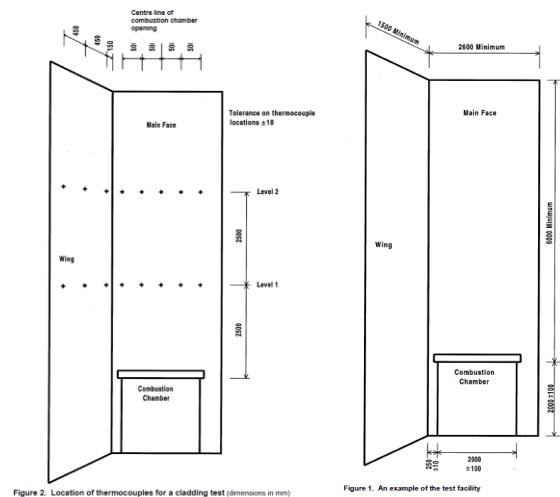
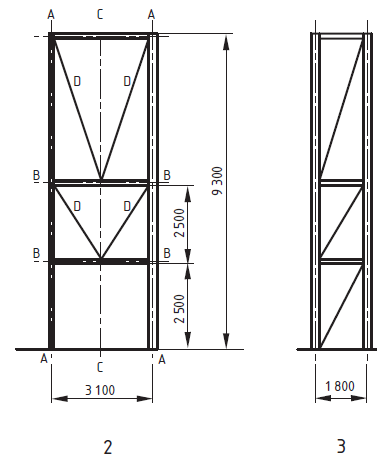


Figure 2. Location of thermocouples for a cladding test (dimensions in mm)

Figure 1. An example of the test facility



Key

- 1 Plan
- 2 Front elevation
- 3 Side elevation

NOTE Details of the steel sections are provided in Table A.1.

Figure A.1 — Steel test frame

