

# NTN 006

## Fixing partition walls to intumescent protected columns

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Smart Protection

### Calibration

In accordance with BS EN ISO 2808:2007, calibration of the d.f.t. Gauge should be carried out following the manufacturer's instructions using a smooth plate (similar in composition to the substrate being measured) at least 1.2mm thick. The calibration should be checked using shims above and below the expected dft.

BS EN ISO 2808 refers to a figure of 25µm as a correction factor for blast profile. It is intended to use the correction factor for measurements for all coating thickness's above 50µm nominal.

Calibration checks should be performed prior to carrying out measurements, in the environment in which the measurements are to be taken. During a series of measurements the calibration should be rechecked on a regular basis.

### Measurement Procedure:

Tests shall be carried out in accordance with the following:

1. I Sections, Tee Sections and Channels. Webs: Two readings per metre length on each face of the web. Flanges: Two readings per metre length on the outer face of each flange. One reading per metre length on the inner faces of each flange.
2. Square and rectangular hollow sections and angles two readings per metre length on each face.
3. Circular hollow sections. Eight readings per metre length evenly spread around the section.
4. Where members are less than 2m in length, three sets of reading shall be taken, one near to each end and one at the centre of the member. Each set shall comprise the number of readings on each face given by (1), (2) or (3) above, as appropriate.
5. For flat plates, take five readings per metre square.

The proportion of items, or of the coated area, to be surveyed will need to be agreed between Tremco CPG UK Limited and the customer.

If defects are identified a more detailed survey may be appropriate. In this case, advice should be sought from the technical services manager and/or sales manager regarding whether Tremco CPG UK Limited technical services or representatives of the customer should carry this out.

### Acceptance Criteria

Intumescent Coating Schemes:

These criteria are based on the required thickness as stated in

the paint specification, advised by the applicator or from the Nullifire loading schedule.

- The average dry film thickness applied to each element shall be greater than or equal to the specified nominal value.
- The average measured dry film thickness on any face of any member shall not be less than 80% of the specified nominal value.
- Dry film thickness values less than 80% of the specified nominal value are acceptable, provided that such values are isolated. Where any single thickness reading is found to be less than 80% of the specified nominal value, a further two, or where possible three, readings shall be taken within 150 and 300mm of the low reading. The initial reading may be considered isolated if all the additional readings are at least 80% of the specified nominal value. If one or more of the additional readings are less than 80% of the specified nominal value, further readings shall be made to determine the extent of the area of under thickness.
- All dry film thickness's shall be at least 50% of the nominal value.

When measuring intumescent fire protected steelwork the mean must not exceed the maximum fire tested thickness for that type and orientation/use of section by more than 10%. If the 10% allowance has been exceeded, please contact a member of Nullifire technical team.

Where possible the primer thickness should be determined prior to the application of the intumescent coating. This mean value and the blast profile correction should then be subtracted from the primer and intumescent thickness, measured before the application of any top coat.

If it has been possible to measure the primer thickness and the primer and intumescent thickness and hence determine the intumescent thickness accurately then the specified nominal thickness for primer and top coat may be used.

In either case the 50 and 80% values relate to the full primer (and top coat) thickness plus 50 or 80% of the specified intumescent thickness.

I.e. specification:

Primer = 80µ, Intumescent = 1500µ, Top Coat = 100µ

50% Value = Primer + 50% Intumescent + Top Coat  
930µ = 80 + 750 + 100

80% value = Blast Profile + Primer + 80% Intumescent + Top Coat  
1380µ = 80 + 1200 + 100

If the specification calls for a minimum thickness to be

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## Dry Film Thickness Reading Criteria

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If the specification calls for a minimum thickness to be achieved any readings below this specified value are unacceptable and need correcting.

### Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Technical Services on 01942 251 400.