

To be read with Preliminaries/ General conditions.

### PROTECTIVE COATING SYSTEMS

- 110 ON SITE COATING TO PRIMED STEEL BEAMS:
- Use/ Location: Exposed internal faces.
  - Preparation and priming: By steelwork contractor.
    - Intumescent coat:
      - Manufacturer: Nullifire Limited or similar
      - Product reference: Sysrem S.
      - Fire resistance to BS 476-21: 1 hour resistance.
      - Finish: White – S602.
    - Top sealer coat: Recommended by intumescent coating manufacturer.
      - Product reference: Not required.

### GENERAL REQUIREMENTS

- 205 VALIDATION OF MATERIALS:
- Project specific evaluation of intumescent coating materials:
    - Standard: To BS 8202-2, clause 4.
    - Submit on request.
- 210 WORKING PROCEDURES:
- Standard: To BS 8202-2.
  - Give notice: Before commencing surface preparation and coating application.
  - Quality control: Record project specific procedures for surface preparation and coating application.
- 215 WORKING CONDITIONS:
- General: Maintain suitable temperature, humidity and air quality during coating application and drying.
  - Surfaces: Clean and dry at time of application.
- 250 SPRAY DRIFT:
- General: Minimize.
  - Adjacent self-finished surfaces: Mask as follows:\_\_\_\_\_ .
- 270 INSPECTION:
- Permit intumescent coating manufacturer to:
    - Inspect work in progress.
    - Inspect quality control records.
    - Take dry film thickness and other measurements.
    - Take samples of coating products.
  - Intumescent coating manufacturer's inspection reports: Submit without delay.

### PREPARATION OF SURFACES

### APPLICATION OF COATINGS

- 410 INTUMESCENT DRY FILM THICKNESS (DFT):
- Required dft: Determine for every steel member to give specified period of fire resistance. Use intumescent coating manufacturer's current published loading tables.

- Special sections and partial fire exposure conditions:  
Obtain required dft in writing from manufacturer.

- Schedule and drawings: Submit at least two weeks before starting work.

- Schedule content: Member sizes, weights/ thicknesses, loading conditions, etc. showing, for each variant, the exposed perimeter/ sectional area (Hp/A) ratio and required dft.

- Drawing content: Steelwork drawings marked in colour to show required dft for each member.

#### 420 MEASUREMENT OF INTUMESCENT DFT:

- Primer dft: Determine average dft for deduction from total dft after application of intumescent.

- Intumescent dft: Determine at:  
- 500 mm centres along each coated plane of sections and rectangular hollow sections (i.e. 8 planes for a universal column/ beam).  
- 125 mm centres along coated circular hollow sections, spread evenly around circumference.

- Acceptance standard:  
- Average intumescent dft: Not less than required dft (exclusive of primer and top sealer).

- Local intumescent dft: Not less than 80% of required dft. Areas greater than 100 mm equivalent diameter of less than 80% of required dft must be brought up to thickness.

#### 450 NORMAL DECORATIVE FINISH:

- Definition: Good standard of cosmetic finish generally, when viewed from a distance of 5 m or more. Minor orange peel or other texture is acceptable.

#### 530 RECORDS OF COATED STEEL:

- On completion of intumescent coating work, submit:  
- Accurate surface preparation and coating application records.  
- Fire resistance certificates.  
- Intumescent coating manufacturer's recommendations for maintenance and overcoating.