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### 3 WORKMANSHIP

#### 3.1 GENERAL

##### 3.1.1 Scope

- 1 This Section specifies workmanship requirements for glazing.
- 2 Related Sections and Parts are as follows:

This Section

Part 1 ..... General

Part 2 ..... Glass

Part 4 ..... Glazed Curtain Wall

##### 3.1.2 References

- 1 The following standards are adopted and/or referred to in this Section:  
BS 8000 ..... Workmanship on construction sites  
BS 8000-7 ..... Workmanship on building sites - Code of practice for glazing.

#### 3.2 STANDARD GLAZING

##### 3.2.1 General Requirements

- 1 External glazing is to be wind and watertight on completion.
- 2 All rebates and grooves are to be clean, dry, free from burrs and other projections, smooth and undistorted.
- 3 The minimum thickness of glass other than fully toughened glass is to be 6 mm when situated in the following locations:
  - (a) any hinged fully, or partly, glazed door and any adjacent side panel
  - (b) any sliding fully, or partly, glazed door and any adjacent side panel
  - (c) any glass wholly or partially within a zone between floor level and 800 mm above floor level.
- 4 Glazing to internal wood doors and screens is to be bedded in self-adhesive black velvet or approved proprietary tape and secured with hardwood glazing beads fixed with brass cups and screws.
- 5 Glazing to external wood doors and screens to be bedded in approved polymer mastic pre-formed tape and secured with hardwood glazing beads fixed with brass cups and screws.
- 6 All rebates to wood doors and screens to be primed and sealed.
- 7 Fire resistant glazing channel shall be butt jointed at corners and fixed with 38 mm countersunk brass screws at not more than 200 mm centres and not more than 50 mm from each end. The butt joints of glazing channels for one-hour fire resisting doors are to be sealed with intumescent mastic.

### 3.3 GLAZING ALUMINIUM WINDOWS EXTERNALLY

#### 3.3.1 General Requirements

- 1 Generally, the glazing system will utilise snap-in beads and glazing gaskets of neoprene or EPDM (ethylene propylene diene monomer propylene diene monomer) as approved by the Engineer. Other glazing techniques involving the use of glazing compounds, sealants, etc. are to be submitted to the Engineer for approval together with details of similar installations successfully employed elsewhere in the Gulf region.
- 2 Unless otherwise indicated elsewhere in the Project Documentation the maximum permitted size of an external glass pane, with all four edges fully supported, in a low rise building (maximum 10 m high) should not exceed the areas given in Table 3.1.
- 3 For maximum areas of glass panes situated externally, the recommendations of the glass manufacturer are to apply in situations that are not covered by Table 3.1, provided that information is not provided elsewhere in the Project Documentation. The recommendations are to be based on a 3 second gust exceeding 180 kph (50 m/s) at 10 m above ground level and a ground roughness category of 1.

Table 3.1  
Maximum Areas for Glass Panes Situated Externally

| Type of Glass                       | Nominal Thickness (mm) |      |      |      |      |      |
|-------------------------------------|------------------------|------|------|------|------|------|
|                                     | 4                      | 5    | 6    | 7    | 10   | 12   |
| Transparent float or polished plate | 1.30                   | 2.00 | 3.00 | 4.00 | 5.50 | 8.00 |
| Wired cast                          | -                      | -    | 1.25 | -    | -    | -    |
| Wired polished                      | -                      | -    | 1.80 | -    | -    | -    |
| Rough cast and patterned            | 0.70                   | 1.20 | 1.75 | -    | -    | -    |
| Fully toughened                     | 1.80                   | 2.90 | 4.20 | -    | 1.00 | -    |
| Transparent laminated               | -                      | -    | 2.80 | 4.00 | 5.50 | -    |

Notes:

- (i) Areas given are in square metres
- (ii) The Table does not apply where the building exceeds 10 m high or where the length to breadth ratio of the pane is greater than 3:1, in such cases the recommendations of the manufacturer shall be followed.

- 4 The depth of rebates for bead glazing are not to be less than that shown in Table 3.2 and the minimum edge clearance (distance between the edge of the glass and the surround) should not be less than 3mm for any glass up to and including 12 mm nominal thickness. The recommendations of the glass manufacturer are to apply for all glass over 12 mm nominal thickness.

Table 3.2  
Minimum Rebate Depths for Bead Glazing

| Nominal Glass Thickness (mm) | Minimum Rebate Depth (mm) |
|------------------------------|---------------------------|
| 4                            | 10                        |
| 5                            | 12                        |
| 6                            | 12                        |
| 10                           | 15                        |
| 12                           | 15                        |

- 5 The minimum edge cover to single glazing shall be as Table 3.3 and equal all round each pane. The edge cover and clearance to double glazing units shall be as recommended by the manufacturer of the units.

Table 3.3  
Minimum Edge Cover for Single Glazing

| Glass Area (m <sup>2</sup> ) | Edge Cover (mm)                      |
|------------------------------|--------------------------------------|
| Up to 0.5                    | 5                                    |
| 0.5 to 1.5                   | 9                                    |
| 1.5 to 4.0                   | 12                                   |
| Over 4.0                     | As recommended by glass manufacturer |

- 6 Setting blocks are to be used between the edges of the glass and the frame or surround in order to support and centralise the glass in the opening. The minimum length of each block shall be equal to 30 mm per m<sup>2</sup> of glass area and the width to be equal to the thickness of the glass (or glass insulating unit) plus the back clearance.
- 7 Location blocks shall be used in opening windows and doors between the edges of the glass, other than the bottom edge, to prevent movement when they are opened. Each block shall be at least 25 mm long and the width shall be equal to the thickness of the glass (or glass insulating unit) plus the back clearance.
- 8 Setting and location blocks shall be positioned as near to the quarter points of each side as possible.
- 9 Glazing gaskets are to be positioned on both sides of the glass and be correctly sized so that when forced into the space between the glass and surround, sufficient pressure is provided to support the glass structurally and to form an effective seal against the weather. Care is to be taken to ensure that the gasket is correctly located in the grooves and that the glass is completely bedded.

### 3.4 FIXING MIRRORS

#### 3.4.1 General Requirements

- 1 Mirrors are to be fixed with spacer washers to compensate for irregularities in the wall surface and with sleeves and washers to prevent contact between the mirror and the fixings.

END OF PART