BSI

BS 5516 : 1977

UDC 69.024.97

Code of practice for

Patent glazing

(formerly CP 145 : Part 1)

Code de bonne pratique relatif au vitrage sans mastic

Richtlinie für Beglasung ohne Kitt

British Standards Institution

Gr 8

Contents

This Code of practice represents a standard of good practice and therefore takes the form of recommendations. Compliance with it does not confer immunity from relevant statutory and legal requirements.

Foreword

This British Standard is a revision of CP 145 : Part 1 : 1969 which is therefore withdrawn. In accordance with BSI policy, by which all new and revised codes of practice are to be published with BS numbers, this revision has been numbered BS 5516.

In this revision it has been found necessary to include design recommendations both for two-edge supported systems and for other systems now popular in which glass is supported on all four edges.

It should be noted that, in introducing four-edge supported systems into this code, care has been taken to align deflection limitations with those recommended in other codes covering windows. In considering two-edge supported systems, primarily used in roof glazing, the more conventional approach to span-squared relationships has been maintained.

The opportunity has also been taken to provide a graphically based presentation of design data based on the use of the working pressure concept for combining the various loads to which patent glazing is subjected. Appendix F gives a method for determining design requirements and includes worked examples.

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British Standard Code of practice for

Patent glazing

Section one. General

1. Scope

This code deals with patent glazing, sloping and vertical, single and double. Recommendations are given for glazing bars, ancillary components and types of glass most commonly used. Information is also provided on such matters as fire resistance, thermal insulation and the use of special glasses.

Conventionally, patent glazing incorporates support for the glass by the bars along two edges only; but, with the increasing use of patent glazing used vertically in sidewall applications, systems have been introduced using four-edge support and four-edge restraint against positive and negative pressures. Within this code these two systems (two-edge and four-edge) are described as 'conventional' and 'four-edge' respectively.

Forces and pressures are given in metric units. The SI unit of force, the newton (symbol N), has been used. It is that force which, when applied to a body having a mass of one kilogram, gives it an acceleration of one metre per second squared. Further information on SI units is given in BS 3763 and in PD 5686.

2. References

The titles of the standards publications referred to in this code are listed on the inside back cover.

3. Definitions and notation

For the purposes of this code the following definitions apply.

3.1 aluminium wings. Preformed aluminium alloy strips fitted to the sides of the load-bearing element of a glazing bar and bearing on the glass.

NOTE. Aluminium wings are designed to form a barrier to penetration by water and to restrain the glass from moving away from the bar under suction forces.

3.2 bead or glazing bead. A strip of metal, wood or other suitable material attached to the rebate to retain the glass.

3.3 came. A light bar of suitable material used to weather a horizontal butt joint between two panes of glass held vertically in the same plane by glazing bars.

NOTE. A came is usually similar in section to the letter 'h'.

3.4 capping. A preformed metal or plastics strip fitted over the load-bearing element along its length and having the same function as aluminium wings.

3.5 depth of glazing. The distance between the top and bottom extremities of the glazed area measured in the plane of the glass.

3.6 draught fillet. A strip to fill the space between the inside surface of the glass and any principal member.

3.7 flashing. A length of impervious material, usually metal, dressed or fitted in order to exclude water from the junction between patent glazing and adjacent material.

3.8 glazing bar. The member by which the glass is supported, retained and made weathertight, i.e. the load-bearing element, plus any associated capping, wing or fitting*.

3.9 head. A horizontal member often used at the top of a tier or series of tiers of patent glazing.

3.10 lead wing. A projecting lead fin forming an integral part of a glazing bar, dressed down to the glass to form a barrier against penetration by water.

3.11 pane. A piece of glass, cut to size and shape ready for glazing (often called a square).

3.12 pitch. The angle of inclination of glazing bars to the horizontal.

3.13 shoe. A fitting securing the lower end of a glazing bar to a structural member.

NOTE. At the lower end of a bar such a fitting may also act as a stop for the glass.

3.14 sill. A horizontal member often used at the bottom of a tier or series of tiers of patent glazing.

3.15 span. The distance between the centres of upper and lower fixing holes of the glazing bar, measured in the plane of the patent glazing.

3.16 stop. A fitting attached to, or integral with, the lower end of a load-bearing element of a glazing bar to prevent the glass from sliding.

3.17 storm clip. A fitment external to the load-bearing element of a glazing bar to restrain the glass against suction forces.

3.18 transom. A horizontal patent glazing member.

3.19 water channel. A drainage channel within the section profile of the glazing bar, the purpose of which is to discharge water to the transom or to the exterior of the glazing.

3.20 door side panel. A fixed pane or panes of glass which could be mistaken for a door, adjacent to a door glazed into a patent glazing system.

*Also referred to as a mullion when positioned between head and sill.