

**AIRPORTS AUTHORITY OF INDIA
DEPARTMENT OF ENGINEERING**

No. AAI/Member (Plg)/Tech-Inst./2012

20 Jan, 2012

TECHNICAL INSTRUCTION NO. 86

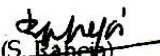
USAGE OF GLASS IN BUILDINGS AND HUMAN SAFETY

1. The use of glass in Terminal buildings has increased manifold in recent past. Glass is a versatile material and its use at various locations brings not only elegance, but enhances the performance of the building. However, because of its nature and properties, it does pose a few risks to users, as it may result in injuries due to impact breakage and falling glass pieces.
2. It is therefore, essential to regulate glass in relation to human safety by either restricting use of glass or specifying use of Safety Glass at critical locations where chances of injury, due to breakage are high.
3. CPWD has developed "Guidelines on Use of Glass in Buildings: Human Safety" through Public Private Partnership with Confederation of Construction Products and Services (CCPS). These guidelines are developed through consensus approach involving all stake holders, various PWDs and other Government Departments etc. Recognizing the problem and uncertainty faced by the Engineers, Architects and users, guidelines for selection of appropriate safety glass suitable for a particular location have been brought out.
4. The guidelines bring out critical locations and suggested use of type of glass for each location; their specifications and test requirements with reference to BIS codal provisions. Critical locations and appropriate type of glass to be used are mentioned below :-
 - **Case 1** : Glass used as Vertical Walls (not likely to be subjected to Human Impact)
Hs (Sill height) \geq 0.75 m or with Residual Protection
Type of Glass to be used: Any glass
 - **Case 2** : Glass used as Vertical Walls (Human Impact but no risk of fall)
Hs (Sill height) $<$ 0.75 m and Hf (Falling height) \leq 1.5 m
Type of Glass to be used : Safety glass (Toughened Safety Glass (TF) or Laminated Safety Glass (LF)

- **Case 3** : Glass used as Vertical Walls (Human Impact and risk of fall both)
Hs < 0.75 m and Hf (Falling height) \geq 1.5 m
Type of Glass to be used : Safety glass (LF preferred)
 - **Case 4** : Glass used in Horizontal or sloped glazing (Risk of fall)
Type of Glass to be used : Laminated Safety glass (LF)
 - **Case 5** : Glass acting as a balustrade, parapet or a railing (Human Impact and risk of fall both)
Type of Glass to be used : Laminated Safety glass (LF)
5. Full copy of Report on 'Guidelines on use of Glass in Building - Human Safety' can be seen at CCPS website - www.ccpsindia.com. Summary with explanatory sketches is enclosed for ready reference.
6. It is therefore, enjoined upon all engineers, architects to follow guidelines while planning, designing, executing and approving buildings/ projects to ensure safe use of glass.

Encl: Summary

Distribution : As per attached list


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