

## Technical Note No 35

# Assessing the appearance of glass



*This Technical Note is one of three on assessing appearance. The series comprises:*

*TN 34 Assessing the appearance of new curtain walling*

*TN 35 Assessing the appearance of glass*

*TN 36 Assessing the appearance of metals and finishes*

## Introduction

The quality of glass is often assessed by visual inspection and disputes sometimes arise over the associated procedures and acceptance criteria. This is particularly the case where a specification is not sufficiently detailed.

This Technical Note gives advice on factors which affect the appearance of glass and how they can be specified and assessed. This Note should be read in conjunction with TN34 'Assessing the appearance of curtain walling'.

## Factors affecting glass colour

Glass may be thought of as colourless but most glass has a green tinge due to the presence of iron. Other colours may also be apparent due to different impurities in the raw materials. Some glass is deliberately coloured by the addition of materials to the molten glass or application of coatings to the glass surface. Alternatively, coatings applied for solar control may be described as clear but may have a slight effect on colour. Appearance depends on the colour of the glass and uniformity of colour. Factors affecting colour are described in Table 1.

## Tolerances in glass products

Tolerances may be given for the size of the glass panes, flatness of glass and faults as summarised in Table 2. 'Faults' is a term used in Standards to describe undesirable

features of the glass however they cannot be entirely eliminated and are permitted within defined limits. Standards divide faults into three categories:

- Optical faults, which result in distortion of images viewed through the glass and relate to flatness of the glass. Optical faults are a permanent feature of the glass and should be assessed at the time of manufacture.
- Spot faults include bubbles and deposits. Many of these faults are permanent features of the glass but some may be introduced by damage during processing and erection.
- Linear/extended faults include scratches and scuffs on the surface of the glass. These faults may occur at any time in the life of the glass and inspection may be carried out at various stages including at the point of initial manufacture, after processing and after installation.

## Viewing criteria for glass types

Table 3 lists the Standards for different glass products, summarises their requirements for assessment of appearance and gives guidance on specification.

The visual inspection criteria given in the Standards listed in Table 3 are generally applicable to inspection at the point of manufacture. The inspection techniques may not be possible under site conditions and different assessment criteria may be appropriate after processing and installation to allow for minor damage during these