

To: All Authorized Persons
Registered Structural Engineers
Registered Geotechnical Engineers
Registered Inspectors
Registered General Building Contractors
Registered Specialist Contractors
Registered Minor Works Contractors

17 July 2020

Dear Sir/Madam,

**Amendments to Code of Practice for
Structural Use of Glass 2018**

Subsequent to the publication of the Code of Practice for Structural Use of Glass 2018 (Code), the Technical Committee (TC) set up by this department regularly collects views and feedback received from the practitioners and the stakeholders arising from the use of the Code, and reviews the contents thereof for the necessary update.

2. Having considered the TC's recommendations, certain amendments to the Code (as detailed at Annex) are promulgated with effect from the date of this letter. The amendments have also been uploaded to the Buildings Department website www.bd.gov.hk.

3. The major amendments include:

- (a) clause 7.1.1 of the Code – elaboration of the design requirements for retaining device to cope with the situation of bond failure of structural sealant; and
- (b) item C2 of Annex C of the Code – revision of the symbol of glass fin thickness in the equation for the torsional moment of inertia (J).

Yours faithfully,



(HO Hon-kit, Humphrey)
Assistant Director/New Buildings 2
for Building Authority

Amendments to the Code of Practice for Structural Use of Glass 2018

Item	Current version	Amendments
1. Clause 7.1.1 2 nd paragraph ¹	<p>The structural performance of a structural sealant depends on a number of factors such as risks to building occupants and pedestrians, long-term durability, degree of redundancy, nature of applied loads, and quality control during fabrication and erection. Façade system or glass element with structural sealant glazing application shall be designed to prevent any fall of glass pane in the event of bond failure in the structural sealant. Retaining devices for such structural sealant glazing in the form of feature capping, angle, bracket or insert, etc. shall be designed and constructed at the top and the bottom of the glass pane for the added purpose of restraining the glass pane from dislocation or falling in case of bond failure of structural sealant. The self-weight of the glass panes shall be mechanically supported by setting blocks.</p>	<p>The structural performance of a structural sealant depends on a number of factors such as risks to building occupants and pedestrians, long-term durability, degree of redundancy, nature of applied loads, and quality control during fabrication and erection. Façade system or glass element, located where any point of the glass pane installed is at a height 5 m or more above the finished floor level of the accessible area on either side of the glass pane, fixed by structural sealant on four sides shall be designed to prevent any fall of glass pane in the event of bond failure in the structural sealant. Retaining device in the form of feature capping, angle, bracket or insert, etc. shall be designed and constructed at any two opposing edges of the glass pane for the added purpose of restraining the glass pane from dislocation or falling in case of bond failure of structural sealant. The strength of such retaining device and associated glass panes shall be capable to resist 37% of the design wind pressure acting on the glass pane multiplying with a partial load factor of 1.0. The design wind pressure is taken as the wind reference pressure in</p>

Annex

		<p style="background-color: yellow;">accordance with the Code of Practice on Wind Effects in Hong Kong 2019 without applying any adjustment factors.</p> <p>The self-weight of the glass panes shall be mechanically supported by setting blocks.</p>
<p>2. Clause 7.5.1 2nd paragraph ²</p>	<p>Weather strips, glazing gaskets and glazing blocks shall be manufactured from extruded silicone rubber, Ethylene Propylene Diene Monomer (EPDM) rubber or other gasket material such as neoprene and Thermoplastic Elastomer (TPE) compatible with silicone sealant. Gaskets shall be provided on both sides of the vent glass unless it is structurally glazed. All gaskets/ weather seals/ spacers shall have continuous mechanical engagement to the framing members.</p>	<p>Weather strips, glazing gaskets and glazing blocks shall be manufactured from extruded silicone rubber, Ethylene Propylene Diene Monomer (EPDM) rubber or other gasket material such as neoprene and Thermoplastic Elastomer (TPE) compatible with silicone sealant. Gaskets shall be provided on both sides of the glass pane unless it is structurally glazed. All gaskets/ weather seals/ spacers shall have continuous mechanical engagement to the framing members.</p>
<p>3. Clause 9.4 3rd paragraph ²</p>	<p>Deglazing test is a method of quality inspection used to confirm if the sealant application has strictly followed the recommendations outlined in the sealant manufacturer's print review and adhesion test report. Deglazing test should be carried out in accordance with the sealant manufacturer's suggested percentage of total number of structurally glazed glass panes to ensure the on-site structural glazing quality of the factory structural glazing</p>	<p>Deglazing test is a method of quality inspection used to confirm if the sealant application has strictly followed the recommendations outlined in the sealant manufacturer's print review and adhesion test report. Deglazing test should be carried out in accordance with the sealant manufacturer's suggested percentage of total number of structurally glazed glass panes to ensure the on-site structural glazing quality of the factory structural glazing</p>

	quality before transportation to the site for installation. The inspection should include the following:	quality before transportation to the site for installation. The inspection should include the following:
4. Annex C - C2 ³	<p>In computing the effective torsional rigidity of beams of solid rectangular cross-section, the value of the torsional moment of inertia (J) may be taken as</p> $J = \frac{db^3}{3} \left(1 - 0.63 \frac{b}{d}\right)$ <p>where d and b are the depth (fin thickness) and breadth of the fin respectively.</p> <p>G and E are taken as 28,700 N/mm² and 70,000 N/mm² for glass fins.</p>	<p>In computing the effective torsional rigidity of beams of solid rectangular cross-section, the value of the torsional moment of inertia (J) may be taken as</p> $J = \frac{dt^3}{3} \left(1 - 0.63 \frac{t}{d}\right)$ <p>where d and t are the depth and thickness of the glass fin respectively.</p> <p>G and E are taken as 28,700 N/mm² and 70,000 N/mm² for glass fins.</p>

Legends: ■ Amended
■ Deleted

¹ The design requirements for retaining device and associated glass panes to cope with the situation of bond failure of structural sealant are elaborated.

² A typo is corrected.

³ The symbol of glass fin thickness in the equation is revised.