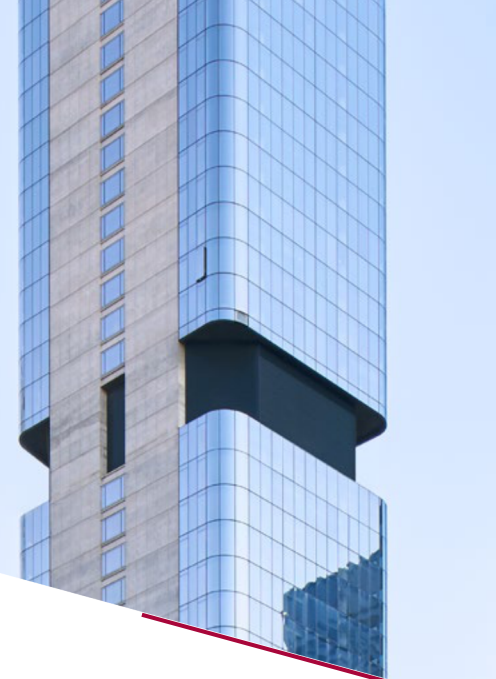
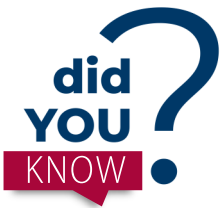




NEW OPPORTUNITIES FOR THE
CONSTRUCTION INDUSTRY



125 GREENWICH STREET, NEW YORK, NY
Fully tempered glass with HST.



HEAT SOAK TEST

IMPROVE SAFETY & REDUCE RISK OF SPONTANEOUS GLASS BREAKAGE

Reduce the possibility of spontaneous on-site breakage of fully tempered glass with our Heat Soak Test technology. This specific process provides an increased level of safety by reducing breakage of tempered glass from Nickel Sulfide Inclusions (NSI).

WHY

Each basic glass contains extremely low quantities of nickel sulphide (NiS) crystals, which are inevitably introduced into the glass via the raw materials. In normal annealed float or patterned glass, these crystals do not have any relevance.

The extremely rapid cooling-off period during the tempering process "freezes" the NiS particles in a high temperature crystal modification. When heat is later applied, for example, through solar energy absorption, this crystal structure may change because the volume of the crystals change, i.e. increases, and this may cause the glass to suddenly burst apart as soon as the particles exceed a critical size.



"Butterfly" indicates the location of NiS inclusion.

HOW

Test is carried out in accordance with EN 14179. It forces the NiS crystals that may be present to quickly react. Panes of glass that do have these invisible crystals are intentionally destroyed during this test.

For the purpose of testing, fully tempered glass panes are heated to a defined $554\text{ }^{\circ}\text{F} \pm 18\text{ }^{\circ}\text{F}$ ($536\text{ }^{\circ}\text{F}$ - $572\text{ }^{\circ}\text{F}$) and held for 2 hours min. However, the entire process lasts at least 8 hours.

The process is monitored by internal controllers and should be documented for each pane supplied.

Moreover, panes should be visibly marked with the fully tempered - HST logo.



HST Oven.

WHERE

Any safety-relevant glazing and panes, such as façade glass, which are exposed to high temperature fluctuations, should be therefore subjected to a heat soak test.



DOCK 72, NEW YORK, NY
Fully tempered glass with HST.