What is Tempered Glass?

Tempered Glass also called toughened glass. Glass was reinforced by tempering. It began in France in 1874. Tempered glass/Reinforced glass is Glass with compressive stress on the surface.

Our Tempered Glass Surface compressive stress greater than 96 Mpa., the number of broken particles reached more than 40 piece in each 50*50mm2 glass block.

Tempered glass (Tempered glass/Reinforced glass) belongs to safety glass. Toughened glass is a kind of prestressed glass, in order to improve the strength of the glass, the methods commonly used in chemistry or physics, formed on the surface of glass glass under compressive stress, first offset surface stress force, so as to improve the bearing capacity of reinforced glass, its wind, cold, impact etc.. Notice the difference between FRP(Fiber Reinforced Plastics) and Tempered Glass.



Security of Tempered Glass

When the glass is destroyed by the external force, the pieces will become honeycomb like obtuse broken small particles, not easy to cause serious harm to human body.

High strength

The impact strength of tempered glass of the same thickness is 3~5 times of that of ordinary glass, and the flexural strength is 3~5 times of that of ordinary glass.

Thermal stability

Tempered glass has good thermal stability, can withstand the temperature difference is 3 times of ordinary glass, can withstand the temperature difference of 300 degrees celsius.

Advantage

The first is that the strength is several times higher than that of ordinary glass. Second is the use of safety, its bearing capacity increases to improve the fragile nature, even tempered glass damage is also small fragments without acute angle, the harm to the human body greatly reduced. Toughened glass resistance to 3~5 times to improve thermal properties than ordinary glass, can withstand temperature above 250 degrees, to prevent thermal breakage has obvious effect. It's a kind of safety glass. To ensure the safety of qualified materials in high-rise buildings.

Shortcoming

Disadvantages of tempered glass:

- 1. tempered glass can no longer be cut, and processing, only in the process of tempering before the glass processing to the shape needed, and then tempered.
- 2. although the strength of toughened glass than ordinary glass, but glass has a self destruct (their rupture) the possibility that the possibility of ordinary glass does not exist and.
- 3. toughened glass surface will have uneven phenomenon (wind spots), a slight thickness thinning. The reason for thinning is that the glass is softened by hot melting, and it cools rapidly after strong wind, so that the crystal gap becomes smaller and the pressure becomes larger, so the glass is thinner after tempering than before tempering. In general, 4~6mm glass is thinner after tempering and 0.2~0.8mm, 8~20mm glass is thinner after tempering, 0.9~1.8mm. The specific degree should be decided by the equipment, which is also the reason why the toughened glass can not be used as the mirror.
- 4. through the tempering furnace (physical tempering) after the construction of flat glass, generally will have deformation, deformation degree is decided by equipment and technical personnel process. To some extent, it affects the decorative effect (except for special needs).

Tempered Glass Application:

Flat tempered and bent tempered glass belongs to safety glass. Widely used in high-rise building doors and windows, glass curtain wall, indoor partition

glass, lighting ceiling, sightseeing elevator channel, furniture, glass guardrail, etc.. Usually tempered glass can be applied in the following industries:

- **1,** The building, building template, decoration industry (for example: doors and windows, curtain wall, interior decoration etc.)
- **2,** The furniture manufacturing industry (glass tea table, furniture etc.)
- **3** home appliance manufacturing industry (TV, oven, air conditioners, refrigerators and other products)
- **4,** The electronic and instrument industry (mobile phone, MP3, MP4, watches and other digital products)
- **5**, The automobile manufacturing industry (automotive windshield etc.)
- **6,** The household products industry (glass chopping board)
- **7**, The construction industry (Military glass)

The toughened glass is broken, small particles of debris will be broken into a uniform and no sharp knife like the common glass, which is called the safety glass and are widely used in automotive, interior decoration, and opened the window floor.

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