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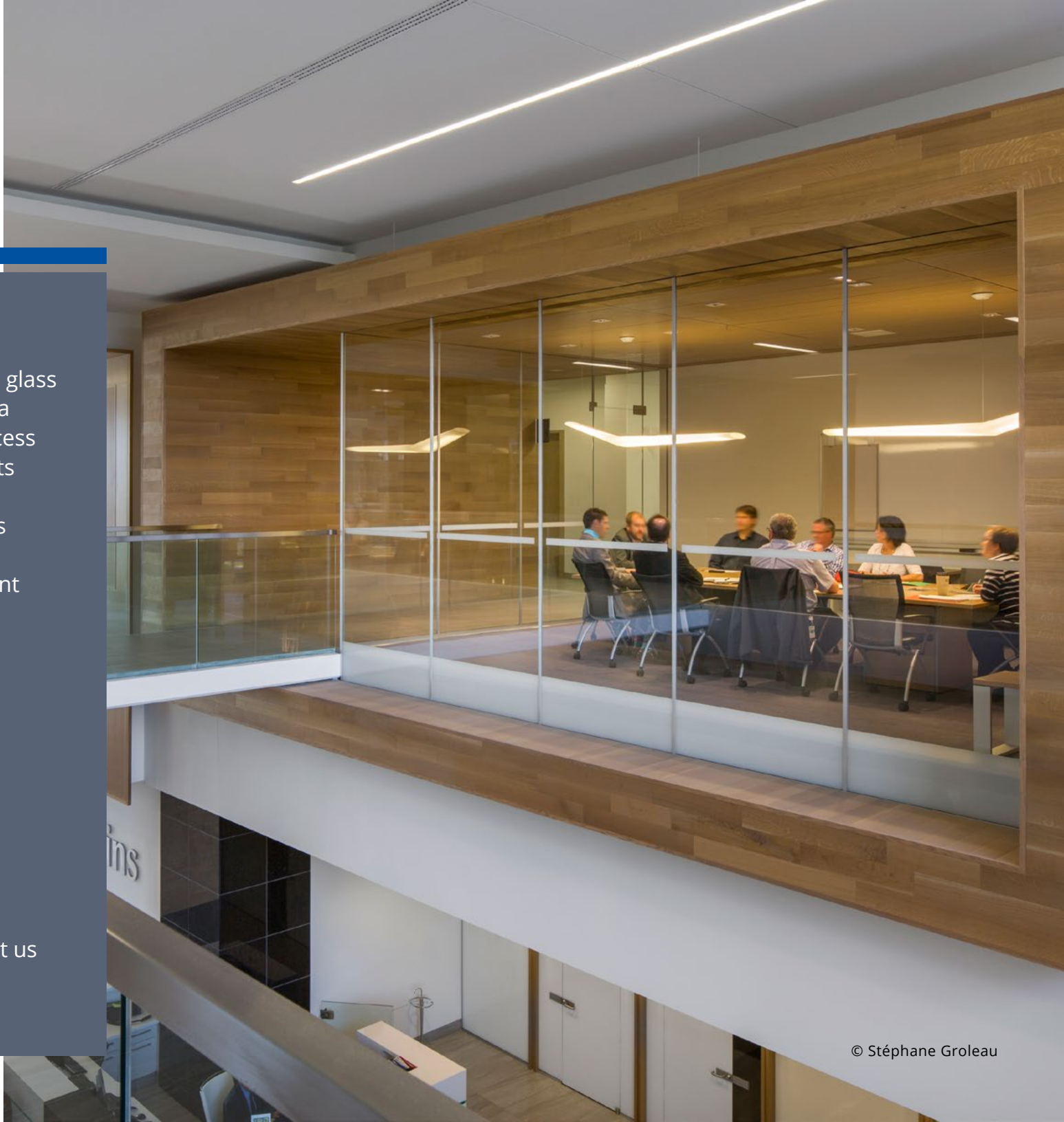
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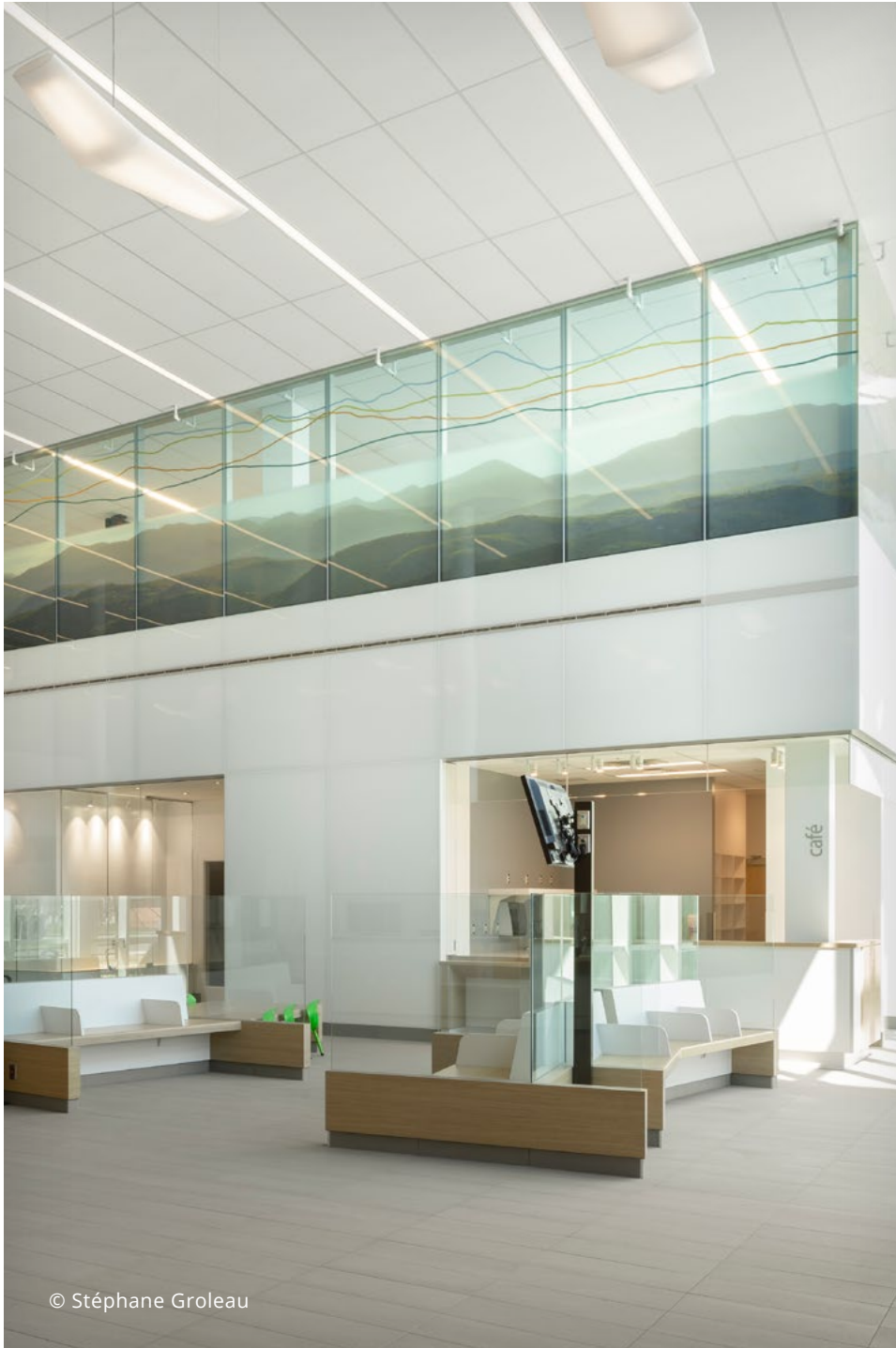
# HEAT-TREATED GLASS

Heat-treated glass is subject to a thermal process to optimize its mechanical characteristics and make it more resistant to breakage.

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## HEAT-TREATED GLASS

The heat treatment process consists of subjecting the glass to a high temperature in an oven, then cooling it quickly, this is all done with the aim of increasing its resistance and making the glass safer in case of breakage

## Tempered Glass

## Heat-Strengthened Glass



The glass is heated to its melting temperature, and then rapidly cooled in air, thus creating internal tension. This treatment will make it more resistant while allowing it to crumble in the event of breakage, rather than splintering into sharp fragments.

This thermal process changes the internal structure of the glass differently from the tempering process. In case of breakage, the glass will adopt a breakage pattern into large fragments that will usually remain trapped in their frame.

<b>EXTERIOR USE</b>	<ul style="list-style-type: none"> <li>▪ Insulating glass</li> <li>▪ Spandrel panels</li> <li>▪ Bus shelters</li> </ul>	<ul style="list-style-type: none"> <li>▪ Greenhouses/solariums</li> <li>▪ Skylights</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insulating glass</li> <li>▪ Spandrel panels</li> </ul>
<b>INTERIOR USE</b>	<ul style="list-style-type: none"> <li>▪ Railings</li> <li>▪ Glass partition</li> <li>▪ Showers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Arena</li> <li>▪ Furnishings</li> <li>▪ Interior door</li> </ul>	
<b>FEATURES</b>	<ul style="list-style-type: none"> <li>▪ 4 times stronger than annealed glass.</li> <li>▪ The glass will shatter into small beads that will likely fall out of their frame.</li> <li>▪ Tempered glass meets glass safety standards.</li> </ul>		<ul style="list-style-type: none"> <li>▪ 2 times stronger than annealed glass</li> <li>▪ The glass will break into large points which will generally remain trapped in their frame.</li> <li>▪ Heat-strengthened glass is not a safety glass.</li> </ul>

## DIMENSIONS (MAXIMUM WEIGHT 260 LB - 117KG)

THICKNESS	MINIMUM DIAGONAL	MAXIMUM LENGTH	MAXIMUM HEIGHT	MAXIMUM P <sup>2</sup>
*3.3 mm	16"	84"	144"	20
4 mm	12"	93"	141"	30
5 mm	12"	93"	141"	40
6 mm	12"	93"	141"	60
8 mm et +	12"	93"	141"	max 250lbs





## SPONTANEOUS BREAKAGE

When glass is produced, although glass manufacturers exercise strict control over their raw materials, it is impossible to avoid the presence of contaminating particles, such as nickel sulfide inclusions. These inclusions are normally less than 0.2mm, and they are undetectable. During extreme temperature variations, they can grow, because an increase in tension in the glass and cause it to burst, without apparent cause. This phenomenon is called “spontaneous breakage”. This kind of breakage only happens very rarely but can occur up to 10 years after the production of the glass. The secondary quench (or “Heat-Soak”) test may be indicated to prevent such breakage, particularly for glass intended to be installed at a height in hard-to-reach places.

## SECONDARY HEAT-SOAK TEST

The secondary quenching test, better known as “Heat-Soak”, consists of subjecting the tempered glass to a controlled thermal cycle in an oven with the purpose of causing breakage of glass containing inclusions of nickel sulphide, that can cause spontaneous breakage of standard tempered glass

## STANDARDS

### Glass

ASTM C1036-16 Standard de specification for flat glass

CAN/CGSB 12.3 M91 (R2017) Standard Canadian - Clear float

### Tempered glass

CGSB-12.1-2017 Safety glazing

ASTM C1048 Heat treated flat glass

ANSI-Z97.1-2015, National American Standard for Safety Glazing used in buildings

16CFR 1201 II, Safety Standard for Architectural Glazing Materials

DIN EN 14179-1, Heat Soaked Thermally Toughened Soda Lime Silicate Safety Glass