

# CONSTRUCTION SITE COURSEWORK

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## Facade material study: Glass

Glass in architecture is used due to more benefits it gives than people can normally think of apart from giving visibility and light to the building.

### -Thermal insulation:

Low-E glass (low-emissivity) is used for building's facade, usually place on the inner or outer pane of one glass unit based on the local weather. It has metallic coating that reflects the heat back.

### -Solar control:

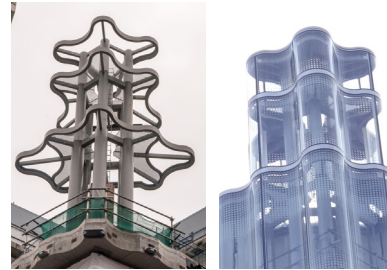
The glass can be designed to prevent solar heating in the building. The glass can be either tinted or has a microscopically and transparent coating on one side

### -Safety, security, fire resistance:

The glass can be toughened or laminated to improve its resistance and prevent breakage.

### -Noise control:

The acoustic glass is designed to block the sound energy in between of two layers of double-glaze glass, using a special interlayer as a dampering core



## Construction method:

The floor slabs and steel/aluminum frames are constructed first. Then the glass will be installed to fit the frames. The glass brackets are install along the floor slabs to hold glass units. One glass unit can be transfer to the positioned brackets by using the vacuum lift or cranes. The sequence of glass installation is from low to high



Construction site at 11 Soho Street  
Architect: Allford Hall Monaghan  
Morris  
Developed by Dukelease



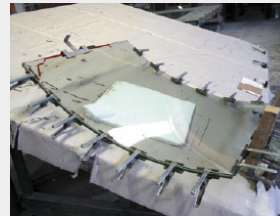
## Curved glass surface

"Ever since the nineteen eighties, architects in Holland and abroad felt dissatisfied with the ubiquitous rectangular blocks of buildings, more often than not clad in a plate-glass curtain wall," says Vollers, who is an architect as well as a building technologist. "So they started experimenting with cylindrically rounded buildings, and eventually started sketching voluptuous curves inspired by images from nature such as dunes, beaches, waves, and the images of information streams flowing around the Web."

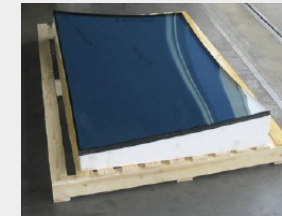
## Process of making a curved glass unit



Large moulds are milled from cellular concrete and placed in the furnace in 700 Celsius degree



Curved panes are turning into insulating glass with coating



The edges of glass panel is cut along the mould. The mould is also used for the aluminum frame



A complete unit with curved frame and glass

source: Tordos and Twister, by Marion de Boo