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Antarctic | Halley Bay | Halley VI Research Station

Project:
Halley VI Research Station
Location:
Halley Bay/Antarctica
Product:
OKA*GEL*
Project volume:
72 m²
Architect:
Hugh Broughton Architects, London and Faber Maunsell, St Albans/UK
Completion:
2008 - 2011

The new complex of the British Antarctic Survey (BAS) Research Station Halley VI is one of the most challenging construction projects on Earth. Since 1956 the Halley bases were used to conduct research into meteorology, glaciology, seismology, radio astronomy, and geospace science. The new station will allow long-running research on global change to continue at the site where the ozone hole was discovered. The present station Halley V is located on the Brunt Ice Shelf, a floating area of ice that is moving westward by approx. 700m per year. At irregular intervals, it calves off as vast icebergs. There is a growing risk that ice on which the existing Research Station sits could break off in the next decade. Additionally more than 1 metre of snow accumulate each year. The first four Halley bases were all buried by snow accumulation and crushed until they were uninhabitable. The new modular station is to be made up of eight individual modules, which are connected together by short, flexible corridors. The modules are kept above the snow surface using hydraulic legs mounted

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on skis. As well as keeping the buildings above the rising snow level the new design will allow the station to be periodically relocated across distances of many kilometres. The central module accommodates the majority of the stations social areas and therefore consists of double height with a large east-facing window made of OKA*GEL*. OKA*GEL* is a new insulating glass system. The inter-pane cavity is filled with translucent Nanogel®, a special noncrystalline solid. Thanks to its extraordinary physical properties it is the lightest and best insulating solid in the world. Nanogel® offers outstanding sound and thermal insulation uniquely combining them with a high light transmittance and light diffusion. Different glass build-ups result in a reduced thermal transmittance of Ug = 0.3 W/(m²K). In a very hostile environment the new Halley base will provide the staff – living and working there all year long – with a little more comfort.

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