



PROJECT DETAILS

Client: The Wine Society

Purpose: Wine storage

Architect: Vincent & Gorbings

Contractor: Morgan Ashurst

Completion: 2009

In Brief:

- How do you design a very large warehouse which requires stable temperature at all times?
- How do you use off-site and innovative construction techniques to reverse the damaging effect of greenhouse gases?
- How do you design an insulated and translucent structure which exceeds the requirements of current Building Regulations?
- Where do you source a translucent cladding system which will save on artificial lighting and reduce external maintenance?
- Why was Kalwall the obvious choice?

The Project

This 3250sqm warehouse is unusual not only because of its construction but also because of its special purpose to store bulk quantities of different wines. Wine is best stored between 13 and 18degC and will only accept small variations in temperature. Consequently, the architects had to respond to the essential requirement of minimal heating and cooling all year round. The result is an innovative use of building materials, high tech daylighting and effective modern methods of construction.

The Solution

The warehouse is constructed with preformed wall panels of Tradical Hemcrete - a mixture of hemp stalk and modified lime formed off-site in large prefabricated sections. To complement the perfect envelope, it is naturally lit by full height wall sections of highly insulating Kalwall which evenly diffuse natural daylight and which, together with the insulated aluminium roof, provide insulated internal space which exceeds current Building Regulations. The 21m double height structure takes advantage of new forklift truck technology to provide storage 8 pallets high compared with the more normal 5-6 racks.

The Comments

The Wine Society said, 'The architects have delivered a sustainable building with environmental conditions which are perfect for the storage of wine. In addition, façade materials and colours have been carefully detailed to achieve a crisp, high quality and contemporary architectural appearance. Mark Chandler, director of architects Vincent & Gorbing, says, 'In our opinion, we have taken full advantage of modern methods of construction. We also chose the insulating Kalwall daylighting system because it would not only save energy and meet the sustainable brief but create well lit working conditions with a remarkable interior ambience.'

The System

Kalwall is the most highly insulating diffuse light transmitting cladding (and skylighting) system available. It is designed to transmit "museum-quality" light evenly across the interior without glare or harsh contrasts of light and shade. The translucent panels are factory prefabricated to the exact size and configuration for each project. Panels can be flat or curved, and opening or fixed glazed window units can be incorporated. The panel is generally 70mm thick (100mm is also available) and by providing various densities of insulation, the thermal resistance and therefore 'U' values can be varied without loss of light. With Cabot's aerogel Lumira (previously called Nanogel), a 'U' value of 0.28W/m²K can be achieved. Kalwall is resistant to damage and is largely self-cleaning.

More Information

For Technical information, downloadable publications, project case studies and short videos, visit www.stoakes.co.uk or telephone 020 8660 7667.



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