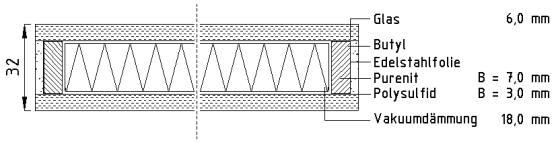
VIP-BAU.DE
Vakuum-Isolations-Paneele am Bau

Report from the Construction site



Kind of insulation: Jamb-crossbar construction

Construction: GLASKEIL GmbH & Co. KG

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VIP-product: WACKER CERAMICS & va-Q-tec AG

Location: Hospital in Erlenbach / Main, Germany

Date of realization: September 2001

Funding: Bavarian State Ministry of Economics, Infrastructure, Transport and Technology

Description of the construction:
A typical jamb-crossbar construction made of aluminium was installed. The total thickness of the façade element was limited to 32 mm. The vacuum-insulated elements were installed instead of 70 mm thick conventional insulation. The theoretical improvement in the U-value should be from 0.57 W/(m²K) to 0.22 W/(m²K) with a 18 mm thick VIP. Because of the thermal bridges at the edge of the element, the real U-value for this element size (about 1 m² with two VIPs measuring 0.5 m x 1.0 m) is 0.6 W/(m²K). It is advantageous that the elements can be manu-factured in the factory so they can be installed like a window pane at the building site. The material of the spacer was varied between stainless steel and Purenit.

Figure 1: Photograph of the vacuum-insulated façade elements during the installation.

Figure 2: Cross-section of a façade element. In some elements the glass was exchanged for 3 mm thick sheet aluminium.

Figure 3: Outside view of the façade