

Report from the Construction site



Kind of insulation: Renovation with insulation under underfloor heating

Construction: Rosel engineering, Wuerzburg

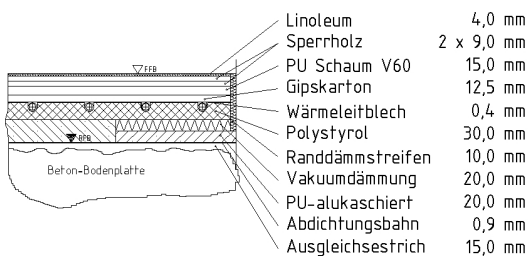
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VIP-product: WACKER CERAMICS, Kempten

Location: Sports hall Gemünden, Germany

Date of realization: July 2001

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



Description of the construction:

The floor of the sports hall was worn down and had to be provided with an underfloor heating during the renovation. The height of the floor was limited. One part of the area was insulated with VIPs. The VIPs measured 0.5x1.0 m². Conventional insulation was integrated in another part of the floor. The conventional insulation (polystyrene boards) is of the same thickness as the vacuum insulation (7 cm thick), yet the U-value of the conventionally insulated area is 0.43 W/(m²K) and that of the VIP-insulated area is 0.15 W/(m²K).



Figure 1: Photograph of the floor during the installation. The shiny VIPs are put on the matt aluminium layer of the polyurethane boards. The VIPs were connected with tape. White polystyrene plates with grooves for the heating pipes are mounted on top of the VIPs.

Figure 2: Cross-section of the floor insulated with polystyrene as well as with VIPs.

Figure 3: Floor of the sports hall after renovation.