KNAUF INSULATION
it's time to save energy

CASE STUDY

Our Lady's RC High School, Manchester

PRODUCTS USED	Crown SteelTherm Roll
PROJECT	Our Lady's RC High School, Higher Blackley, Manchester
MAIN CONTRACTOR	Laing O'Rourke
SUPPLY CHAIN SPECIALIST	Sheffield Insulations
SUB CONTRACTOR	Prestwich Plastering Ltd
KNAUF INSULATION MANAGER	Matthew Prowse

"Supplied by Sheffield Insulations Manchester branch, Knauf Insulation's Crown SteelTherm Roll was ideal for this project. The product is specifically designed for the thermal insulation of external walls in steel frame construction, plus it combined the best qualities of glasswool, such as superb thermal performance, sound absorption and fire resistance."

Mark Gray
Senior Technical Advisor, Sheffield Insulations

CHALLENGE

The challenge was made to Sheffield Insulations, supply chain specialist, to find the right solution to meet Part L of the Building Regulations requirement of the SBEM (Simplified Building Energy Model) calculations. The solution also had to meet Part E acoustic requirements as well as complying with the tight budgetary requirements associated with BSF programmes. For public buildings such as this, superior fire performance is crucial in line with guidance offered by the recent Building Bulletin 100: Design for fire safety in schools. The DfES (Department for Education and Skills) also encourage designers to consider as many sustainability techniques as they can in the design of new or refurbished school buildings.

The innovative education village is the first project under the Manchester School's Programme with the aim of uniting the whole community together to make the most of its facilities. The site, due for completion early in 2009, will eventually house two schools, providing pupils with high-tech classrooms, and an environment conducive with learning.

SOLUTION

From the discussions with Sheffield Insulations, architects, main contractor and Manchester City Council, Knauf Insulation designed, manufactured and tested a new product solution, 'Crown SteelTherm Roll' to act as a full fill insulant within the steel frame cavity of the building. This cost effective solution allowed for the reduction in the overall thickness of the wall construction.

Now part of the generic specification for the wider project being rolled out across 25 schools in the programme, Knauf Insulation's Crown SteelTherm Roll offers excellent thermal performance. The inherent fire resistance of the mineral wool insulation and it's environmental credentials also contributed to the specification.

Crown SteelTherm Roll is manufactured in 600mm widths and is specifically designed for friction fitting between standard steel frame sections. The easy to handle roll is easily installed and as the product naturally knits together there is no risk of gaps between adjacent rolls or steel frames, adjoining rooms or between floors, resulting in a thermal conductivity of 0.040W/mK, with no thermal leakage. Fully filling the studs ensured the passage of flanking sound was dramatically reduced.

Crown SteelTherm Roll is manufactured from glass mineral wool, which is ideal for limiting the spread of fire -since it holds a Euroclass classification A1, for non-combustibility and will not burn. Nor will it give off toxic smoke or suddenly ignite in a fire due to 'flashover'.

Superior fire performance was crucial – and by specifying non-combustible materials such as Crown SteelTherm Roll, Our Lady's RC High School is designed in accordance with guidance offered by the recent Building Bulletin 100: Design for fire safety in schools.

Crown SteelTherm Roll is manufactured using recycled glass bottles and is also recyclable at the end of the building's life. Free from CFCs, HCFCs and any other material with ozone depletion potential in its manufacture and content the product also represents no known threat to the environment.

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