

Influence of Coatings on Energy Conservation in Construction Industry

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Abstract : World energy consumption has increased rapidly in the past few years. Due to population growth, total energy consumption is increasing; a large amount of energy is wasted on the cooling and heating processes in buildings. However, using thermal heating management can minimize costs, heat consumption and create a management system for the heat insulation for buildings. This concept is being implemented through different approaches. Based on analysis and research, there is evidence in the energy consumption before and after testing and applying construction approaches for thermal heating management in building units. This investigation addresses the evaluation of the influence of external coatings on energy consumption. Coatings are considered one of the smart effective available approaches for energy efficiency. Unfortunately, this approach is not widely applied in the construction industry. It needs more data to prove effectiveness and credibility between people to use it as a smart thermal insulation approach. Two precedents have been analyzed in order to monitor buildings' heat exposure, and how the buildings will be affected by thermal insulation materials. Data sheets from chemical companies which produce similar coatings are compared with the usual products and the protective thermal products.

Keywords : energy consumption, building envelope, thermal insulation, protective coatings

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