Thermal Breaks in Practice

Following on from case study DBP00071 Peers Steelwork have recently completed a project where the use of “Schoek” thermal insulators was a specific design requirement. Below is a list of key points which may prove useful for anyone thinking of using a similar product.

Key Points:-

1. The insulators were required to form a break in the overhanging eaves on a new portal frame lab structure.
2. The design of the actual joint was indicative only and Peers liaised with Schoek and were responsible for the final joint design.
3. Schoek’s catalogue is quite in depth with regard to the various types of joints, design guides and test data for the various joint types.
4. The thickness requirements for the end plates is much greater than a normal steel to steel connection as distortion resistance is critical and double curvature bending can not be assumed. This may lead to stub pieces and thick plates being welded to column flanges.
5. The units came in pairs with each unit (2 bolts) costing £65. The additional stubs and thicker plates gave a joint cost of £180 per location (Mar 08). This may well be more expensive than providing additional insulation especially in the case of cantilever beams supporting a fully clad soffit.
6. Before making a decision on the use of thermal insulators a good resource is the SCI publication P380 – “Avoidance of Thermal Bridging”. This gives guidance on the use of thermal breaks and shows other methods such as continuous beams and reducing affected area.

For further information contact Chris Achilles (Peers) – Tel 01204 558500.