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PETRA a Peikko product

Statement, use of PETRA in Denmark.

This statement concerns the use of PETRA exchange beams in Denmark.

It is not required that this product has a CE marking. The production fulfills the requirement in [6] for the steel part of the product and in [7] for the welding of reinforcement. The quality assurance of the production does also fulfill the requirements.

The product and the design of the product fulfill the requirement in the Danish building regulations for the utilization in Danish buildings.

This statement is based on the following documentations and conclusions.

Background documentation

The basis for the statement is

- [1] Petra, Udvekslingsbjælke til dækåbninger, Teknisk Manual, DK 01/2017
- [2] Petra slab hanger, Structural design, Recommended values of Eurocode + DK Annex, 15.08.2013
- [3] VTT, Research report, VTT-S-07216-12
- [4] DS/EN 1990:2003 and DS/EN 1990 NA:2013
- [5] DS/EN 1993-1-1+AC:2007 and DS/EN 1993-1-1 NA:2015
- [6] DS/EN 1090-2
- [7] DS/EN ISO 17660
- [8] DS/EN 1992-1-1+AC:2008 and DS/EN 1992-1-1 NA:2013
- [9] DS/EN 1993-1-8+AC:2007 and DS/EN 1993-1-8 NA:2013

Conclusions of the documentation

The static calculations adapts the correct values for partial safety factors for a structure in CC1-CC3 according to DS/EN 1990:2007, DS/EN 1990 NA:2013, DS/EN 1992-1-1:2007 and DS/EN 1992-1-1 NA:2013, DS/EN 1993-1-1:2007 and DS/EN 1993-1-1 NA:2015.

The loading on the Petra beam from the supported hollow core slab are in agreement with the documented distribution method in [3].

The design capacity of the L-beam is in accordance with the general principles in [5], [8] and [9].

The design capacity during standard fire situation documented in [2] is not used in Denmark, as the slab hanger will always be fire protected in Denmark to a meet a critical steel temperature 400°C – see data sheets in [1].

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