Review of robustness/progressive collapse methods in relation to Swedish building approaches

Modern day building practices include considerations for robustness and progressive collapse which are often based on prescriptive design provisions specified in structural codes such as the Eurocode. Currently there are efforts by code writing committees for appraising design provisions related to robustness requirements. One critical question that needs addressing is the suitability of certain approaches to robust design to building systems which are common to Sweden (e.g. prefabricated concrete solutions).

Master thesis proposal
The overall goal for the proposed thesis is to study the suitability of certain approaches to robust design to building systems which are common to Sweden. The method of investigation will involve a review of available design methods which will be critically assessed in relation to their suitability for prefabricated building solutions common in Sweden. This assessment may involve some more in-depth analyses of selected systems which will be determined together with industry partners. Ultimately, some useful recommendations for appropriate design approaches for increased robustness and progressive collapse resistance which are appropriate for the Swedish building sector are desired.

The master thesis project should be carried out by two students.

Start/end: Jan 2018/June 2018

Prerequisites: Passed courses VBKN05 Concrete structures, VBKN01 Steel – and timber structures VBKF01 Building systems

Other requirements: Good analytical skills and good writing skills in English/Swedish

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