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Evaluation of the course of study of the supervisor

Ing. Svitlana Kalmykova

Doctoral thesis

Rectangular hollow T-joint with eccentricity

Ing. Svitlana Kalmykova studied at the Department of Steel and Wood Structures as a full-time doctoral student from 2016 to 2020. During her studies she passed professional and language exams. She passed the State Doctoral Examination in 2019.

As part of her studies, Svitlana had the opportunity to participate in SGS (or RPMT) projects 161 - 1611575A134 Preparation of background material for a technical paper, work on a numerical model, SGS17/050/OHK1/1T/11 Welded closed section contact beams, and SGS18/117/OHK1/2T/11 Welded closed section contact beams. Participated in the results of Merlion II grant No.312312170A134 Advanced design of steel structure strengthening under load. Svitlana co-authored a paper on steel structure contact beams accepted for publication in a SCOPUS journal and participated in two international scientific conferences. During her studies, Svitlana was involved in the development of a new course (co-investigator, FIS 1052038A003, number 2020/3, Support of Czech language teaching for foreign students of Bachelor's degree programmes - creation of interactive popular language materials (ČJ-AJ-RJ) for the development of professional vocabulary and communicative competences while studying at the FSv CTU).

The PhD student has developed a dissertation on the current topic of load-bearing capacity of closed sections, which determines the design of welded joints of rectangular hollow sections (RHS) with offsets. The thesis includes experimental and numerical investigations on the topic. Through the proposed modification of the analytical relations, higher load capacities can be achieved, leading to a more economical structural design. The economic design of the structure, where the same load capacity can be achieved using less material, also has a positive effect on the amount of CO₂ emissions that are an unavoidable part of steel production. The proposed design approach therefore also has a positive environmental impact.

František Wald, Prof. Ing. CSc.

Supervisor

