

## Reviewer's form for thesis evaluation

### 1. Identification of the student

Student:	Kovil Chaitanya Reddy R A
Thesis:	Residual Stresses in Hollow Section Joint
Institution:	Czech Technical University in Prague, Faculty of Civil Engineering Department of Steel and Timber Structures
Academic year:	2017/2018

### 2. Identification of the reviewer

Name:	Ing. Michal Strejček, Ph.D.
Institution:	Kovové profily, s.r.o. (Podnikatelská 545, Praha 9 – Běchovice, 190 11)
Position:	Structural engineer

### 3. Fulfillment of thesis goals

excellent <input type="checkbox"/>	above aver. <input checked="" type="checkbox"/>	average <input type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments:				
<p>The thesis is in accordance with the supervisor's assignments and all goals mentioned in chapter 3 are fulfilled. The content of the thesis is well organised and divided between the state of the art and the student's own contribution. The quality of the submitted work would be improved with more detailed descriptions of the assumed laboratory test, numerical analyses and their results.</p>				

### 4. Academic/scientific/technical quality

excellent <input type="checkbox"/>	above aver. <input type="checkbox"/>	average <input checked="" type="checkbox"/>	below aver. <input type="checkbox"/>	weak <input type="checkbox"/>
Comments:				
<p>The thesis is very valuable to its intent. Objectives are logical and worthy for future practice. The principles and solutions proposed are acceptable. The student demonstrates creative thinking and the ability of independent creative activities. Nevertheless a wider description of diagrams in chapter 5.2, where results of the analysis are discussed, would help the reader to better understand the student's conclusions.</p>				

### 5. Formal arrangement of the thesis and level of language

excellent     above aver.     average     below aver.     weak

Comments:

The formal arrangement of the thesis is very good. The content is clearly divided into chapters in logical progression. Images, tables and diagrams are obvious and easily readable.

### 6. Further comments

Notes to discussion:

- a) Why the finite element analysis assumes a bilinear material model according to EN 1993, though experiments in chapter 2.4 probably have detailed material tests? Can you explain principle of a true stress - strain diagram?
- b) Can you explain benefits of application of contact interaction between bottom flange of chord and support for analysis results?
- c) Can you explain reason why numerical model without influence of residual stresses is validated on test results where residual stresses are included? What is the reason of strong inaccuracy between prediction and test results in elastic part of diagram in Figure 18?

7. Grade: B (VERY GOOD)

Use the following scale

A (excellent)	B (very good)	C (good)	D (satisfactory)	E (sufficient)	F (fail)
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Prague

23 January 2018

The Review

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Signature