Reviewer's form for thesis evaluation

1. Identification of the student

Student:	Marcos Bryan Flores Pazmiño
Thesis:	The Prediction of the Joint Stiffness in Riveted Steel Bridges
Institution:	Czech Technical University in Prague
Academic year:	2017/2018

2. Identification of the reviewer

Name:	Ing. Filip Kutina
Institution:	SUDOP PRAHA a.s.
Position:	Bridge designer

3. Fulfillment of thesis goals

excellent ☐   above aver. ☑   average ☐   below aver. ☐   weak ☐

Comments:

Student fulfilled the goals to model different riveted joints for bridges using a nonlinear material characteristics, to perform the load/stiffness analysis of these joints and to evaluate the results obtained in order to establish the predictive formula based on results of this research and other existing research.

Targets of the research are presented with appropriate comments, illustrations and explanations to obtained results.

4. Academic/scientific/technical quality

excellent ☑   above aver. ☐   average ☐   below aver. ☐   weak ☐

Comments:

This thesis was elaborated on a high theoretical and practical level. The student used national and international standards, prior published methodologies dealing with the topic of stiffness of a steel connections and specialized software for static assessment. The author has proved the ability to solve complicated technical issues and to evaluate them according to his own opinion.

Conclusions of the research are useful for the concerned engineering branch and may serve for faster evaluation of stiffness of a semi-rigid riveted joints as an input parameter for a global numerical model. Results could be also useful for further research.

5. Formal arrangement of the thesis and level of language

excellent ☐   above aver. ☐   average ☑   below aver. ☐   weak ☐

Comments:

The thesis has a very good stylistic. The text is complemented with numerous suitable illustrations and drawings, results and conclusions are commented on illustrating diagrams. The resources of the reproduced data processed in the thesis are quoted according to requirements.

Linguistic level is good, grammar or typing errors occur, though, which sometimes makes readability of the text a little more difficult.

6. Further comments

Questions to the student (topics for discussion):

1. Compare the amount of joints tested that are corresponding to Formula 1 and Formula 2. Do you consider these formulas the same representative for appropriate types of profiles? Could the significantly higher average percentage error obtained for Formula 2 (greater profiles) be related to the lower amount of profiles of this category tested?

2. How did you evaluate the error from the statistic point of view? Did you exclude the extreme values?

3. The error obtained using results of Minor's thesis are higher than in case of other studies. Explain, whether this could be caused by different method of joints modeling used in Minor's thesis.

4. Does CBFEM represent real behavior of a riveted connection credibly? Explain.

7. Grade: __B (very good)__

Use the following scale

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

Prague

25 Jan, 2018

The Reviewer

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(Ing. Filip Kutina)