

I. IDENTIFICATION DATA

Thesis name:	The Ultimate Load Capacity of the Road Historic Bridge
Author's name:	Sandryne Lefebvre
Type of thesis :	master
Faculty/Institute:	Faculty of Civil Engineering (FCE)
Department:	Department of Steel and Timber Structures
Thesis reviewer:	Dr. Elyas Ghafoori
Reviewer's department:	Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment <i>Evaluation of thesis difficulty of assignment.</i>	extraordinarily challenging
The topic of this master thesis is very challenging	

Satisfaction of assignment <i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	fulfilled
The foal of the master thesis was fulfilled.	

Method of conception <i>Assess that student has chosen correct approach or solution methods.</i>	outstanding
The method chosen to approach the solution was quite logic.	

Technical level <i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	A - excellent.
The thesis demonstrates a good use of knowledge gained through the references.	

Formal and language level, scope of thesis <i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	A - excellent.
The English language of the text is excellent.	

Selection of sources, citation correctness <i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	A - excellent.
It has been fulfilled.	

Additional commentary and evaluation <i>Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.</i>
From the results of the master thesis, it looks like that the student worked hard to create and calibrate a nonlinear numerical modelling. Therefore, I would say that this thesis has a very high technical level and helpful for readers.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

Just a few comments on this thesis, which are mainly editorial:

1. In Page 24, the paragraph just above Table 9: "In addition, the bridge was strengthened with SMA (shape memory alloys) from the Germany manufacturer Weimar". Is the SMA described here the Fe-SMA? If so, has it been manufactured at "re-fer AG Company" in Switzerland or "German manufacturer Weimar" Please explain.
2. In Page 24, Table 9: where does the information in this Table come from? Are they from fe-SMA from re-fer AG Company? If so please see:
<https://doi.org/10.1016/j.matdes.2017.07.055>
<https://doi.org/10.1088/1361-665X/aaa2c9>
3. Some of the figures have multiple curves but do not have any legend, for example, please see Figs. 45-54. Legends can help the readers to better and faster understand the content of the figures.

In general, I evaluate this master thesis with classification grade **A - excellent**.

Date: **22.7.2019**

Signature: Elyas Ghafoori