**OPPONENT REVIEW AND EVALUATION OF THE BACHELOR THESIS**

| Title of the bachelor thesis: | Static design of steel frame hall structure  
Statické posouzení ocelové rámové konstrukce |
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<tr>
<td>Name of the student:</td>
<td>YIJING PAN</td>
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<td>Supervisor of the bachelor thesis:</td>
<td>Ing. Miroslav Rosmanit, Ph.D.</td>
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**Evaluation of the thesis content, compliance with the bachelor thesis assignment:**
The bachelor thesis content matches the given topic. The thesis deals with basic static design of frame hall structure and design of the main details.

**Evaluation of the structure and sequence of work:**
The structure and sequence of the thesis is smooth, every part relates to each other logically. The theoretical part of the thesis is quite simple and gives the evidence of the overall knowledge of the student.

**Overall evaluation of the thesis:**
The bachelor thesis contents a basic static design of the steel frame hall structure. Three possible variants of the boundary conditions have been solved for better understanding of the frame behavior in 2D. Simple comparison of the variants was made, one structure was chosen for detailed design. Both ultimate and serviceability limit states were checked. Two most important details, namely the top hinge connection and main frame connection, were designed. The thesis includes simple drawings for better description of the designed structure.

The student consulted her work regularly. Most of the time very strong leadership and repeated explanation of the basic principles of the design procedures, actions of the loads and usage of the static program Scia Engineer were needed. Finally, the student understood the problem and finished the work sufficiently.

**Reviewer's comments and discussion topics:**
In the discussion would be appropriate to discuss following topics:
- The difference between the elastic and plastic static design of the steel structures.
- Combinations of the loads according to the Eurocode design procedure.
- Design of the members under the compression, buckling behavior.
- Carrying capacities of the bolt connections – bearing, shear and tension resistance.

**Contribution of the work and possible use of the results:**
Contribution of this thesis is mainly forming the knowledge of the student forced to the independent work.

**Characteristics of choice and reference use:**
Selection and use of study materials is correct and sufficient to complete the assigned work.

**Evaluation of formal editing of the work, language level and attachments:**
Formal editing of the thesis and language level is sufficient. The work is performed in the range of the requirements for the bachelor thesis at the Faculty of Civil Engineering, VSB-TU in Ostrava.

The thesis is recommended / not recommended for the defense, with suggested grade **GOOD – (DOBŘE) – E/55 (ECTS)**

In Ostrava: 23.05.2014

[Supervisor's signature]