



## THESIS EVALUATION SUPERVISOR EVALUATION

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Supervisor: Eng. Miroslav Novak, Ph.D.

Thesis title: Optimization of current sensors with Hall probe and Rogowski coil

- A. Abstract quality, keywords matching..... Excellent minus (1–)
- B. Research scope and processing ..... Excellent (1)
- C. Level of theoretical part ..... Excellent minus (1–)
- D. Appropriateness of the methods ..... Excellent (1)
- E. Results elaboration and discussion ..... Excellent minus (1–)
- F. Students own contribution ..... Excellent (1)
- G. The conclusion statement ..... Very good (2)
- H. Fulfillment of Thesis tasks (goals) ..... Fulfilled
- I. Structure, correctness and fulness of references ..... Excellent (1)
- J. Typographical and language level ..... Very good (2)
- K. Formal quality ..... Excellent minus (1–)  
(text structure, chapters order, clarity of illustrations)
- L. Student access (independence, activity etc.) ..... Excellent (1)

### Comments, remarks:

The presented diploma thesis deals with simulations of Rogowski current sensors. It investigates sensor errors due to the position of the primary conductor, surrounding conductors, and geometric errors of the sensing coil itself. The simulations were performed in the ANSYS environment. The calculations were compared with a semi-analytical solution created in MATLAB scripts and finally verified with measurements.

The student worked intensively and very independently on the solution, devoting much time to the 3D modeling and semi-analytical solution of the sensor errors.

The submitted work has the usual structure, is clear and summarizes the volume of work performed.

Unfortunately, there are minor typographical and grammatical errors. The images are of slightly worse quality.

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Overall assessment:

Geometrical errors of Rogowski sensors significantly affect measurement accuracy. The work is, therefore, of great practical importance.

The student showed three different error investigation methods and compared them. He must handle the complex simulation tool ANSYS, practical measurements, and their evaluation well.

Questions for the defense:

Why Rogowski sensors are suitable for measuring high frequencies.

What limits their frequency range?

**Plagiarism checking:**

Similarity by STAG 3 % (see [www.IS/STAG](http://www.IS/STAG))

Comment if similarity is above 5 %:

Low similarity (obligatory chapter Declaration, figure captions, references).

**Overall classification and recommendation:**

Work meets the Master degree requirements and therefore I recommend it for the defense

I suggest to classify this work by grade: Excellent (1)

By signing I certify that I am not in any personal relationship with the author of the thesis

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Supervisor signature