

DIPLOMA THESIS EVALUATION

Student's name and surname: Sai Rhoda Ayorkor

Name of the diploma thesis: The Improvement of the Cavitation Resistance of Technical Surfaces Using High Power Laser Pulses

Supervisor of the thesis: Ing. Miloš Müller, Ph.D.

1. Diploma thesis evaluation

Evaluation	excellent	excellent minus	very good	very good minus	good	failed
Meeting the goal and fulfilling task of the thesis	x					
Quality of conducted survey	x					
Methodology of solutions		x				
Expert level of the thesis	x					
Merit of the thesis and its potential applicability of results	x					
Formal and graphic level of the thesis	x					
Student's personal approach	x					

Mark x in the corresponding box.

Supervisor's final evaluation is based on his/her overall subjective evaluation.

Grading is stated literally in the article no. 5, neither by a number, nor by a letter.

2. Comments and remarks on diploma thesis:

The thesis fulfills all the tasks and goals given in the assignment.

The samples have not been treated within an identical time period and some results were approximated. From the thesis it is not clear how exactly the approximation was realized. More detailed description of this procedure should be beneficial. For some later research it would be suitable to test more samples for each treatment to be able to apply an error analysis.

The results have proved the LSP as an appropriate method for the cavitation resistance improvement. Its application for the real components in hydro machinery is the next logical step.

3. Questions about diploma thesis:

Is the relief of the surface treated by LSP modified? And if yes, how can it influence the possible cavitation flow around?

The residual stresses after the LSP are noted in the thesis. Is there any residual stresses profile available for the used samples?



4. Supervisor's statement on results of the inspection carried out by the anti-plagiarism program in the STAG system:

The anti-plagiarism system included in STAG indicates similarities with one document less than 1%, however these similarities comes from keywords and references. This cannot be considered as a plagiarism.

5. Supervisor's grading of the diploma thesis: Excellent

The diploma thesis meets the academic title requirements and I recommend this thesis for the defense.

Date: 18.6.2020, in Liberec



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Supervisor's signature

