

## DIPLOMA THESIS EVALUATION

Student's name and surname: Narendar Padmanaban

Name of the diploma thesis: Experimental Investigation of the Wake behind the Bluff Body with Heating

Supervisor of the thesis: Ing. Petra Dančová, 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:

**Meeting the goal and fulfilling task of the thesis:** First goal defined in the master thesis assignment form is fulfilled partially; author did not perform analysis of the other authors' works. Second goal was fulfilled. Third goal was fulfilled with help of a supervisor and a KEZ doctoral student. Fourth and fifth goal were fulfilled partially when the experiments were performed with help of a KEZ doctoral student, moreover the quality of results is low. Sixth goal was fulfilled partially, author analyzed obtained experimental data, but there is no comparison with the other authors.

**Quality of conducted survey:** There is no analysis of the state of the art (flow around the heated cylinder). The thesis brings only the theory of the bluff body and the PIV and pLIF methods.

**Methodology of solutions:** The choice of the PIV and LIF methods was right. Authors explained both methods on a good level. On the other hand, measurement settings and data analysis were not correct and the presented results are poor.

**Expert level of the thesis:** As the results are not correct, I suggest considering the new data analysis or repeating the experiments.

**Merit of the thesis and its potential applicability of results:** It is no potential applicability of results as the results have very low quality. To fulfill this point, new experiments have to be performed; author has to think about the settings of the experiments and the measuring system. I also suggest to think about the synchronization between the system and measured phenomena.

**Formal and graphic level of the thesis:** I appreciate creating author's own pictures in Chapter 2. The pictures taken from the literature are good cited, only sometimes the text included in these pictures is not readable. In author's results presented as figures or graphs, the scale and units are not readable, so it is not clear what these results actually express.

**Student's personal approach:** Author designed the channel himself. He needed help with the design of the heated cylinder. However, author was not able to work without the help of a KEZ doctoral student (help was necessary with performing the experiments, settings of the measurement setup, settings of the measuring system, measured data analysis, etc.).

### 3. Questions about diploma thesis:

How the synchronization between the measured phenomena and the measuring system can be performed?

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

The system STAG at TUL evaluated the match of 0%.

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

I recommend this work for the defense and grade it as **good**.

Date: 24.5.2019, in Liberec



.....  
*Supervisor's signature*