

I. IDENTIFICATION

Title:	Determination of Influence of a Spoiler and a Flap on Standard Airfoils
Author:	Daniel Camilo Mora Sierra
Thesis type:	bachelor
Faculty:	Faculty of mechanical engineering
Department:	Department of fluid dynamics and thermodynamics
Supervisor:	Ing. Vít Štorch
Supervisors' affiliation:	Department of fluid dynamics and thermodynamics

II. Evaluation based on respective criteria

Assignment	Rather difficult
<i>Assessment of thesis assignment</i>	
The task was to research the wing mechanization with focus on aerodynamics of flaps and spoilers. The assignment contained a practical part which required measuring polars of an airfoil equipped by either flap or a spoiler. Due to the laborious practical part, I assess the assignment as rather difficult.	

Fulfillment of the assignment	Accomplished
<i>Evaluate whether the submitted thesis fulfills the requirements in the assignment. When relevant, state the parts of the assignment that were not fully accomplished, or whether the thesis in any way extends the assigned tasks. If the required tasks were not accomplished, try to assess the magnitude, consequences and causes of each deficiency.</i>	
The assignment was accomplished fully.	

Activity and independence during working on the thesis	A - Excellent
<i>Assess whether the student was active during working on the thesis, whether he/she followed the agreed timeline and consulted his progress frequently and was prepared for the meetings. Evaluate the ability of the student to work independently and creatively</i>	
The student was very active. He consulted his progress periodically but at the same time was able to work independently between the meetings.	

Level of expertise	B – Very good
<i>Assess the level of expertise achieved in the thesis, usage of knowledge gained during studies and from literature, the usage of data and information obtained in practice.</i>	
The overall quality of the submitted thesis and the level of expertise that was reached is very good, the student used appropriate available data and information. Some topics that were described were less relevant to the assigned tasks.	

Formal and language aspects, extent of the thesis	B – Very good
<i>Assess the correct use of formal notations and evaluate the typographical and language aspects of the thesis.</i>	
The thesis is written in English and does contain some grammar and typographical errors, which are not in any way significant. The extent of the thesis is only slightly longer than assigned.	

Choice of sources, correctness of referencing	A - Excellent
<i>Asses the activity of the student when obtaining and using study materials. Characterize the choice of materials. Evaluate whether the student used all relevant sources. Check that all the ideas and parts from literature are referenced and distinguished properly, that the citation etiquette was not violated and that the bibliography contains whole and correct references according to conventions.</i>	
There are 23 sources in the bibliography, including textbooks, articles, coordinate point definitions, software and other materials that are relevant to the covered topic. The reproduced images and ideas are correctly referenced according to usual conventions.	

III. OVERALL EVALUATION AND CLASSIFICATION PROPOSAL

The thesis describes the aerodynamics of wing, generation of lift and drag and other important aspects for understanding the principles of how flaps and spoilers function. The student explains the physical phenomena and gives some classification of wing mechanization based on literature research. In the experimental part of the thesis, the goal was to measure the polars of specific airfoils. Due to the wind tunnel facility limitations, the results were strongly influenced by the wall effects, as described in the conclusion, however, all the important aspects of influence of flaps and spoilers were demonstrated and the goals given by the assignment were accomplished.

I classify the submitted bachelor thesis by the following grade: **A - Excellent**

Date: 11.8.2015

Signature: