OPPONENT´S ASSESSMENT ON DIPLOMA THESIS

Student´s name and surname: Rakesh Nag

Name of the diploma thesis: Modification of the mechanical system of the needle bar

Supervisor of the thesis: Ing. Jiří Komarek, Ph. D.

Opponent: Ing. Petr Krpeš

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 student had to solve a technical issue / limitation of the use of the DECO 2000 sewing machine at high speeds. The student identified this limitation and proposed a solution. He used the TRIZ method for the solution, which I really appreciate about the work. At the same time, he coped quite well with the technical solution.

For future application, I would recommend the student to focus more on the comprehensible communication of their ideas, either graphically or in text. The text contains errors of inattention and clearly shows that the student did not have enough time to complete. At the same time, in the end, I miss a clear comparison of both solutions, where the result of an improvement of 7% and respectively 40%, clearly indicates the direction in which future development should go(?).

In the technical documentation I would point out:

1) missing drawing documentation of catalog parts (impossibility to verify connection dimensions)

2) missing main dimensions on the assembly drawings

3) there is the rule: rotating parts (as for example screws, washers and nuts) in the section are not to be displayed in a cut!

3. Questions about diploma thesis:

1. Do you think there are any other possible solution how to increase the speed of the sewing machine than the solution introduced in the thesis?
2. Would it be possible to describe how to use the method TRIZ for solving a technical issue?

3. Would it be possible to explain the principle of the function the isolator? Could you explain the difference between HERM and CWRI?
4. What was the biggest challenge for you in solving this technical problem, and what would you do differently next time?
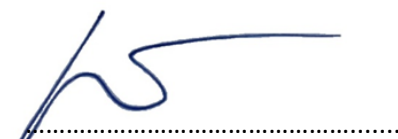5. On the drawings there are used the tolerances outside of the ISO 2768 mK, why?

4. Opponent´s statement whether the diploma thesis meets the academic title requirements and whether it is recommended for defense:
The thesis meets the prerequisites for the award of the academic title of Engineer in the following evaluation (see point 5).

5. Opponent´s grading:

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Excellent minus

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Date 27.01.2021 in Prague

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Opponent's signature