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Review

G. Ananthasayanan : Heat Transfer in Horizontally Oriented Air Enclosure, Diploma Thesis, Technical University in Liberec, Faculty of Mechanical Engineering, Liberec, 2020.

Theme of the submitted Diploma Thesis is from subject of heat transfer, namely from free convection. Heat transfer is of interest in different branches of engineering, undoubtedly. Experience and new knowledge based on experiments on thermal parameters are in demand. Experimental data and their evaluation are valuable for their further applications in design and operation of systems. In laboratory of the department Power Engineering Equipment, special measurement technique for evaluation of thermal conductivity is arranged to measure heat rate in air enclosures. The author of the Diploma Thesis prepared and performed experiments with heat transfer in horizontally oriented air enclosures with different temperatures of upper and lower walls. He obtained experimental data and evaluated thermal parameters to derive criterial equation. The attempt for elimination of thermal radiation effect seems to be important step. The author fulfilled goal of this task but he missed the opportunity to evaluate differences between criterial equations for the case hotter upper wall and the case of hotter bottom wall. Important obvious shortcomings are in survey and in following text. Quantities heat flux and heat rate have to be acquired. Unacceptable are mistakes in units of physical quantities. Errors are in equations. Numerical error is in calculation in page 41. It is possible to understand English, but used English grammar is very poor. The author is recommended to consult his Diploma Thesis at native English speaker. In list of references, nonsense and confusing references appear. Due to serious insufficiencies the submitted Diploma Thesis has to be remade (it is mandatory requirement) and in this form it cannot be representative document of the Technical University in Liberec.

Conclusion :

The author of the submitted Diploma Thesis fulfilled goal of formulated in the Master Thesis Assignment Form. But formal level of the Diploma Thesis is seriously failed. The reviewer does not recommend this Diploma Thesis for the defence nor for to be a document of Technical University in Liberec.

Opponent's grading :

failed - 4.



Prague June 16th, 2020

Source :

Electronic version of the Diploma Thesis

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Diploma Thesis Evaluation

G. Ananthasayanan : Heat Transfer in Horizontally Oriented Air Enclosure

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

Prague June 16th, 2020


Prof. Ing. Pavel Šafařík, CSc.
reviewer