



Technische Universität Braunschweig | Institut für Strömungsmechanik
Hermann-Blenk-Str. 37 | Braunschweig | Deutschland

Czech Technical University in Prague
Faculty of Transportation Sciences
Department of Air Transport
Ing. Bc. Jakub Hospodka, Ph.D.

Konviktská 20
110 00 Praha 1, Czech Republic

Review of Diploma thesis Bc. Matej Kiss

Technische Universität
Braunschweig
Institut für Strömungsmechanik

Hermann-Blenk-Str. 37
38108 Braunschweig
Deutschland

Dr.-Ing. Peter Scholz

Tel. +49 (0) 531 391-94256
Fax +49 (0) 531 391-94254
P.Scholz@tu-braunschweig.de
www.tu-bs.de/ism

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Bc. Matej Kiss has conducted a study on factors influencing both, the amount of particles that can be imaged and their brightness in a generic PIV-setup. He designed a suitable test stand and conducted a series of measurements, where all influencing factors have been tested. The core of the studies was a series of measurements with various types of seeding particles. He postprocessed the raw data with customized codes.

As one minor shortcoming regarding the description of work and his originality to fulfill it, Mr. Kiss tended to proceed as planned, while sometimes scrutinizing the results and varying the approach would have been more efficient, but Mr. Kiss however balance this very good by his insistence and a patient way of working.

Mr. Kiss worked in a very self-reliant way. He contacted his supervisor regularly, reported his progress and presented his most recent findings. He always proposed suitable approaches to problems arising during the work, but was also open to suggestions, which he accepted and implemented quickly. He was always motivated and was able to utilize resources for his benefit.

His experimental results and the postprocessed data gives valuable guidelines for future PIV applications, particularly on the choice of seeding type, choice of a lens and the amount of seeding required for a desired test.

His thesis itself consists of the theoretical background with sufficient detail to understand the parameters defining the brightness of particle images, the experimental setup to a level that the experiments are good to follow and

understand and a discussion of the results. Also, the custom-written code is documented and Mr. Kiss archived his data for eventual future studies.

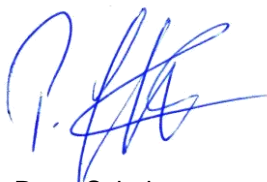
The thesis features two minor weaknesses:

The total amount of scientific literature discussed and cited in the text could be larger. The discussion of the theoretical background focuses on knowledge available from text books and comprises only few scientific papers. Furthermore, in some passages in the results section, the data could have been discussed more into detail. Sometimes no link is established to the fundamentals presented in the theoretical backgrounds section.

In summary I rank Mr. Kiss as follows.

Complexity, Originality of the approach	85 %
Way of working, self-reliance, interaction with the supervisor, approach to problems	95%
Quality of the results	90 %
Quality of the thesis, preciseness, exhaustive documentation, scientific discussion	85 %

In total, I rank him at 89 %



Dr.-Ing. Peter Scholz