

THESIS SUPERVISOR FORM



1. Identification of the student:

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| Student: | Nigar Shaikh |
| Thesis: | Characterisation of historic burnt clay building ceramics with respect to their production technology and raw material provenance |
| 1 st Institution: | University of Minho |
| 2 nd Institution: | Czech Technical University in Prague, Czech Republic |
| Academic year: | 2017/2018 |

2. Identification of the supervisor:

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| Name: | Jan Válek |
| Institution: | Institute of Theoretical and Applied Mechanics, AV ČR, v. v. i. |
| Position: | Head of research unit |

3. General comments

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The main aims of Ms. Nigar's Thesis were (i) to sample clay soil in the vicinity of the Church of St. Johan of Nepomuk on Zelená Hora near Žďár nad Sázavou and (ii) and to assess the composition and behaviour of the clay samples when burnt at different temperatures.

The sampling locations and the analytical tests were selected as a collaborative work. The rest of the work was carried out by Ms. Nigar independently under the supervision. An important part of the analytical studies was the quantitative phase analysis (XRD-QPA) that was determined under the guidance of Dr. A. Viani at CET (Telč) where Ms. Nigar carried out the measurement and learnt about the analytical procedure and scientific cooperation.

The analytical tests, such as TA and XRD were carried out in collaboration with the experts who operate the instruments. In these cases, the important aspect of the research was to understand the technique and be able to interpret the results. The tests dealing with physical characterisation and optical microscopy were carried out solely by Ms. Nigar who demonstrated (by her approach) the ability to independently carry out experimental work. The practical and laboratory tasks were fulfilled by Ms. Nigar on time, accurately and with a great effort. The applied methodology and results are presented and discussed in the Thesis.

The Thesis are adequately structured. There are clearly defined aims and the description follows a standard layout used to present an experimental work. Due the time constrains of the study programme, the literature review was not fully developed into a critical evaluation but it adequately covers the main testing methods. There are some formal mistakes and inconsistencies in the referencing. The sampling and methods are reasonably described. The obtained results are presented in a way that sufficiently demonstrates the understanding of the studied material. The main points are discussed appropriately considering the limited time given for this analytical study.

Overall the experimental program successfully contributed to the defined aims. The results were discussed and relevant conclusions were drawn. The study was not exhaustive however, the planned scope of the experimental work was sufficiently extensive to be conclusive regarding the studied samples. The further research ideas were correctly proposed.

Ms. Nigar is capable to carry out tests and to follow the experimental work. She is able to analyse the results and understand the subject in a broader sense.

There are some minor mistakes and inaccuracies in the Thesis. They do not significantly affect the overall scientific quality but should have been corrected prior the submission.

Overall I grade her approach, laboratory work quality of the Thesis as B – very good.

4. Grade

Use the following scale

| | | | | | |
|---------------|----------------------|----------|------------------|----------------|----------|
| A (excellent) | B (very good) | C (good) | D (satisfactory) | E (sufficient) | F (fail) |
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Institute of Theoretical and Applied Mechanics, AV ČR, v. v. i., Prague

July 12, 2018

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The Supervisor,

(Jan Válek)