



PROJECT FINAL REPORT

Project number: projekt AKTION 71p7

Applicant: prof. Ing. Rostislav Drochytka, CSc., MBA, Brno University of Technology

Project partner: Johannes Kirnbauer, Univ.Ass. Dipl.-Ing. Dr.techn., Vienna University of Technology

1. Project goals:

Scientific research was focused on clarifying behaviour of concrete at elevated temperature and pressure with employing new test set-up constructed at Institute of Building Construction and Technology, VUT Vienna. This unique test set-up allows measuring gas permeability of different building materials such as concrete or ceramic at both high temperature (up to 400°C) and pressure (up to 6 bars). The project was based on collaboration between neighbouring countries. It assisted the transfer of experience and ideas between close located institutions and therefore helped to create new scientific and social values.

2. Project results:

- Three publications of scientific articles (APPENDIX A)
- Laying the foundations for future collaboration with the aim of new scientific and social values

3. Project schedule:

Duration	Activity	Responsible person
11– 12/2014	Preparation of device to measure the permeability of concrete, thermal insulation of the oven	Michaela Fiedlerová (Y) Johannes Kirnbauer (A)
1– 2/2015	Preparation of tested specimens (15 x specimens)- basalt aggregate, CEM II 42,5 (5x reference, 5 x with polypropylene fibres - the dose of 1 kg/m ³ , 5x with polypropylene fibres - the dose of 2 kg/m ³), preparation of termocouples, mold casting.	Michaela Fiedlerová (Y) Johannes Kirnbauer (A)
	Device calibration, evaluation testing procedures, optimization of measurement.	Johannes Kirnbauer (A)
3– 6/2015	Permeability measurement - pressure 4 bar, temperature 20°C, 100°C, 150°C, 200°C, 250°C.	Michaela Fiedlerová (Y)
6/2015	Evaluation of results, Preparation of publication.	Michaela Fiedlerová (Y) Johannes Kirnbauer (A)



6– 7/2015	Device calibration, evaluation testing procedures, optimization of measurement.	Michaela Fiedlerová (Y)
8 – 10/2015	Evaluation of results, Preparation of publication, Final report.	Michaela Fiedlerová (Y) Johannes Kirnbauer (A) Rostislav Drochytka (P) Heinrich Bruckner (P)
11– 12/2015	Evaluation of obtained results, evaluation results as benefits from scientific point of view, establishing long-term cooperation between universities and institutes.	Michaela Fiedlerová (Y) Johannes Kirnbauer (A) Rostislav Drochytka (P) Heinrich Bruckner (P)

(Y) -young researcher, (P) – professor, (A) – professor assistant

4. Cooperation evaluation:

The project was focused on strengthening international contacts between Brno University of Technology and Vienna University of Technology via cooperation on scientific research. Cooperation of universities is beneficial in science and research, mainly due to the possibility of sharing the most advanced test equipment and experience of researchers. The benefits of join project are tangible particular in the following areas:

- Bilateral cooperation in research in all scientific areas
- Funded research internships
- Supports provided for young researchers involved in scientific research
- Opportunity for researchers to present and exchanges ideas in a friendly and supportive environment

5. Overview of project costs

5.1. Overview of project costs arising in the territory of Austria in EU

Date	Subject	Person	Amount (€)	Attachment
20.11. - 22.12.	Internship	Michaela Fiedlerová	930,-	<i>Internship confirmation</i> APPENDIX B
14.10. - 17.10.	Short term visit	Michaela Fiedlerová	3 x 90 = 270,-*	<i>The travel order</i> APPENDIX B
18.11. - 21.11.	Short term visit	Michaela Fiedlerová	4 x 90 = 360,-*	<i>The travel order</i> APPENDIX B
Total amount in €			1 560,-	

* Přesun finančních prostředků z RD na MF



5.2. Overview of project costs arising in the territory of Czech Republic in Kč (APPENDIX C)

Date	Subject	Person	Amount (EU)	Attachment
1.11. - 3.11.	Short term visit	Johannes Kirnbauer	Accommodation 2 x 1500 = 3 000,-	Invoices in APPENDIX C
			Pocket money 3 x 500 = 1 500,-	
11.12. - 17.12.	Short term visit	Johannes Kirnbauer	Accommodation 6 x 12 001 = 7 206,-	
			Pocket money 7 x 500 = 3 500,-	
14.10. - 17.10.	Return train ticket	Michaela Fiedlerová	1 x 897 = 897,-	
18.11. - 21.11.	Return train ticket	Michaela Fiedlerová	1 x 897 = 897,-	
Total amount in Kč			17 000,-	

6. List of APPENDIX:

APPENDIX A – Project results (Conference papers)

APPENDIX B – Confirmation of internship, Travel orders

APPENDIX C - Invoices

Applicant:

prof. Ing. Rostislav Drochytka, CSc., MBA

Brno, 6th of January 2016

Signature:

Project partner:

Johannes Kirnbauer, Univ.Ass. Dipl.-Ing. Dr.techn.,

Vienna, 6th of January 2016

Signature: