ing. Unlike standard devices, where only the static air permeability can be measured, the MPT01 enables also dynamic air permeability measurement, which is possible in several modes. Dynamic air permeability measurement can be conducted in a mode of increasing and decreasing pressure difference in a wide range of the pressure difference sensors with respect to the range of the flow meter, which measures the amount of air passing through the textile. Deformation changes in the textile can be observed along with the air permeability measurement. The device described offers the possibility to observe the structure of the textile during the measurement using a camera, or to measure its bulge. The most important property is the bulge of the textile in the z axis. Due to the bulge, the pores in the textile open, and thus the space for air to pass through the textile increases. Based on the mathematical relations and exact knowledge of the bulge, we can determine the effect of the bulge of the textile during the measurement on the increase in pore size caused by this bulge. This extension of the pores also results in an increase in the air permeability This device is intended for further use in researches dealing with the issue of the bulge of a sample during dynamic air permeability measurement.

References

1. ČSN EN ISO 9237 – Textiles - Determination of the permeability of fabrics to air.
2. EN ISO 9237:1995 – Textiles – Determination of the permeability of fabrics to air.
3. BS 5636:1990 – Method for determination of permeability of fabrics to air.
4. DIN 53887 – Testing of textiles; Determination of Air Permeability of Textile Fabrics.
5. Staněk J. Science of textile materials. VŠST Liberec 1988; 1, 4: 120-121.
6. Gniotek K, Tokarski P. New Method of Assessing Static a Dynamic Flow Characteristics of Textitiles. *Textile Research Journal* 2000; 70, 1: 53-58.
7. Gniotek K. Dynamic Permeability of Textiles. *Fibres & Textiles in Eastern Europe* 1996; 4, 2(13): 54-55.
8. Tokarska M. Analysis of Impact Air-permability of Fabrics. *Fibres & Textiles in Eastern Europe* 2008; 16, 1(66): 76-80.
9. Xiao X, Zeng X, Bandara P, Long A. Experimental Study of Dynamic air Permeability for Woven Fabrics. *Textile Research Journal* 2012; 82, 9: 920-930.
10. Bandara P, Lawrence C, Mahmoudi M. Instrumentation for the measurement of fabric air permeability at higher pressure levels. *Meas. Sci. Technol.* 2006; 17, 8: 2247–2255.
11. Havrdová M. Behavior of fabrics when measuring their air permeability. *9th International Conference STRUTEX Technical University of Liberec 2002*; ISBN 80-7083-668-7: p.255-262.
12. Havrdová M. *Contribution to the evaluation of the air permeability of clothing fabrics*. PhD Thesis, Technical University of Liberec, Czech Republic, 2004.
13. Havlová M. Model of Vertical Porosity Occurring in Woven Fabrics and its Effect on Air Permeability. *Fibres & Textiles in Eastern Europe* 2014; 22, 4(106): 58-63.
14. Backer S. The Relationship Between the Structural Geometry of a Textile Fabric and Its Physical Properties. Part IV: Interstice Geometry and Air Permeability. *Textile Research Journal* 1951; 21, 10: 703 – 714.
15. Gooijer H. *Flow Resistance of Textile Materials*. Thesis UT Enschede, 1998. ISBN 90-36511240.
16. Veselá-Lonková D. *Fabric air permeability measurement devices*. Masters Thesis, Technical University of Liberec, Czech Republic, 2004.
17. Somerová L. *Control of device for the air pearmeability classification*. Masters Thesis, Technical University of Liberec, Czech Republic, 2006.
18. JCGM 100:2008 - Evaluation of measurement data — Guide to the expression of uncertainty in measurement.

Received 20.04.2015 Reviewed 24.06.2015

International Biodeterioration & Biodegradation Society

International Conference on the Biodeterioration and Protection of Cultural Heritage

September 8-9, 2016, Technical University of Lodz, Lodz, Poland

Programme

08. 09.2016 Thursday

8.00 – 9.00	Registration
9.00 – 9.30	Opening ceremony
9.30 –10.45	Session 1. Biodeterioration of historical buildings, monuments, frescos & wall paintings.
10.45 – 11.45	Chairperson: Christine Gaylarde
11.45 – 13.00	Poster session and coffee break
13.00 – 14.15	Session 2. Biodeterioration of archival documents, paper & photos. Chairperson: Flavia Pinzari
14.15 – 16.15	Session 3. Biodeterioration of historical textiles.
16.15 – 17.30	Chairperson: Beata Gutarowska
19.00	Lunch Session 4. Biodeterioration of historical wood. Chairperson: Kale Pilt Conference dinner

09.09.2016 Friday

9.00 – 10.15	Session 5. Biodeterioration of historical objects stored underwater. Chairperson: Brenda Little
10.15 – 11.15	Poster session and coffee break
11.15 – 12.30	Session 6. Methods of investigation. Chairperson: Katja Sterflinger
12.30 – 13.45	Session 7. Protection, disinfection & conservation methods. Chairperson: Thomas Warscheid
13.45– 14.45	Closing ceremony
14.45 – 15.45	Lunch
16.00	Sightseeing of Łódź

Contact: www.biodeterioration2016.p.lodz.pl