ufacturing method; it was especially necessary to reduce the drainage rate.
2. The orientation of fibres was nearly random in almost all the fibreglass webs analysed because the drainage of water during the web formation process was random and not direction dependent.
3. The orientation of fibres was independent of the web area density and variables used i.e. dispersion and fibre length. However, the orientation of fibres is dependent on how the fibres are laid down in the web formation region and how the water is drained from the slurry.

References

1. Vaidya, N. The Manufacturing of wet-laid hydro-entangled glass fibre composites for industrial application, *Textiles,* North Carolina, North Carolina State University. Masters, 2002.
2. Frank, K. K.; Williams, M. P.; Pastore, C.; Carey, J. Structure and properties of carded glass composites, INDA TEC, 1987, 333-346.
3. Kenney, M. C.; Barlow, S. K.; Eikleberry, S.L. New glass fibre geometry - a study of nonwoven processability, *TAPPI journal*, 1997.
4. Tappi Standard T 205, Forming hand sheets for physical tests of pulp, 2002, T 205 sp-95. Tappi.
5. PPG Fiberglass Europe, Data sheet of chopped strands 3075, 8031 and 8069, 2001, from http://www.ppg.com/glass/fibreglass/products/Pages/wet_chop.aspx.
6. Rojas, O. J.; Hubbe, M. A. The dispersion science of papermaking, *Journal of Dispersion Science and Technology,* 2004, 25(6), 713-732.
7. Konopka, A.; Pourdeyhimi, B.; Kim, H.S. In-plane liquid distribution of nonwoven fabrics: part 1 — Experimental Observations, *International Nonwovens Journal*, 2003.
8. Gong, R. H. Digital image processing techniques for the investigation of nonwoven structures, Textiles. Manchester, UMIST. Ph.D, 1989, 136 -145.
9. Jeddei, A. A. A.; Kim, H. S.; Pourdeyhimi, B. Measurement of fibre orientation: Optical Fourier Transform, *International Nonwoven Journal*, 2001.
10. Pourdeyhimi, B. Optical method for evaluating surface and physical properties of structures made wholly or partially from fibres films polymers and combinations thereof U. S. Patent. U.S.A., 2005.
11. Toshiharu, E.; Yoon-H, H.; Akira (Non-destructive determination of fibre orientation distribution of paper surface by image analysis,*Nordic Pulp and Paper Research Journal,* 2006, 21(2), 253-259.
12. Maroš, T.; Aleš, L. Analysis of planar anisotropy of fibre system by using 2D Fourier Transform, *Fibers & Textiles in Eastern Europe,* 2007, 15(5), 64-65.
13. Media Cybermetics Incorporate, Image pro plus software for image analysis, 2004.

Received 21.06.2011 Reviewed 25.11.2011