

The problems of universal and convertible shoe size system

Petr Hlaváček¹, Wuyong Chen²

¹ Faculty of Technology, Tomas Bata University, Zlin 760 01, Czech Republic;

²National Engineering Laboratory for Clean Technology of leather Manufacture, Sichuan University, Chengdu 610065, P. R. China;

Abstract: At present the common practice is to use more than four different sizing systems for determination of shoe length. They differ from a specific old long measure (English inch and French stitch and their modifications) and new based on metric system (Japanese, MONDOPOINT). Moreover, different rules for assignation of beginning for determination of footwear (or foot) length and so-called "Toe allowance" contribute to this non-uniformity. The solutions of this world-wide problem is seen by ISO (International Standard Organization) as it is expected that new Standard ISO/TC 137 - Sizing system, designations and marking for boots and shoes will be presented before end of 2010. The proposed presentation is based on review of sizing systems currently in use with specific divergences and limitations. Actual globalised footwear market cannot verify a correct size of footwear on the base of lasts, but it has made out from footwear (without lasts).

Results: The Universal Footwear Sizing system will be based on a metric system; beginning will be located on most distant point on heel. In the remaining time it will be necessary to appoint condition rules for correction of positions of this point in dependence on height of a heel. Solution for unambiguous rules for metering of a „toe allowance“ still remain. Apparently it should allow production of footwear in all existing size systems, but with obligatory supplementary information for how long feet (in mm) is the footwear optimal.