

S1.3.3 SIMULATION-ENHANCED BUBBLEPOINT TESTING FOR WOVEN WIRE MESHES

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The Bubble-Point Test according to BS 3321 is a standard testing procedure to examine the quality of woven filtration media by identifying the size of the largest pore. The test is favored in quality control because it is fast and easy to perform.

The procedure provides a pressure value which can be converted into an equivalent pore diameter. The formula behind this conversion unfortunately only works for cylindrically shaped pores. To apply the procedure on woven wire meshes, showing a variety of pore geometries, the so called capillary correction factor is needed to obtain reliable results. This factor usually has to be determined empirically by conducting a vast number of laboratory measurements.

GKD uses numerical tools to replace the time consuming capillary correction factor determination process by a simulation model. This multiphase simulation model makes it possible to immediately find a sturdy value for the capillary correction factor with only one computation necessary, regardless of the filter pore geometry.