

POROMETRIC MESH: A TEST WINNER ONCE AGAIN IN PERFORMANCE COMPARISON OF NINE MESHES

Markus Knefel¹

¹GKD - Gebr. Kufferath AG

Industrial filtration basically has three main requirements: high flow, low pressure loss and a sufficient particle removal. Of course, these three may not be perfectly reached in one and the same application, but modern engineering methods can help to find an optimum for a given process. This paper intends to show how many years of practical experience and modern simulation methods can be combined to engineer a whole new product. The latest result of this continuous development procedure, the mesh family called Porometric, will serve as an example to illustrate the research process. This ultra-high flow mesh has special pores designed to show a low blocking tendency combined with low in-pore flow velocities to avoid damage when filtering abrasive media. In addition to that the flow rate through the new mesh was tripled compared to other weaving patterns by the use of state of the art CFD simulations. The theoretical and virtual developments were supported by extensive in-house and external performance testing, confirming the expected results.