

Influence of loose powder sintering parameters on the physical and the mechanical characteristics of bronze filters used at high pressure

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Use of high-pressure bronze gas filters strictly requires certain physical and mechanical characteristics. Powder metallurgy technology is generally used as a method of manufacturing of filters; this method can easily ensure the high porosity for these materials; since sintering of the compact powders can lead to the creation of such porous structure, it can link between all particles and make them as a solid one. In the case that those filters maybe submit to extreme working conditions, they must be checked and tested according to specific test and characterization standards. Control of powder sintering parameters is therefore very important to warranty the good characteristics of those filters. In this context, a powder sintering method was chosen to elaborate such filters; loose powder sintering was used, and different

parameters of sintering were applied. Each time, two objects were prepared in the sintering molds, they are the filter and a traction sample. Then, they were tested according the standards recommendations. The acceptable filters were only that respect all recommendations. Good results were obtained, and a very good protocol of sintering was identified.

Speaker Biography

Shaira M has completed his PhD in 2006 from INSA of Lyon, France. He is an associate professor at Al-Baath University, Syria, until 2017, and he is a visiting professor at INSA of Lyon. He has over 25 publications (journals, books at conferences), with an experience of more than of 17 years in teaching and research in several universities. He is a member of review committee of Journals of Engineering Science for the Universities of Al-Baath, Syria. He is also an editor in the academic journal of engineering sciences, USA.

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