

## **PREPARATION AND CHARACTERISATION OF FILTER SUPPORT FROM LOCAL SILICA**

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### **ABSTRACT**

Ceramic filters have been widely used in the filtration and separation processes technology. Due to the advantage of the ceramic properties, the ceramic filter can be used from water filtration, molten steel separation even to petrochemical filtration or separation applications. In this study, local silica is selected for the preparation of the fabrication of ceramic filter. It is also to study the suitability of the local silica as the alternative materials for the current alumina filter. Two selected formulations of silica with the characteristic particle sizes distribution and binders were formulated and mixed in a z-blade mixer for 3h respectively. The mixer was extruded using the deairing pugmill. The extrudate was cut into 80mm x 15mm x 10mm and dried. Then, the samples were fired at 2°Cmin<sup>-1</sup> to maximum temperature from 1000°C to 1300°C and held for 30min before cooling. Sintered samples were characterized for the density, microstructures, porosity and flexural strength and the results are presented.

<http://journal.masshp.net/wp-content/uploads/Journal/2008/Jilid%201/A.%20Hamidi%2014-20.pdf>

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