

[Experimental investigation of soot deposition in diesel particulate filters](#)

Authors Samir Bensaid, DL Marchisio, N Russo, D Fino

Publication date 2009/9/1

Journal Catalysis Today

Volume 147

Pages S295-S300

Publisher Elsevier

Description

The present paper highlights the features of soot deposition inside the channels of wall-flow diesel particulate filters (DPFs). This investigation is tailored to understand the behaviour of soot loading in DPFs, since the subsequent regeneration step is strongly affected by the cake profile in the inner channels of the filter. In addition, the experimental data here reported are useful to validate detailed mathematical models for the prediction of pressure drop, filtration efficiency and filter loading.

The investigation regards the differences in soot deposition profiles of two geometries for the filter housing: the first one was responsible for an uneven distribution of the flow at the inlet of the channel, closer to real cases in the exhaust pipes, while the other one was designed to minimize this effect. The two housings were tested in the same operating conditions, with lab-scale filters and synthetic soot, in order to achieve a better ...

Total citations

[Cited by 80](#)