

New techniques in particle counting help analyzing high performance liquid filters

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The filter industry is always trying to improve the performance of filters. New media move the separation limits to sizes well below $4\mu\text{m(c)}$. The automotive and other industries request media with better β_{200} to improve the reliability of injection systems.

PAMAS GmbH developed a new particle counting sensor to move the limits for test stands to smaller particle sizes below the limits of extinctions sensors. A new scattering sensor was designed to specifically fulfill the requirements of the fuel and oil filter industry.

The new sensor can be calibrated according to ISO11171. It has the ability to see particles as small as $1\mu\text{m(c)}$ with very high concentrations.

This paper describes the performance of this system and shows how it was integrated into the ISO11171 framework. The paper will also show gaps in the calibration definitions that will need a closer look in the future.

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