Pressinformation

BINE Informationsdienst

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Burning wood with 90% less particulate matter

New method for wood chip and wood log boilers

In terms of their ecological balance, wood-fired heating systems offer a virtually closed CO2 cycle if the firewood comes from sustainable forests without long transport routes. However, they also significantly contribute to hazardous particulate emissions in cities. The BINE-Projektinfo brochure "Clean heating with wood" (06/2016) presents a new electrostatic particle separator that is especially designed for wood chip and wood log boilers with thermal outputs between 50 and 200 kW. The method is suitable for both new boilers and for retrofitting existing systems.

The fine dust filter is positioned at a point before the flue gas enters the chimney. The gas flows through an ionization chamber and is thereby electrically charged on a high voltage electrode. In the subsequent separation chamber, the particles are deposited on grounded steel brushes. These regularly rotate across scraping edges, which causes the adhering particulate matter to drop into an ash pan. This method has the advantage that it is a dry process that can filter out up to 90% of the particles. The developers have tested the new separator for more than 30,000 hours on test rigs and in field trials.

At the beginning of 2015, the 1st Federal Immission Control Ordinance tightened the fine dust limits for wood-fired heating systems in accordance with specific transitional periods. This will make it necessary to install dust separators in many wood chip and wood log boilers. Together with industrial partners, the Karlsruhe Institute of Technology (KIT) has developed the new electrostatic particle separator to market maturity.

The BINE Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. The brochure cover and an additional image can also be downloaded from the press section in this web portal.

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