



HEARTH FURNACE COKE (HOK) ADSORBER FOR EASY AND HIGHLY EFFICIENT DIOXIN AND MERCURY DEPOSITION

MINIMIZING POLLUTION – EFFICIENTLY AND SAFELY

The HOK-adsorber is a fixed bed reactor which operates according to the counterflow principle. It can be used in particular for cleaning “moist” or “wet” exhaust gases. The adsorber is operated below the dew point, the hearth furnace coke is moistened during operation. Thereby, in contrast to the “dry” operated carbon filters, the occurrence of so-called “hot spots”, and thus the risk of fire or explosion within the adsorber can be excluded reliably. An installation of equipment for fire detection, fire prevention and fire fighting is thus not required.

MINIMIZING POLLUTION – EASILY AND ECONOMICALLY

Depending on the amount of exhaust gas the adsorber consists of one or more modules which are subdivided into several cells. Small amounts of hearth furnace coke are withdrawn at certain time intervals by pipes installed at the bottom of the adsorber cells. The loaded HOK-dust layer sags to a non-perfused adsorber section and is replaced by the less laden adsorbent inflowing from above. The withdrawal is made during operation.

In order to avoid harmful breakdowns a sufficiently large HOK-minimum layer is in the cells. In addition, a further amount of HOK, the consumption layer, is filled into the cells. Only when this amount is depleted by a series of withdrawals, fresh hearth furnace coke is refilled. The filling of single adsorber cells with furnace coke can be performed during operation.

The HOK adsorber can be installed as a separate compact unit next to an existing system without affecting the operation. The conversion times are short.

PROVEN HIGH DEPOSITION – THE BENEFITS AT A GLANCE:

- High deposition rate for dioxins/furans (> 99%) and mercury
- Insignificant inspection/maintenance costs
- Low adsorbent cost

The HOK adsorber has proven itself very well in practice. It is characterized by easy handling, simple operation and high reliability. Further benefits are the high deposition rate, low pollution of odors and dust and clean exhaust gases.

ADVANTAGES OF THE WET OPERATION AT A GLANCE

- No exhaust gas heating
- No minimum throughput of exhaust gas
- No adsorber inertisation
- No CO measurement



HOK adsorber



HOK adsorber, detailed view



HOK adsorber, installation



HOK adsorber, installation

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