Für Mensch & Umwelt

Umwelt Bundesamt

Mercury Emissions from Industrial Sources – Status Quo and Perspectives

A Project of the Environment Agency Germany

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Aims of the Project

Comprehensive Documentation

- Of the current origin and distribution path of mercury from industrial sources in Germany
- Quantification of the input of mercury via input materials, e.g. raw materials and equipment, their specific release behavior in the processes and the resulting emission pathways (including industrial products and by-products)
- Description of the current Hg mitigation measures and verification of their transferability to other industries
- Measurements of mercury content in products or processes
- Description of opportunities for real sinks in each industrial sector
- If possible, the investment and operating costs should be evaluated for all measures

Proposals for a national mercury strategy of the German Industry - including a cost analysis

Basic Data

Costs of the project : 420.000 €

2016: 50,000 €
2017: 60,000 €
2018: 90,000 € plus 75,000€ for measurements
2019: 155,000 €

Duration: 06/2016 – 12/2019

Participating institutes:

Öko -Institut, Berlin

Ökopol, Hamburg

Cutec Research Centre, Clausthal

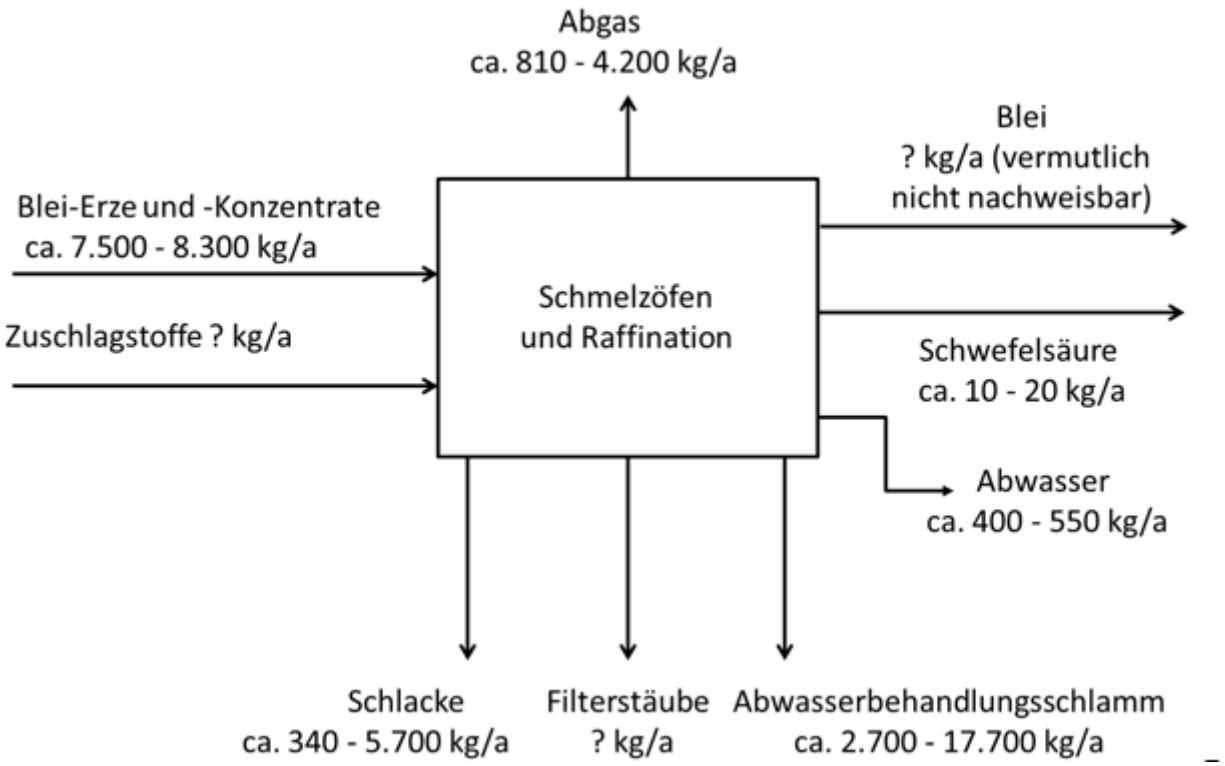
Otto v. Guericke Universität, Magdeburg

Origin and distribution paths - the considered sectors

- Processing of metal ores (copper, lead, zinc, aluminum)
- Chemical industry
- Combustion plants (small, medium and large, different fuels)
- Steel production
- Foundries
- Cement production
- Production of lime, dolomite and gypsum
- Glass industry
- Ceramics industry
- Refineries
- Natural gas production and distribution
- Paper and pulp production
- Waste incineration, waste treatment
- Crematoriums
- Soot and graphite production
- Manufacture of mercury-containing products

Altogether more than 41 sectors or subsectors.

Eaxample: Production of Lead



Are there real sinks?

Already implemented sinks:

- Transfer of filter dusts underground
- Shipment of residues from the non-ferrous industry (e.g. calomel) underground
- Landfill of power plant dust in open pit
- Production of Hg-rich sludge in wastewater treatment with subsequent underground shipment

Further development measures to create sinks:

- Roasting process in the cement industry with storage of loaded adsorbents underground
- avoiding the transfer of Hg in FGD gypsum by suitable techniques, e.g. special hydro cyclone and Hg enrichment in sewage sludge.

2 Workshops with Stakeholders

Topics and goals of discussion with stakeholders

Workshop 1

Period: September 2018

Subject: Mercury sinks

Objective: To verify the draft texts drafted by the researchers, discussion of applicable techniques in other sectors

Workshop 2

Period: Autumn 2019

Subject: Reduction measures for sectors and proposals for a national strategy

Final Report: expected by the end of 2019.

Thank you for your attention!

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