

# A TEC

## XMERCURY SYSTEM



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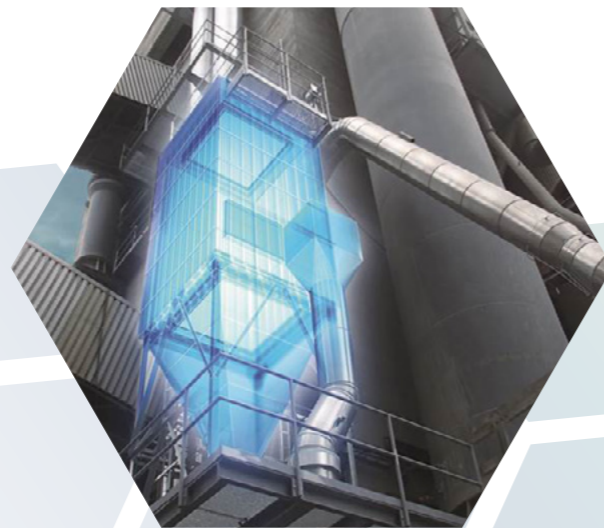
### Reducing Mercury in Cement Production

Due to the environmental impact, Mercury emissions are in focus worldwide. Being present in raw materials and/or fuels, Mercury can affect the cement production process and its emissions directly.

According to the United Nations Environment Program, the cement industry contributes an estimated 10% or about 190 metric tons per year of all global mercury emissions.

The objective of the industry is to minimize the release of Mercury to the environment from cement manufacturing as some cement kilns are facing Mercury emissions already close to actual limits.

To reduce mercury emissions, the Austrian companies A TEC Production & Services GmbH as well as SCHEUCH GmbH developed a new technical innovation: the Xmercury split preheater system.



#### Recent Projects:

- w&p Zement Wietersdorf (AT): Xmercury pilot plant for the reduction of mercury emissions.
- Schwenk Zement Allmendingen (DE): Xmercury



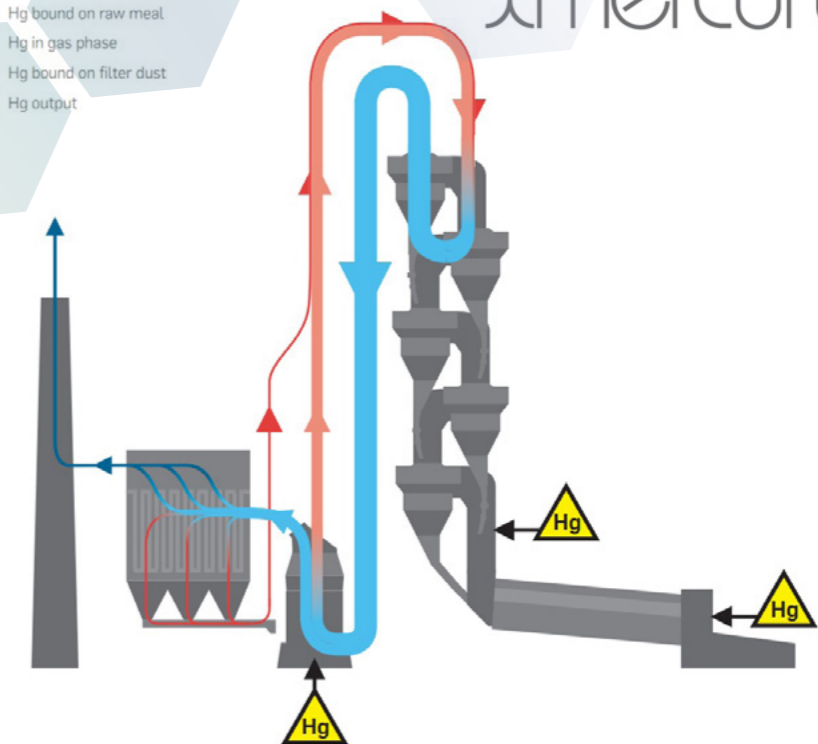
### Basic principle

The basic idea is to keep investment and operational costs at a minimum while achieving the highest efficiency of Mercury reduction.

A small fraction of hot gases are extracted from the lower part of the preheater. In the split preheater, the filter dust (which is high in Mercury) will be mixed with hot gases to release the Mercury from the dust. The clean dust will be separated with high-efficiency cyclones and a ceramic filter.

The dust-free of Mercury - is returned back to the preheater. The gaseous Mercury is condensed and bound by additives. The additives stay pure (clean from dust) and can be re-used.

- Hg input
- Hg bound on raw meal
- Hg in gas phase
- Hg bound on filter dust
- Hg output



### Benefits

- Up to 80% Mercury emission reduction
- No additional thermal losses for treatment
- Low additive consumption - low costs for additives
- Low gas quantities to be treated (3-10%)
- The system includes high-efficiency cyclones
- Low life-cycle costs
- No raw meal separation is necessary
- A low amount of additives required

xmercury

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