

gMAX[®] Cyclones for WFGD

With decades of experience and a rich history of excellence, KREBS[®] is the industry leader in hydrocyclones and separators for wet flue gas desulfurisation scrubbers in power generation.

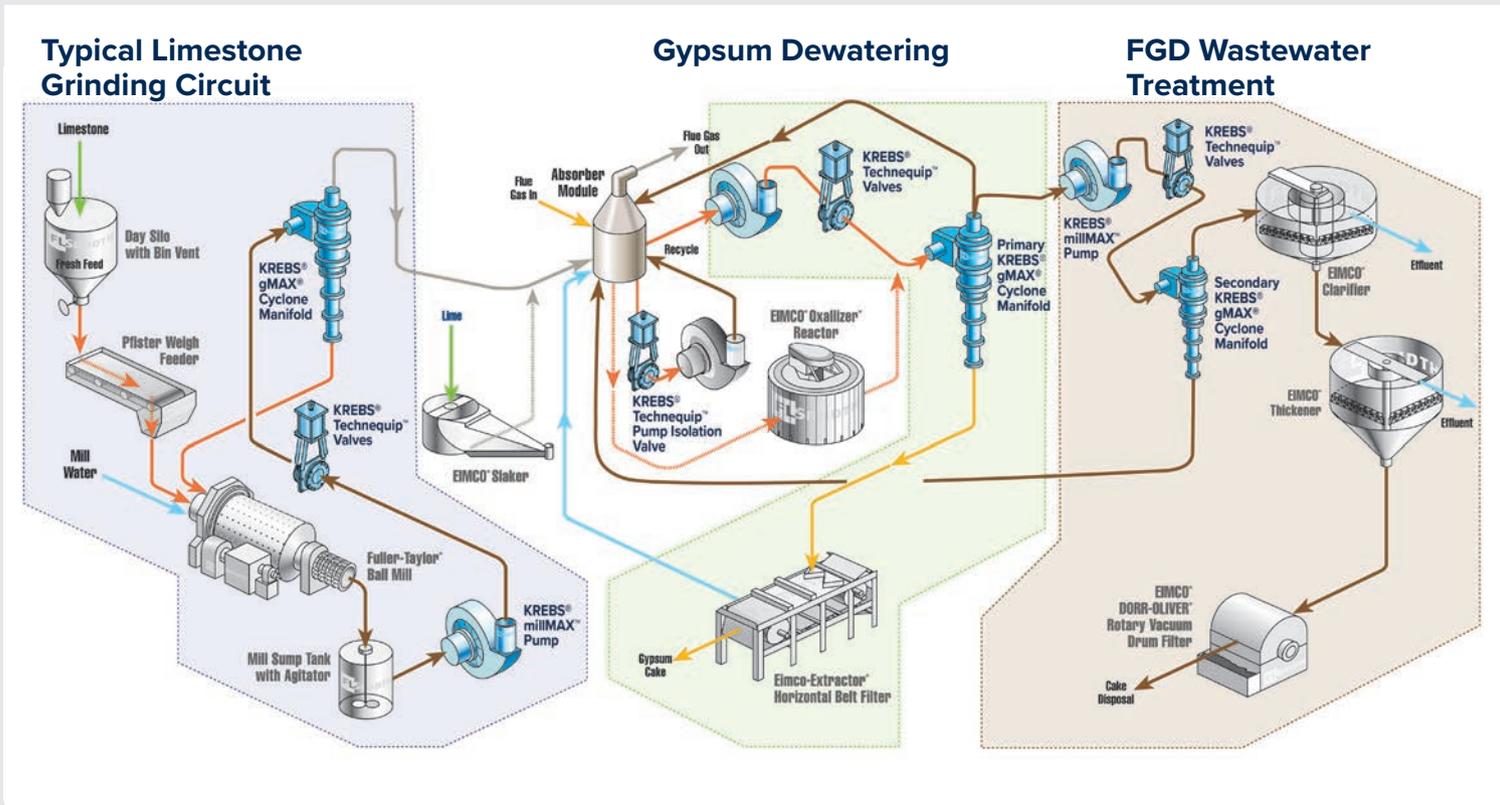
Benefits

- Low capital cost and no moving parts
- Interchangeable parts between reagent preparation cyclones and gypsum dewatering cyclones
- High capacity in a small footprint
- Efficient separation with KREBS[®] gMAX[®] cyclone technology

Design

- Wide range of KREBS cyclone sizes are available; diameters of 50–150 mm (2–6 in) are most common in WFGD applications
- Cyclones with steel housings are available with replaceable wear liners in gum rubber, synthetic elastomers or ceramic
- Cyclones are also available in molded urethane
- An epoxy paint is standard for corrosion resistance in a high-chloride environment

WFGD scrubber blowdown treatment process



How KREBS hydrocyclones can help

The WFGD system is made up of a limestone grinding and reagent preparation process, a gypsum dewatering area, and waste disposal. Our KREBS hydrocyclones use gMAX cyclone technology and they are an ideal solution for each of the three steps in this system.

In the limestone grinding circuit, the ball mill limestone discharges to hydrocyclones for classification. The overflow reports to reagent storage, and the underflow returns to the mill for further grinding.

In the gypsum dewatering area, the prepared limestone reagent reacts with absorbed SO₂ from the power plant boiler exhaust, and forms gypsum as a byproduct. Gypsum slurry from the absorber is pumped to the dewatering hydrocyclones, and is dewatered from about 15–20% solids by weight to around 50% solids by weight. The thickened slurry feeds a vacuum filter to produce a filter cake.

In the waste disposal area, the hydrocyclones are fed the overflow from the gypsum dewatering hydrocyclones. Overflow from the waste disposal hydrocyclones reports to a clarifier for further processing and later disposal, and the underflow is returned to the absorber module for gypsum dewatering.

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