Dürr Air Pollution Control
Ventilation Air Methane

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Dürr’s experience in coal mine ventilation air methane abatement since 1994

Thoresby mine, 1994
10,000 Nm3/h

Enlow fork mine 2007
10,000 Nm3/h

Appin Colliery mine, 2001
10,000 Nm3/h

Zhengzhou mine, 2008
62,500 Nm3/h
Hot water generation

Datong mine, 2011
370,000 Nm3/h
Hot water generation

West Cliff mine, 2006
250,000 Nm3/h
6 MW steam turbine

Verdeo McElroy mine 2012
250,000 Nm3/h
6 MW steam turbine

GaoHe mine, 2014
1,020,000 Nm3/h
20 MW steam turbine
Example for cost estimation

Coal mine with 500,000 m³/h capacity, mean methane concentration of 0.6 Vol.%

- Climate effect of 400,000 t/a CO₂ (factor 25 CH₄ vs CO₂)

Investment abatement plant <10 Mio. €

Investment infrastructure (ducts, laser measurement, power supply, groundworks) << 2 Mio. €

Capital costs (6%, linear depreciation) = <1,560,000 €/a

Operation costs (maint.+fans 120 €/MWh): < 400,000 €/a

- Costs for CO₂ reduction (based on 10 year operation): <4,90 €/t
  (benefits for CO₂ credits not considered)

- Additional 24 MWth excess energy available for external use (steam, electricity etc.)

As comparison: Costs for CO₂ reduction based on carbon storage: 65-85 €/t¹

¹: Steinkraus, A. (2015), »Coal and Gas - From Cradle to Grave with Carbon Capture and Storage«, Economics Department Working Paper Series No. 14
Subject to change. The information in this presentation contains only general descriptions or performance characteristics, which may vary in different cases. The requested performance characteristics are only binding if they are expressly agreed in the contract.