Development of landfill and coal mine methane emission reduction projets



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Fields of application and products



Fields of application and products







Coal mine gas

- Test degassing

- Exploration

- Compressor

- Utilisation





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- Degassing

- Flares

- Compressor

- CHP

- Gas cleaning

- Gas disposal



- CHP

- Gas cleaning

- Thermic systems

gas

- Danger defence **Natural gas** CHP Cogeneration **Trigeneration**

Special gases - Wood gas - Petrol vapour - Solvents - Pyrolysis gas

- Lean gas



Landfill gas system



Lifetime circle and advanced technologies



Flow of landfill gas Methane content Gas engine End of disposal 40% High-temp. flare station Special utilisation 25% Catalytic-aided gas disposal < 2% Biofilter Time

Flare station





Setting-up of a container system





Landfill gas power station





Development of the landfill gas production



Experiences landfill gas projects



Technical

- conservative landfill gas prediction
- approved technology (degassing system, flare, gas engine)
- modular systems
- adaption of the system during operation time
- Legal
 - who is the owner of the gas
 - construction / licence

Coal mine gas utilisation





Coal mine gas drilling

Drilling plant DBA 4 Capacity 40 t 30.000 Nm max. torque 17,5 m plant altitude

Drill process: Airlift drilling Core drilling at a depth of 200 m







Coal mine gas test degassing





Experiences Coal mine gas projects



- Operating mines
 - approved and optimized ventilation and degassing system (pre degassing)
 - dewatering system
 - optimized flare and gas engine systems for low methane content (25 vol.% CH₄)



Experiences Coal mine gas projects

- Abandoned mines
 - adapted suction system
 - high methane contents
 - modular systems
 - exploration licence (who is the owner of the gas)

Conclusion



- Methane from coal mines and landfill sites have become more and more important in the context of increasing awareness of safety, climatic and environmental problems
- The capture of coal mine and landfill gas will substantially reduce greenhouse gas emissions and could make significant contributions to energy needs



Many thanks for your attention.

Questions? - Please feel free to contact us!