

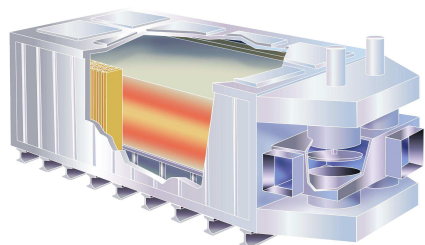
A VAM Thermal Power Plant efficiently and safely converts the energy content of Ventilation Air Methane (VAM) into **heating energy**.

Coal Mine Ventilation Air contains methane in very low concentrations, but since the ventilation air volumes are so large, the VAM emissions from a single ventilation shaft can annually have the same effect on Global Warming as the emissions from half a million cars.

By applying the flameless, single bed, regenerative VOCSIDIZER to the Power Plant Steam Cycle, MEGTEC has created a patented technology being able to utilize the extremely dilute VAM as boiler fuel. A severe Green House Gas emission is thereby converted into useful energy.

## PROVEN TECHNOLOGY

- winning Australian Greenhouse Gas Award



More than 700 VOCSIDIZERS have been installed globally for the efficient industrial scale abatement of low contents of organic pollutants. Only 0.2% methane concentration is required to maintain the oxidizing energy of system. At higher concentrations, the energy of methane exceeding this level can be recovered and utilized.

# VOCSIDIZER DEMONSTRATIONS AT COAL MINE SITES



In 1994, a VOCSIDIZER successfully demonstrated methane abatement at a coal mine of British Coal in the UK. 8 000 Nm<sup>3</sup>/h of ventilation air with a methane concentration of 0.3 - 0.6% was efficiently oxidized.



In 2001 – 2002, a VOCSIDIZER with embedded tubes demonstrated efficient heat recovery by using the VAM as fuel for boiling water. The installation was demonstrated at the Appin Colliery of BHP in Australia during 12 months. In April 2005, it was awarded as the best Greenhouse Gas Project funded by ACARP (Australian Coal Association Research Program).



In 2007 a large scale VOCSIDIZER installation demonstrating VAM Abatement in the US is taken into operation at CONSOL Energy. Mine gas of high concentration is injected into 50 000 Nm<sup>3</sup>/h of fresh air to simulate various concentrations of VAM, which is then efficiently oxidized in the VOCSIDIZER. The project is partly financed by US EPA and the US DOE.



In the World's first commercial size VAM Power Plant, 250 000 Nm<sup>3</sup>/h of ventilation air is handled by four VOCSIDIZERS generating high grade steam that operates a 6 MWe conventional steam turbine. The plant feeds electricity to the local power grid. It is partly funded by the Australian Greenhouse Office and also by selling Carbon Credits on the Australian NSW trading scheme for Green House Gas emission reductions.

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