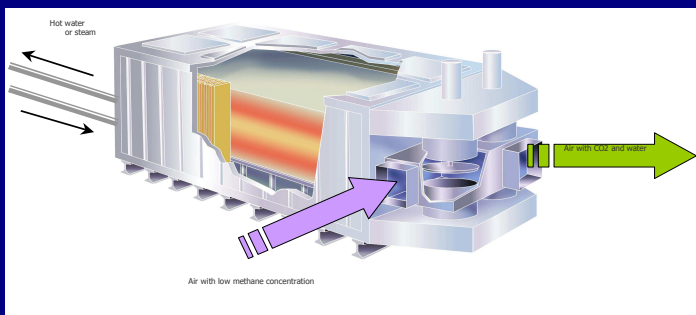


# VOCSIDIZER UTILIZING VAM

Demonstrating VAM Abatement in 1994 and VAM Energy Recovery in 2001, the VOCSIDIZER is pioneering the handling of the extremely dilute mine gas VAM (Ventilation Air Methane).

Supporting the development of mine safety and VAM utilization, MEGTEC has been presenting the full scope of the VOCSIDIZER VAM Technology in China since 2004.



More than 800 VOCSIDIZERS have been supplied to various industrial applications, often applying natural gas.

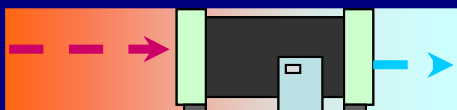
The process is **flameless**, single bed, regenerative thermal oxidation. The compact design gives small foot print.

As the ventilation air passes through the centrally heated ceramic bed inside the VOCSIDIZER, it is gradually heated by efficiently retrieving heat from the bed media until the methane is oxidized, leaving its energy through efficient heat exchange with the bed media, passing out of the bed. By reversing direction of flow, the hot zone is kept central. Since the system operates with extremely homogenous temperature distribution, there is **no generation of thermal NOx**.

Electrical power is generated by steam from high quality tubes embedded in the VOCSIDIZER.

## Energy Recovery Examples:

CONDITIONS	yield	THERMAL ENERGY	or	ELECTRICITY (if 30% efficiency)
800 000 m <sup>3</sup> /h @ 1 % CH <sub>4</sub>	→	72 MW <sub>th</sub>	→	21 MW <sub>e</sub>
800 000 m <sup>3</sup> /h @ 0.6 % CH <sub>4</sub>	→	36 MW <sub>th</sub>	→	10 MW <sub>e</sub>



By using hot water as driving energy, cold water (4 – 6 degr C) can be produced.

$$72 \text{ MW}_{th} \longrightarrow 21 \text{ MW}_e \longrightarrow 19 \text{ MW}_e + 38 \text{ MW}_{(cool)}$$