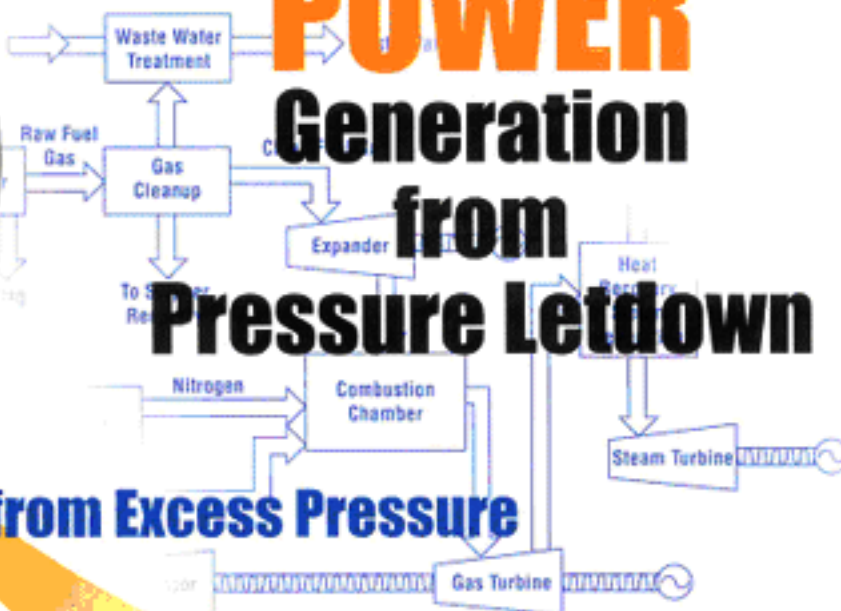
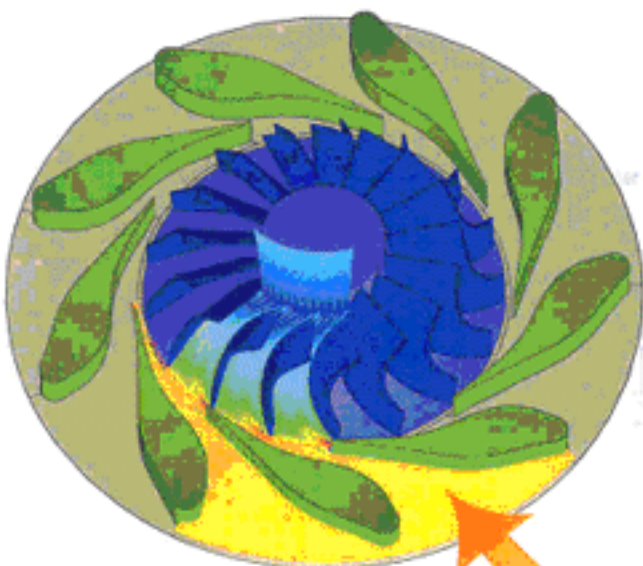




Mafi-Trench **POWER** Generation from Pressure Letdown



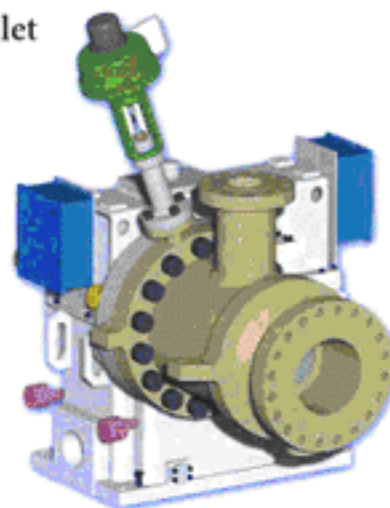
Recover Useful Energy from Excess Pressure

How is it done?

- By isentropic expansion of the gas in a single stage radial turbine or turboexpander
- Using the extracted shaft power to drive a generator
- Precise control of gas flow or pressure with integral variable inlet guide vanes

Where can they be used?

- Pressure Letdown Sites (ie. city gate stations)
- Natural gas fired turbine fuel supply systems
- Pipeline-to-pipeline pressure reduction stations
- Steam boiler and other industrial gas supply systems
- In parallel with existing control valves or regulators



POWER
Ranges:
500kW - 10 MW

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Mafi-Trench **POWER** Generation from Pressure Letdown

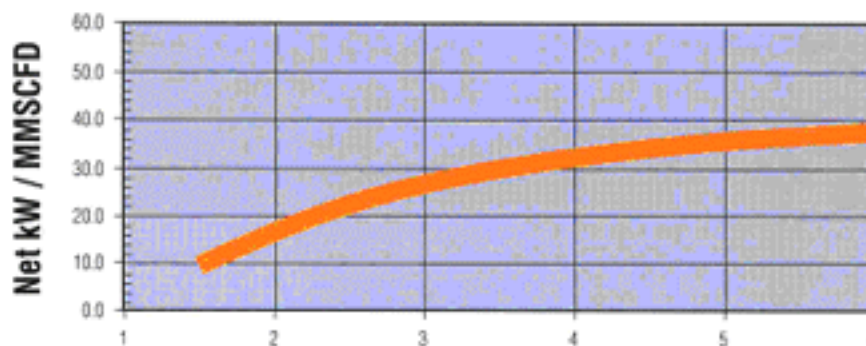


This 2.5 MW expander generator is being used to generate electricity by pressure letdown at the inlet to a large natural gas processing plant.

Our Customers Include:

Enron Power
Williams
Duke Energy
BP
Texaco
Abu Dhabi National Oil Company
BHP
Connecticut Natural Gas
BASF
Saudi Iron & Steel
Dow Chemical
Shell
Exxon - Mobil
Statoil
Petroleum Development Oman
Distrigas
Gas Authority India
El Paso Natural Gas
Conoco
Repsol - YPF

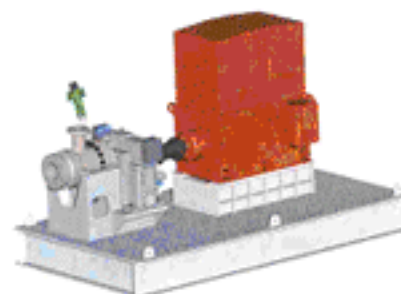
Power Recovery from Natural Gas Pressure Letdown



Expander Pressure Ratio

The approximate power produced per unit of flow can be estimated by dividing the absolute inlet pressure by the absolute outlet pressure which establishes the expander pressure ratio.

The heart of the system is an expander generator which produces electrical power while controlling the flow and pressure of the gas stream.



About Mafi-Trench

Located in the central California coastal city of Santa Maria, Mafi-Trench has supplied more than 500 turboexpanders to the natural gas processing, power and petrochemical industries. Designed and built to stringent industrial standards, these machines are operating in demanding applications around the world. At MTC, you'll find proven capability to design and build power recovery systems, as well as complete turn-key installations.



Visit us at: www.mafi-trench.com