

Generating low cost onsite power for shale oil producers

Reducing wasteful flaring of associated gas, shale oil producers in the U.S. increasingly use the by-product as a cheap fuel to power onsite power gensets. To help improve the operational efficiency of flare stacks, US industrial burner firm Periflame offers MD-G burners in capacity ranges from 0.3 to 100 MW for single units.

“Upstream companies are forced to use gas flares, or flare stacks, for waste gas after burning in order to avoid considerable environmental pollution. However, open flame remains extremely harmful and makes waste gas absolutely unusable,” said Yuri Kryzhanovsky, Periflame's director of engineering.

Low natural gas prices in the U.S. have made it uneconomic to commercialise associated shale gas at some shale oil production sites, but up to 30 feet high flames from flare stacks, are dangerous to have onsite.

North Dakota: Controversy over tax-free flaring

In North Dakota, new regulation allows oil producers to flare natural gas for a year without paying taxes or royalties on it. Thereafter, producers can ask state regulators for an extension with reference to high costs of moving the gas to market.

Though the new tax code has kindled some controversy, it grants exemption and tax incentive applications considering whether the producer is reducing the gas by use of burners or by compression and storage.

The code seeks to grant incentives for upstream companies that gather waste gas to for use in onsite power generation, or “a value added process that will reduce the volume or



intensity of a flare by more than 60%,” Kryzhanovsky suggested.

Modifying flare stacks save diesel, electricity costs

By adding generation capacity to the flare stacks, Periflame customers can save diesel and electricity, while reducing thermal and chemical pollution through a more effective heat transfer process.

Gas flares themselves can be designed and retrofitted with a combustion chamber and heat exchanger, or designed to use a compact enclosed flame. “Fitting our combustion chamber with a heat exchanger allows the energy produced during waste gas combustion to be channeled and utilized,” he said.

MD-G burners range from 0.3 MW to 100 MW

Upstream companies use Periflame's MD-G burners as a means to use their wasted gas onsite to reduce the expense of diesel-generated electricity. The burners are available in capacity ranges from 0.3 MW to 100 MW for single units.

The burners use a patented flame-holder system with direct-flow micro-diffusion stabilizer, allowing flame stability irrespective of the fuel quality and external conditions, and this technology can be applied in flares.

Combustors and heat generators from Periflame can also be adapted for other equipment such as industrial equipment boilers, steam generators, and furnaces. ■