



Heat exchangers for larger-scale power generation

EJ Bowman has extended its range of exhaust gas heat exchangers with its new type 15 unit which is capable of recovering waste energy from engines rated up to 1 MW. The type 15 heat exchanger means Bowman can now cater for larger-scale power generation applications, reveals WIP.

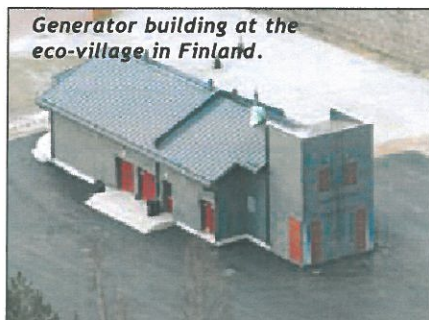
First unveiled at the Hannover Fair 2013 the Bowman type 15 heat exchanger generated a huge level of interest, reports the manufacturer.

Designed specifically to address market demands for a high efficiency unit for engines up to 1MW typical power, the type 15 is capable of recovering around 600kW of waste heat through the engine's exhaust stream at an exhaust gas mass flow rate of 70kg/min.

The unit is perfect for larger independent genset applications, where high levels of waste heat that would otherwise be lost to the atmosphere can be recovered and used to provide either hot water or heat thermal oil for ORC systems at no extra cost in terms of fuel usage.

Commenting on the launch of the unit, Kevin Howell of Bowman, told WIP: "The launch of the type 15 heat exchanger is a significant step forward into larger scale power gen applications for Bowman. It also gives genset manufacturers the opportunity to offer their customers CHP solutions that combine exceptional efficiency with a competitive price."

As well as for heat recovery, these units can also be used to reduce the exhaust temperature in engines operating in hazardous environments where for safety reasons it is necessary to reduce the temperature of the exhaust gases



Generator building at the eco-village in Finland.

In common with all standard Bowman Exhaust Gas Heat Exchangers, the new type 15 unit is suitable for use with engines powered by Biogas, Diesel Gases and Natural Gases.

Bowman Exhaust Gas Exchangers are manufactured to a standard range of sizes, they are competitively priced

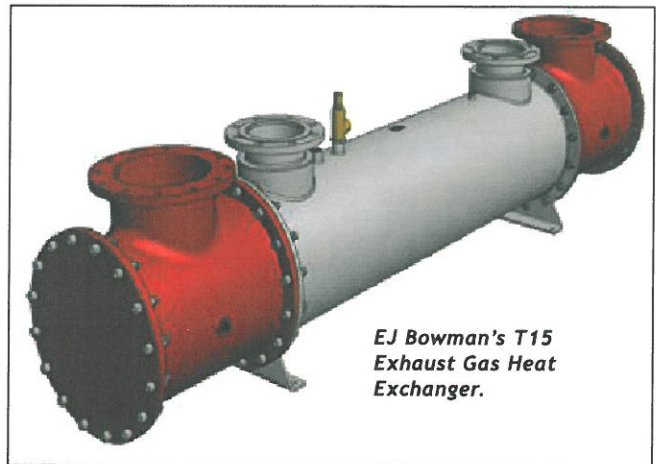
and offered on a quick delivery to meet clients' build schedules.

Bowman can also now offer several exhaust gas heat exchangers with right-angled end covers, which are fitted with a removable plate on each end, allowing easy access to the heat exchanger tubes for cleaning and maintenance without the need to drain the system.

When Bowman exhaust gas heat exchangers are used in conjunction with other Bowman units such as: Header Tank Heat Exchangers, Charge Air Coolers and Bowman Oil Coolers, it is possible to reclaim over 90% of lost heat from the engine.

Bowman heat exchangers are tested to the limit and proven in the most demanding applications, the world over - including the British Antarctic Survey's (BAS) new research station, Halley VI. In winter, temperatures on the Brunt Ice Shelf plunge to - 50°C and snow falls for half the year.

Bowman units are critical to the combined heat and power system (CHP) which supplies energy for space heating, hot water, lighting, ventilation and electrical power.



EJ Bowman's T15 Exhaust Gas Heat Exchanger.

Without this CHP system, the people on the resident BAS team who live and work at the base could not survive.

The units met the demands of this unique artesian water supply, a variety of pool sizes, heating methods and the massive fluctuation in outside air temperatures - from below freezing in winter up to 40°C in summer.

Bowman heat exchangers are also central to three CHP power plant units at a Finnish eco-residential project. The units are fitted to Sisu Gensets for recovering waste heat from the exhaust and jacket water systems. The power plant supplies heat and power to 10 houses.

EJ Bowman is a worldwide, ISO9001:2008 certified OEM manufacturer of Heat Exchangers and Oil Coolers for industrial and commercial applications.

Bowman occupies a purpose-built factory which is ideally situated centrally in the heart of the UK, from where it directly exports over 70% of its production worldwide.



Internet link

www.ejbowman.co.uk