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LP GAS

THE VOICE OF THE INDUSTRY

27TH WORLD LP GAS FORUM

Prins Wins WLPGA Innovation Award.

ALSO IN THIS ISSUE: UKLPG NEWS SPACE HEATING INSTALLATION

ANOTHER AWARD FOR ITO

By Neil Ormrod, director, ITO Europe Ltd

ITO receives official confirmation of its innovation claims from the World LP Gas Association.

The ecoRizer uses no fossil fuels and has no running costs.

The paper presented by the ITO Group at last year's Global Technology Conference during the 26th World LP Gas Forum in London has been placed as runner up to Prins Autogassystemen BV for the WLPGA Innovation Award 2015.

Following on from ITO's first place win with Lpg Applied Technology For Seismic Hazard presented at the World LP Gas Forum in Doha in 2012, the paper given last year was entitled Eco-Friendly Lpg Vaporisation By Efficient Use Of Atmospheric Heat and details the ecoRizer system, which uses no fossil fuels and has zero running costs in its vaporisation process.

With capacities ranging from 100 to 1,500kg/hr (greater capacities can be achieved by combining multiple units) and manufactured in A6063 aluminium, it offers the greenest solution possible for vaporisation and is corrosion free, offering virtually maintenance free performance for decades.

Lpg is a wonderfully flexible fuel; its usefulness is increased by its ability to create a large volume of lp gas from a relatively small amount of liquid. To use small amounts of lpg as our energy source – for example, for domestic use – is simple; we use lpg vaporised within a cylinder or vessel. In contrast, for facilities that use large quantities of lp gas – for industrial use, for example – we would have to install many cylinders or larger vessels to assure enough vaporisation. There is also the problem of icing, which occurs when too much vapour is drawn from an insufficient supply. Vaporisers are used to decrease the number of cylinders whilst still providing sufficient quantities of lp gas for consumption.

Typically, present day vaporisers use large quantities of electricity or lp gas as their heat source, heating up water and steam to use as the vaporisation medium. The electric bath type uses a large quantity of electricity; likewise, the lp gas version uses vast quantities of lpg and the hot water circulating type consumes both. Consumption of these energy sources is a large burden on our environment and it seems strange to pay for energy to create energy. We should also note that the use of electricity presents a potential supply risk – in the event of a power cut or other emergency, the lpg supply would also be cut.

Activities for the prevention of global warming and CO_2 reduction are expanding all over the world and the ITO Group feels that it provides one of the best solutions for these problems. It has developed a vaporiser that does not need any fossil energy at all, not even electricity.

Firstly, the regulators decompress the liquid down to 1 bar, which reduces its temperature to around -25°C. Using just the warmth of the air circulating through its fins, the ecoRizer then carries out the vaporisation process, even at ambient temperatures, down to as low as -10°C. It is by securing this temperature difference that we can instantly begin the vaporisation process. We operate a dual line system with service and reserve blocks, enabling run over of excess liquid from the service line.

ITO Group's ecoRizer.

Safety is paramount with any lpg installation and the vaporisers must incorporate shut off systems to ensure that no liquid runs over to the downstream side. This can be caused by overcapacity due to an overload, unusual weather and so on. The ecoRizer is therefore fitted with a liquid carryover protection system. The vaporiser also incorporates a safety valve, which can release lpg to a safe place and decrease the internal pressure if the pressure in the vaporiser rises to more than the design pressure.

By fully utilising atmospheric temperature as a heat source for the vaporiser, this ecoRizer accomplishes zero consumption of energy for vaporisation without CO_2 generation and greatly contributes to the global lpg industry's contribution to the lessening of the burden on the environment. In addition, these ecoRizers make it possible to provide a stable supply of lpg for emergency use during periods of disaster as they are standalone devices that work without the need for other energy, including electricity.

The ITO Group will be demonstrating the ecoRizer on booth 89 at the 27th World LP Gas Forum in Miami, USA, on October 28–30.

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