

Choosing the right technology

● *Robert Smith of Prestigious Fires contends that not many people in the UK fireplace industry have heard of bio-ethanol fires or know much about them. Although he is probably right, those present on the Sunday of this year's Hearth & Home Exhibition may beg to differ when recalling the evacuation of the exhibition halls as an example was doused with a fire extinguisher. It's perhaps not too surprising therefore that we were burdened with the odd prejudice or two when we visited him to learn more!*

ALIVE fire burning out of control is probably any exhibition organiser's worst nightmare and although the incident at this year's Hearth & Home Exhibition was minor and resulted in absolutely no damage to man or material, it did serve to highlight the dangers of knowing little or nothing about a new type of fire.

In reality however, bio-ethanol fires are not new. They've been around for some years with the first examples probably originating from Australia where bio-fuel technology is as advanced as anywhere.

Prior to visiting Prestigious Fires, some of those we had talked to said that bio-ethanol and gel fires were one and the same thing. As we've learnt, although they have something in common, Robert Smith suggests they are as different as chalk and cheese.

Not the same as gel fires

Robert said, "Most retailers in the UK will know about gel fires and have experience of using them. Gel fires use a viscous liquid made from bio-ethanol and other additives to form a jelly like fuel. This viscous liquid is poured into a container, usually a tin, and then ignited on the top surface of the gel. As the gel burns, the level drops in the pot until the fuel is exhausted leaving a residue that is either thrown away with the container or has to be cleaned away."

"Some say that gel fires produce a nice effect but counter this by saying that the flame height is virtually uncontrollable and the gel usually burns with a very distinctive odour. It's the latter that has

resulted in most complaints to retailers who, for the most part, seem to have stopped selling them."

Bio-ethanol is essentially alcohol derived from various forms of biomass including corn, wheat and sugar beet although sugar cane is probably the

does have one additive - a tiny amount of 'poison' that makes it unfit for human consumption and also (and more importantly perhaps), exempts it from the taxes imposed on alcohol! And before anyone asks, even if you're Merlin the Magician, you can't separate the poison from the alcohol!



Above, the Bio Flame Kreta.

highest yielding crop. It is a thin liquid with a viscosity similar to water, it is highly flammable and, when burnt, produces carbon dioxide and water vapour. As might be expected of such a 'pure' fuel, the products of combustion are so clean that bio-ethanol fires operate without any form of flue. They are, if you like, flueless fires.

The bio-ethanol bought by consumers is so close to being pure alcohol that it

on the top surface. It's effectively the burner and the flame trap all in one so there's no 'loose' fuel.

The fires Robert demonstrated to us were odourless, silent, had no gas or electricity supply, were flueless and don't require routine servicing. They were easy to fill with the liquid fuel and

Unique flame trap

As bio-ethanol is also highly corrosive, this seems as good a point as any to talk about the engines that burn it. The system used by Prestigious Fires is patented and addresses one of our more obvious concerns.

The fire that caused the organisers a moment or two in Harrogate was a well made stainless burner comprising a reservoir for the fuel with a gauze above to act as a flame trap. As bio-ethanol evaporates at ambient temperatures, the vapour can be ignited above the gauze which prevents the flame burning back to the fuel lying beneath it.

The system used by Prestigious Fires differs in that the reservoir is, to all intents and purposes, a sponge. It's actually a porous ceramic rock surrounded by a box which, just like a sponge, absorbs the fuel but only allows it to burn

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featured a clever interlock between the filling point and the burning area that prevents a consumer from trying to add fuel when the fire is alight.

So are bio-ethanol fires the next generation of fireplace appliances?

The burners are currently undergoing testing by TUV in Germany and are expected to carry its safety seal of approval very soon.

Roberts responds. "We don't expect these fires to be used as primary heat although, depending on burner size, they can produce up to 2kW of usable heat."

"We believe they will be used by consumers who want a real flame but where the installation of a gas fire is not possible. On a like for like basis, the running costs per kW of heat for a bio-ethanol fire will be higher than a gas or electric fire but used occasionally, bio-ethanol fires offer a real alternative."

Sustainable sources

The products being offered by Prestigious Fires go beyond the burner and fuel by providing a range of 'fireplace' enclosures that a consumer can have installed and working in 30 minutes. A shelf style burner has just been added to the list for those wishing to create a hole in the wall flueless fire and we were even shown a 'fireplace' on wheels!

Responding to recent criticisms that bio-fuel production is driving food prices higher, Robert says, "There are those who claim that growing crops for fuel is reducing the land available for growing food but we're using fully sustainable sources across Europe that don't prejudice normal food production. The volumes used in this latest generation of decorative fires will not impact on the world's ability to produce food."



Above, the Bio Flame Umbria.



Above, the Bio Flame Lasize.

Robert concludes, "Bio-ethanol fires will grow in popularity over the coming seasons as consumers become aware of the limitless possibilities of these flueless fires and recognise them more as visual effect furniture than a heat source. For retailers they offer a new opportunity and an answer for those consumers who simply cannot have a gas fire."

"Bio-ethanol fires are here to stay, and we believe retailers will endorse the technology and use it where the features and benefits offer a unique solution for the consumer."

And what about the prejudices we carried when arriving at Robert's factory in Rotherham?

The fires Robert demonstrated to us were well designed, well made and had clearly received the attention of someone with a consumer safety conscience.

Our fears have been completely eliminated and, not that we needed any more convincing, a simple little experiment carried the day.

We took two containers, fitted one of them with the ceramic sponge used by Prestigious Fires and

then filled both containers with bio-ethanol. We lit the fuel of both tins and then picked up and inverted the one with the ceramic sponge. The flame continued to burn on the inverted surface but nothing else happened.

You will not be surprised to learn that we left the other tin well alone.

For further information about Prestigious Fires and its complete range of bio-ethanol fires and fireplaces, visit www.prestigiousfires.co.uk or ring 0845 2190023.



In our next issue

WE report on visits to Livingstone in Limerick, MAC Metalcraft, Charlton & Jenrick, Interbuild and the northern Home Building & Renovation Show.

Dennis Milligan of Schiedel looks at the future for wood burning stoves and how the rules and regulations might change and we look at the new Government target to reduce carbon dioxide emissions to 20% of 1990 levels in the next four decades.

All this plus our usual round-up of news and the latest products to reach the market.

To discuss editorial opportunities in future issues, contact Philip Malkin by email to editor@fireplacemarketing.co.uk or ring 01325 720775.