

Open day at centre

INNOVATIVE businesses looking for hi-tech premises have been invited to an open day at the expanding Westthorpe Business Innovation Centre in Killamarsh, near Sheffield.

North East Derbyshire District Council, which manages the complex, on Green Lane, Killamarsh, is building a £3.2 million second centre on the site to cope with increased demand from small to medium-sized businesses working in the knowledge based economy.

The council is inviting prospective tenants from South Yorkshire and North East Derbyshire to visit the centre on Thursday October 4, from 2 to 5pm.

Big race sponsors

IRELAND'S premier bloodstock auctioneers, Goffs, and Doncaster Bloodstock Sales are marking their recent merger by sponsoring the feature race on Ladies' Day at Doncaster St Leger Festival.

The merger has created an auction house which expects to sell around 10,000 horses a year in Ireland and Doncaster.

Goffs and DBS's support for races on both sides of the Irish Sea is expected to generate more than £4.3 million (£2.9 million) worth of prize money in 2007, increasing to a possible £6.2 million (£4.2 million) in 2008.

Software solution

XACTIUM, the Sheffield-based software specialist, has unveiled a new product that aims to help companies improve corporate compliance.

The company says its new 'Business Motivation Solution' can be used across all business sectors and will be instrumental in helping to both manage goals and objectives and analyse the decisions behind strategic plans.

Managing director Dr Andy Evans says the software is the first standards-based business motivation solution that helps companies comply with the demands of corporate governance, at the same time as developing and managing all processes and plans from a central source.

Fewer failures

THE number of companies going into administration has fallen by 15 per cent across the UK and 22 per cent in Yorkshire, Humberside and Tyneside, says business advice firm Deloitte.

But, Ian Brown, Reorganisation Services partner at Deloitte in Leeds, warns the figures should be treated with caution.

"At Deloitte we are seeing more work dealing with troubled companies, which were acquired from earlier failed enterprises and which are now beginning to fall again with increasing momentum."

Taking the risks out of technology

Specialists able to extract noxious fumes that threaten health of process workers

By Robert Rae
Business Editor

PROFILE Business

Company:
Purex International

Address: Fairfield Park,
Manvers Business
Complex, Rotherham

WHAT do nail bars, fish processors, bottling plants and electronics factories have in common?

They all turn to Manvers-based Purex International to solve their environmental, health and safety problems.

The company, founded in the early 1980s by Phil and Jill Mullins and brother-in-law Rob Turner, and now owned by Domino Printing Sciences, has built a reputation as a leading innovator in the field of fume and dust control technology.

That in turn has fuelled its growth and is opening up markets around the world.

Purex is a classic example of how one man's problem is another's opportunity.

The company began life when health and safety was rapidly working its way up the regulators' priority list, culminating in the introduction of the COSHH regulations covering the Control of Substances Hazardous to Health in the late 1980s.

For processes producing harmful fumes or dust, companies have three choices.

- Change to a harmless alternative.
- Control the fume and dust.
- Issue employees with Personal Protective Equipment (PPE).

Changing material isn't often possible and PPE isn't as satisfactory as controlling the fume or dust, which is where Purex comes in.

In the firm's early days, the fumes given off by solder were a leading cause of occupational asthma, so it was hardly surprising the electronics industry became one of Purex's biggest customers.

To this day the sector remains a major part of the company's business.

The Fairfield Park company supplies equipment for everything from full production lines to single soldering stations - up to 50 of which can be connected to a single, central Purex extractor.

Another area which has grown in importance over the years has been fume extraction for lasers.

The company supplies systems used in schools, laboratories, hospitals - for laser surgery.

But one of the biggest applications is for production lines - including bottling plants - many of which now use lasers in preference to ink jet printers for marking batch numbers, sell-by dates and the like.

Fume extraction is doubly important when lasers are used in bottling plants as the systems can mark up to 70,000 bottles an hour.

Not only do the lasers create a small amount of fume, their lenses are expensive to replace if hot glass or plastic spits back and sticks to them.

Purex sells across Europe through a chain of distributors and also works directly with Original Equipment Manufacturers.

Eastern Europe is opening up as an important market, as companies start moving production from Britain to lower-cost countries and take their health and safety practices with them, says European sales chief John Twigg.

The company is also keen to seize opportunities to marry its advanced dust and fume control systems with laser and other equipment being made in emerging economies such as China, where its parent group - a world leader in ink jet and laser coding and printing technologies - already has a foot hold.



▲ Dealing with polystyrene mountain: Eric Butcher fills the Purex Styromelt machine ... and shows the much-reduced residue which can be put to a number of uses



Innovation at heart

INNOVATION has been at the heart of the Purex success and is taking the firm into emerging markets in the Far East and Asia, which are traditionally seen as competitors by Western manufacturing.

The company's innovations include adjustable-arm technology for use with soldering stations, comprehensive monitoring and control systems and a pre-filter designed to capture larger particles, which the company calls a "labyrinth filter".

More recently, the company has developed tailored "Nail Stations" for beauty salons and, thanks to its partnership with Taylor Products, the

new Styromelt thermal densifier for waste polystyrene.

The arm incorporates a patented knuckle joint, which allows operators to adjust the positioning of the extraction arm without having to unscrew and then re-tighten fixing bolts.

The patented labyrinth filter is one of the company's major breakthroughs - a series of square, open weave, filter bags, fitted together like the bellows of a concertina, which has around ten times the life of a normal filter and cleans the air before it goes through the main high efficiency particulate air or HEPA filter.

Both the Labyrinth and

HEPA filter are also designed to be changed independently and in seconds, without the need for tools.

Purex control systems range from simple, LED-based warning lights, to full digital systems, incorporating electronic flow control, which allow the user to set a target vacuum and extraction rates, define when warnings should be triggered and monitor the actual vacuum and temperature the system is operating at.

The company makes everything from small-scale cabinets to industrial-scale purification facilities with features that include acid resistance.



▲ Purex base: Management team includes Andy Easey, Paul Priestley, Jon Young, Graham Mattock and Phil Downing; right, the Manvers shop floor



Tackling the mountain of polystyrene

A PIONEERING partnership between Manvers-based Purex and packaging, automation and equipment specialist Taylor Products is helping to solve the major environmental problem of what to do with a growing mountain of polystyrene foam.

Enough foam to fill 15,000 Olympic swimming pools is sent to Britain's landfill sites every year, costing companies an arm and a leg and using up valuable space.

Taylor Products came up with the original idea for reducing the volume of the foam and turning it into material that could be used as a replacement for hardwood, among other things, or even a source of bio-fuels.

The Welsh company initially approached the Rotherham firm for help with controlling the fumes given off by the process, but then suggested Purex develop and make the machine itself.

Purex's Styromelt machine reduces the volume of polystyrene foam by about 95 per cent, turning it into a solid block.

Blocks can be turned into products, incinerated, releasing about twice as much energy as a similar weight of coal, or even turned into fuels such as green diesel.

Purex claims a standard Styromelt machine, processing 10 cubic metres of foam a day for five days a week, could pay for itself in just 44 weeks and go on to save users around £15,000 a year.

The company has already supplied machines to a fish processor who needs to get rid of the ice-packed foam boxes, and to Rolls Royce, which wants to recycle the foam the chrome work it uses comes packed in.

Another machine has gone to an independent electrical retailer, who doesn't generate enough waste foam to justify a machine of his own but plans to make it pay by getting rid of foam for seven shops in the same parade as well as his own.

Taylor Products, meanwhile, has sold machines to French and Spanish supermarket chains and has plans to develop a process for turning the blocks produced by the Styromelt into Liquid Petroleum Gas.

Impact on the environment

EXPANDED polystyrene is a pain.

The total environmental impact of making it - in terms of energy consumption - is the second highest of any material, according to some experts, and, it is a nightmare to dispose of.

Although it is a plastic, its light weight and low scrap value make it unattractive to recycle and that means there is a lack of suitable recycling facilities.

Some of it is recycled as a filler in other plastic products, but expanded polystyrene used to store meat or fish cannot be re-used because it is invariably contaminated by blood and most of it eventually ends up in landfill sites.

Ninety per cent of it is air. Even crushing it only reduces its volume by 50 per cent, so it takes up a lot of space.

More than 300,000 tons of expanded polystyrene is thrown away in the UK every year.

To make matters worse, it takes a very long time to decompose.

But, it is a superb insulating material and great for protecting electrical goods from damage during transit, so it isn't going to go away.



Nail bar: Sam shows how

Beauty defeats the beast

THERE'S a beast stalking the beauty industry.

It's practically invisible and it leaves beauty technicians with headaches, nausea, breathing difficulties and no sense of smell.

The problem centres on acrylic false nails, the glues and resins used to bond them to the natural nail, and varnishes to cover them.

Breathing in fumes and acrylic dust from filing nails caused Sam Mawhood so much grief that she quit her job as a nail technician.

She found a job with Purex and that put her in the right place to suggest the industrial dust and fume extraction experts had the equipment to tame the beast.

The result is a tailor-made nail bar, with its four-way extraction system that saves nail technicians from breathing in dust and fumes.

The Purex Nail Station draws nail dust down through a grille in the nail bar table. Chemical fumes are sucked away through a flexible extraction arm which incorporates the work lamp. Fumes from bottles and dishes stored under a cowl are drawn away, and there's a vent in the storage drawer. Nail bars are selling in the Far East.

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