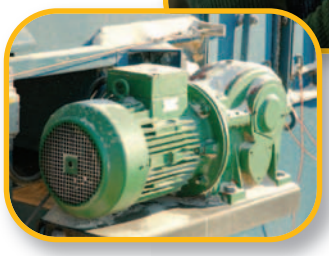
Extracting rewards

Avoiding risk, safeguarding the workforce and complying with health and safety regulations are key goals of dust and fume extraction equipment. But there's also a financial reward to be reaped, reports Brian Wall

While investing in dust and fume extraction plant may seem to be all about avoiding risks, there are financial dividends to be had as well. With the right equipment and safeguards in place, employee productivity and attendance may improve. But there can also be: savings on cleaning costs; improvements in equipment reliability, product quality and factory productivity; and reductions in waste.

However, when buying new equipment, it's worth remembering that the purchase price is only one aspect. "Plant managers will typically be responsible for sourcing after-sales service and maintenance, and budgeting for running costs and energy use," explains Mark Hodgens, managing director at Nederman, which supplies environmental technology. And he adds: "Poor reliability that halts production is extremely expensive."

Then there is compliance. Although the Control of Substances Hazardous to Health (COSHH) regulations still provide the legal backbone, HSG258 (Health and Safety Guidance 258, Controlling Airborne Contaminants at Work: A Guide to Local Exhaust Ventilation LEV) provides all the information.



Above: Extracting fumes can be critical for health Left: Dust laden plant provides evidence of extraction failure Below: Bill Treddenick of Lorien Engineering

Legislation tightening

Its three-tier messaging, respectively targeting employees using LEV (local exhaust ventilation), employers managing LEV, and contractors designing and installing LEV, is particularly useful. For example, as a result of HSG258, airflow indicators are now commonly fitted to extraction points, giving users early warning of poor functioning and employers reassurance that they are meeting their legal duty to ensure installed LEV is working properly.

"Plant managers need to be aware of the options available to ensure LEV is working and that legal requirements are being met," comments Hodgens. And he points to the fact that HSE is continuing to focus firmly on the dangers of dust and fumes in workplaces, to help protect the thousands of workers still developing long-term or acute illness or disease, as a result of occupational exposure.

And that comes at a price: under recent changes to HSE policy, duty holders (plant owners, operators and managers) will in future be charged when HSE serves enforcement notices and provides advice to remedy health and safety failings where material breaches have occurred. It's a tougher stance that will see HSE recovering costs, on top of levying fines – and signals further tightening of the rules.

So, how well are plants performing? "I find that factories are either outstandingly good or outstandingly poor at controlling dust and fumes in the workplace – and there are not many in between," comments Bill Treddenick, compliance director at Lorien Engineering Solutions.

What separates the 'good' from the 'not-so-good'? Mainly the attitude in operations, from top to bottom, he states. "Good practice often comes from an awareness of the consequences of poor dust and fume control, and from an overall 'good manufacturing practice' ethos that can also be observed through the setting of TPM [total productive maintenance] targets, and clear reporting and manufacturing controls," explains Treddenick.

One worrying area that may also be overlooked – and that he highlights – is the immediate and very potent risk of fire and explosion. "We should be equally concerned about controlling these hazards and complying with DSEAR [Dangerous Substances and Explosive Atmospheres Regulations 2002]," he warns. "The surprising fact is that, among our various food category clients, around 75% have factory areas that fall under DSEAR that could, without active management and careful design, cause mass injury and significant loss."

What, then, is the lesson here? Mainly that dust and fumes are an everyday part of plant life, and coming to terms with this is just another part of manufacturing excellence – except, as Tredennick points out, "this part can kill". PE