Three steps to heaven

28.10.2009

Current coil cleaning best practice is sorely in need of a revamp to reduce infection risks, says Advanced Engineering technical director Colin Pratt.

Any ACR engineer worth his salt knows the importance of regular coil cleaning; it's an essential part of maintenance.

Quite aside from improving air quality and cooling performance, it's a legal requirement under part L of the Building Regulations, which states that a system must be kept in line with manufacturers' recommendations for energy efficiency.

But how long that cleanliness lasts – and the job facing the engineer at the next service visit – varies hugely according to the occupants of the building and the cleaning protocol followed.

In particularly grimy or germ-laden conditions, it's not uncommon to come back to an unpleasant job and complaints about foul smells from the system.

Given that such odours are usually caused by a high level of fungal or bacterial activity in the system – and hence in the air – are current practices and products really doing enough to safeguard hygiene and prevent the spread of infection?

The standard 'clean-and-disinfect' protocol – whether separately, or using a chemical cleaner that incorporates a BS/EN compliant biocide like QX-60 – has been generally accepted throughout the ACR industry. With good reason, too: coils provide warm or moist conditions, ideal for microbes to multiply, before catching a ride with the circulating air.

Dirty Air in Hospitals?

Of course, it's not just office buildings which suffer this problem.

To see how the issue might affect areas where hygiene is particularly sensitive, Advanced Engineering commissioned a survey into ACR coil cleaning practices at 60 UK hospitals.

We discovered that the majority of hospitals clean their coils every 6 months – and many only annually. Fewer than a third cited any kind of regular disinfection as a part of their schedule.

But bacterial populations typically double every 20 minutes, a single bacterium landing on a coil can become a colony of a billion in as little as 10 hours.

The depressing truth is that mould and bacteria have started to grow back before the engineer is even back in the van… and just imagine the numbers created before the next service visit, six months later.

When you consider the number of microbes entering a hospital, combined with the weak immune resistance of sick people on wards, this is a real cause for concern. Our hospitals may be circulating dirty air around people who can ill-afford to breathe it.

With increasing worry over superbugs such as MRSA, international 'flu pandemics and the like, microbial growth in air conditioning has the potential to become an important issue: one where managers – not just in hospitals but any building – look to their ACR engineer for reassurance.

But what can be done? It's clearly absurd to recommend that anyone, whether an office, supermarket, hospital or wherever, should clean their coils daily.

Instead, we need to make more of the maintenance visits that are made and try to find a way of ensuring coils remain as clean and free of germs as possible until the next scheduled visit.

As the world's leader for coil cleaners, Advanced Engineering felt it was our responsibility to try and address this potentially dangerous gap in the industry's best practice.

The result was a new product – and a whole new way of thinking about coil cleaning.

Clean – Kill – Protect.

Try to forget coil cleaning as a one-off event, improving the system when it gets below an acceptable level. Instead, think about it as ensuring air quality and hygiene continuously, on an ongoing basis – whether you're there or not.

To achieve this, we developed Guardian: a spray-on protective layer that prevents mould or bacteria regrowing on coils for up to six months.

It sounds a simple concept, but it's potentially revolutionary. It has taken some tough development and holds very real benefits for engineers and facilities managers alike.

People occupying air-conditioned buildings will find their air nicer-smelling and – importantly – have the peace of mind of knowing their air conditioning is not spreading harmful infections.

For engineers, of course, subsequent coil cleaning becomes quicker, easier… just a less unpleasant job all round.

In my view, this is one of the biggest developments in coil cleaning in the last decade… and the beauty is that it is easy to implement into engineers' daily routine.

It's as simple as adding a brief, third element to the standard coil cleaning procedure. In short, the mantra should be: "Clean – Kill – Protect":

• Clean the coil chemically,

• Kill any germs with a good disinfectant, and

• Protect the coil until the next visit.

To help engineers make the change, Guardian comes in a small, inexpensive self-spray bottle designed to coat one standard-sized coil.

Protecting the system takes just a few minutes – and could make all the difference to air quality, hygiene and future maintenance work. Not just in hospitals, but anywhere.

TECHNICAL DATA SHEETS, SAFETY DATA SHEETS & MUCH MORE AVAILABLE AT: WWW.ADVANCEDENGINEERING.CO.UK

Advanced Engineering Limited,
Guardian House, Stroudley Road,
Basingstoke, Hampshire,
RG24 8NL. UK
Tel: +44 (0)1256 460300
Fax: +44 (0)1256 462266
e: sales@advancedengineering.co.uk
web: www.advancedengineering.co.uk

INVESTOR IN PEOPLE

Note: Advanced Engineering follows a policy of continual product improvement. For this reason, some materials and specifications could change without notice.