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Grenfell: one year on



Case study: pressing issues at Agfa Graphics

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At Agfa Graphics, which produces the raw materials used to print books, posters or magazines such as this, the hazards are constant but the corporate and safety cultures evolve. Bridget Leathley visits.

The Agfa Graphics factory in Leeds, a manufacturing site with an annual turnover that places it in the "large organisation" category in respect of the sentencing guideline, is nevertheless an eerily quiet place, with just faint hisses, low hums and the occasional higher pitched whistle to suggest the scale of the operation. The site is a leading manufacturer of aluminium pre-sensitised plates for lithographic printing, as well as a supplier of pre-press equipment and chemicals to the printing trade.

A recent reduction in noise is one of the safety successes that can be claimed by safety officer Stuart Gregory, who has a recent NEBOSH Diploma and a quarter of a century of operational experience. He was aware that noise levels in one production area were around 85dB, triggering action under the Noise at Work Regulations.

Rather than simply enforcing hearing protection, he looked at the motors generating the noise and found alternatives that were not only quieter, but cheaper and more energy efficient. Changing the motors provided an opportunity to simplify pipework, with further reductions in noise as a consequence. The net result is that hearing protection is not necessary in this part of the site, making communication across the line much easier.

Gregory can also claim additional successes in designing out hazards. He was aware that some roll-forming machinery would occasionally emit spray from the lubricating oils used. While one solution would be to insist that staff wore the whole face hoods that were available for respiratory protection for the whole 12-hour shift, Gregory realised that would be uncomfortable.

Instead, he looked at other oils used in the factory, discovering that one used for gearboxes would also work for roll-forming. Looking at the safety data sheet, he found the alternative oil was less hazardous and less of it was required, removing the need for PPE. The new oil was also cheaper.

Onsite insights

The interventions were described on a visit arranged by Onsite Insights, a business which evolved from a project by the erstwhile Department of Trade and Industry to help businesses improve through benchmarking and peer support. After government funding was removed in 2003, founder Ailsa Carson set up a private programme of around 80



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events every year, in which businesses that have been successful in a particular topic area open their site to visitors and share their insights.

As well as health, safety and environment, visits can be themed around quality, lean production, logistics, sales, customer care, project management and maintenance.

Skeleton staff

Production at Agfa Graphics is in the hands of a workforce of around 90, a skeleton staff in relation to the 500 employed 20 years ago, and the 1000 workers who were on the site in 1980. The site's journey through various ownerships and corporate structures since then has mirrored the experience of so many other manufacturing sites, but it's also had a significant impact on the safety culture

In 1980, under the ownership of Vickers Engineering, the site had around 20 reportable injuries a year. At the time, the current site manager, Graham Cooper, had just joined as a research assistant, and he reflects that his younger self and colleagues accepted this as "normal". "We even won a British Safety Council award in 1983," he remarks.

In 1989, the plant was sold to US chemical giant, DuPont. "We thought we were doing okay, but when DuPont came in, we found we were at the bottom of their league tables for safety," Cooper says.

Under DuPont, when the site employed about 650 people, safety procedures became "foremost", although the methods employed to enforce rules and compliance now sound positively historic.

He describes how the American plant manager at the time, a Vietnam veteran who still seemed to think he was at war, would "rant and rage when someone was injured. He sacked the heads of departments with the worst safety records. It was brutal, but effective." Within four years, however, the accident rate was down to one or better per year.

DuPont then sold its graphic film and offset printing plates businesses to Agfa-Gevaert in 1997. The drive to rationalise was extreme, with staff numbers reduced to the current 90 full-time employees by 2006. While DuPont had introduced very strict health and safety procedures, Agfa brought little additional focus on safety, Cooper says.

Mixing new and old

One benefit of the new regime, however, was that Cooper and his colleagues could "ditch unnecessary bureaucracy" while still maintaining the positive aspects of DuPont's approach to safety. Cooper describes how multiple copies of paper forms had to be completed and filed in three separate places, with different systems for safety and quality reports, and another set of forms for permits.

"If we'd carried on adding paper forms for energy and environment we would be drowning in bits of paper by now," he says. Instead, they developed a system using a single electronic form for reporting all safety and quality issues, whether problems spotted or suggestions for improvements.

But they kept strict rules about how to isolate, lockout and tagout before working on machinery (see photo, above). "The new owners noted that we had comparatively more down time preparing for maintenance, but we knew from experience that this was better for safety and better for the business, so we kept doing it. Eventually, the rest of the business adopted similar processes," says Cooper.

So much so, that he has been flown to the US to show factories there what to do, while safety managers in Belgium call Gregory for advice.

While DuPont had used fear to get people to follow safety procedures, Agfa's rationalisation brought fears of a different kind. "People had seen many of their colleagues lose their jobs. We were all frightened the site would have no long-term future." In response, Cooper says, "we set out to be the best".

Having benchmarked the site's safety performance after an injury in 2008 and discovering that the site was not as good as had been thought, Cooper turned to the workers and asked them for their ideas. "With staff numbers reducing, we had to change our way of measuring safety.

Saying you've passed a year without an accident when you've reduced from over 500 staff to fewer than 100 isn't comparable. So we moved to counting exposure hours and set an aspirational target of one million hours. Everyone bought into it."

The Leeds site has maintained its position at the top of the Agfa safety league. "When we passed our one million hours target in 2014 (see photo,below), we set another target of 1.5 million hours. We passed that in February this year, and are now working towards two million hours," says Cooper.

Gregory, who joined just as DuPont took over, is now the only specialist, whereas there was once a team of five. He is deliberately described as a "specialist", not a safety officer or a manager. "I'm not a police officer, and I don't manage safety for them. Health and safety is

everyone's responsibility. We retained that culture from the DuPont days. Every line manager knows they have to keep workers 100 times safer than they would choose to keep themselves."

Private invitations

The tour at Agfa explains how the lines take aluminium coils in at one end, process them, and recoil them as substrate for lithographic printing plates at the other. "Plates" seems a rather archaic term for the enormous, mesmerising rolls, but derives from the days of printing presses with individually set metal type characters.

The materials used at Agfa Graphics are paper thin, with a gauge from 0.15mm to 0.5mm. Lasers, not metal type or film, are used to create the text and images for printing. Walking through a warehouse of stacked coils, it's hard to believe that the 2m diameter drums contain 7km of "plate".

But with that density comes hazards: each coil weights 7 to 10 tonnes, and spins off a production line running at 80m per minute. Manual handling is limited to 25kg, so specialised trolleys, cranes and a fleet of 11 forklift trucks are used to position the coils.

Meanwhile, the electrochemical process uses high current electricity and corrosive acids: the site uses seven million litres of acid a year, and has to deal with 240 million litres of effluent.

At the heart of Agfa's safety programme is selective adherence to the "5S" regime, which stands for: sorting (to remove obstacles); setting in order (to make it easy to find items); "smooth" workflows; sweeping (or viewing cleaning as inspection); and standardisation of procedures and schedules to ensure consistency of first three goals.

"At the heart of 5S the visible message to employees is 'keep tidy'. At the heart of our programme is the message to 'keep yourself and your colleagues safe'," says Cooper. "We've seen other businesses focus on the 5S, but they seem to continuously relaunch their programmes."

The site achieved quality standard ISO 9001 in 2003, and was then asked to work towards ISO 14001 on environmental management and OHSAS 18001 on health and safety. Cooper made a virtue out of a necessity. "For ISO 9001, we had added meetings, processes and documentation to meet the standard. With 90 people, we couldn't just add more meetings, more documents and more processes.

We had to find a way of making what we did every day, every week, every month, the means of meeting the standard."

In effect, Cooper and his team integrated the three management standards while ISO Annex SL was still an idea. The electronic form was adapted to be used for environmental and, later, energy reports. Instead of multiple lengthy annual meetings to comply with the requirements in each ISO standard, the management team reviews issues relevant to all the standards in a monthly two-hour meeting.

"Issues get dealt with quickly, and don't get left to escalate," Cooper says.

With quality, environmental, energy and safety certificates under their belt, Cooper and Gregory are not complacent. "It's not about wearing a certification badge; you have to live and breathe the standards, and continually improve."

A further advantage of their approach is in relation to external audits. "We don't prepare for external audits," Cooper tells us proudly.

"We just show them what we do."

The other big success is that they are still there, and the production lines are rolling. "Since we decided to 'be the best', Agfa has closed one factory in Korea and two in Italy. If we hadn't become the best – at safety, and at everything else – that could have been us."

Accident reduction

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