

Following Lord Young's report into improving health and safety, plant engineers need to get back to basics. Brian Tinham talks to Geoff Cox, HSE's head of manufacturing

On the face of it, Lord Young of Graffham's 'Common Sense, Common Safety' report, published on 15 October, has little to offer plant engineers – certainly those working in what might be termed high hazard industrial settings. With the exception of its recommendations to set up a register of professionally qualified occupational safety consultants, and to simplify some of the Health and Safety at Work Act 1974, most of the report's punch is aimed at quashing the classic 'bonkers conkers' problems and dealing with the compensation culture, each spawned by over-zealous interpretation of existing legislation.

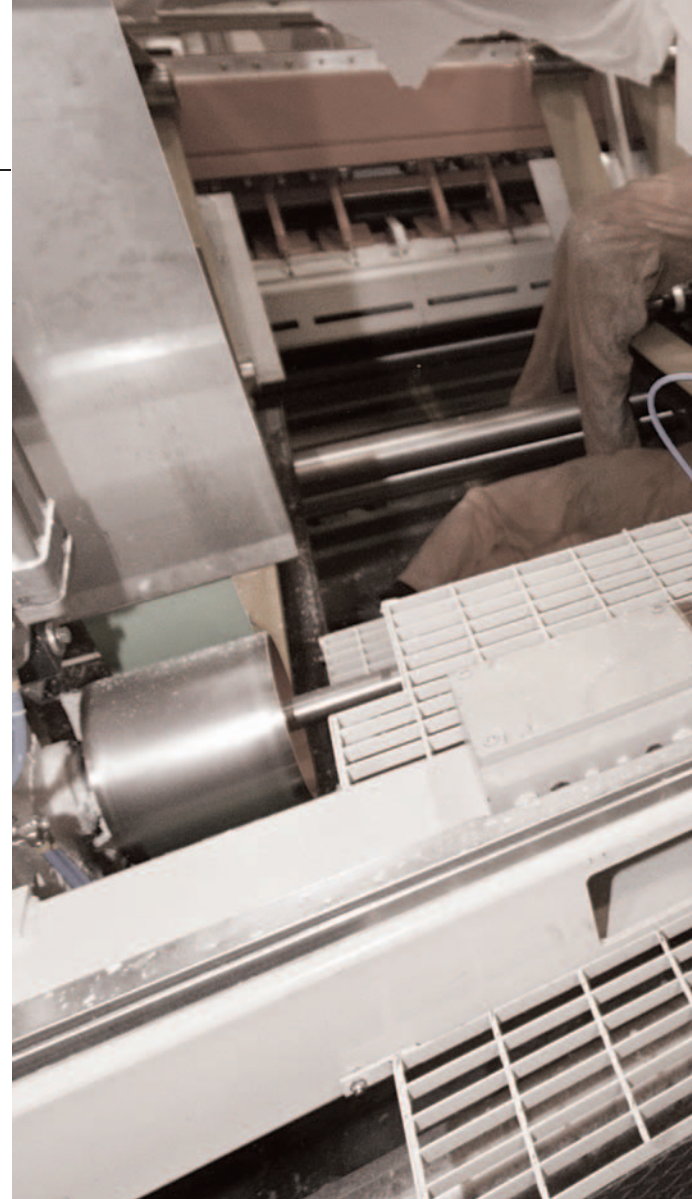
It's hardly a surprising outcome, given Lord Young's remit – which was essentially to present policies for improving the perception of health and safety, ensuring it's taken seriously and minimising

Safe maintenance

the compliance burden on small companies with low-risk workplaces. It's also consistent with British industry's generally good reputation where health and safety are concerned, driven by the existing legislative framework, and the associated standards and enforcement efforts of the Health & Safety Executive and local authorities in the UK.

Except that such an analysis, although perfectly correct, might encourage complacency. And we can't afford that. Figures released by HSE as we go to press make that point eloquently. They show, for example, that although fewer people are dying or being injured in manufacturing industry, nevertheless 22 lost their lives between April 2009 and March 2010 (compared to an average of 33 in the past five years). Also, while the number of major injuries, such as amputations or broken bones, fell by 11%, it still amounted to 3,863 – and injuries that kept workers away for three or more days were recorded at 14,678 (16% down on the previous 12 months).

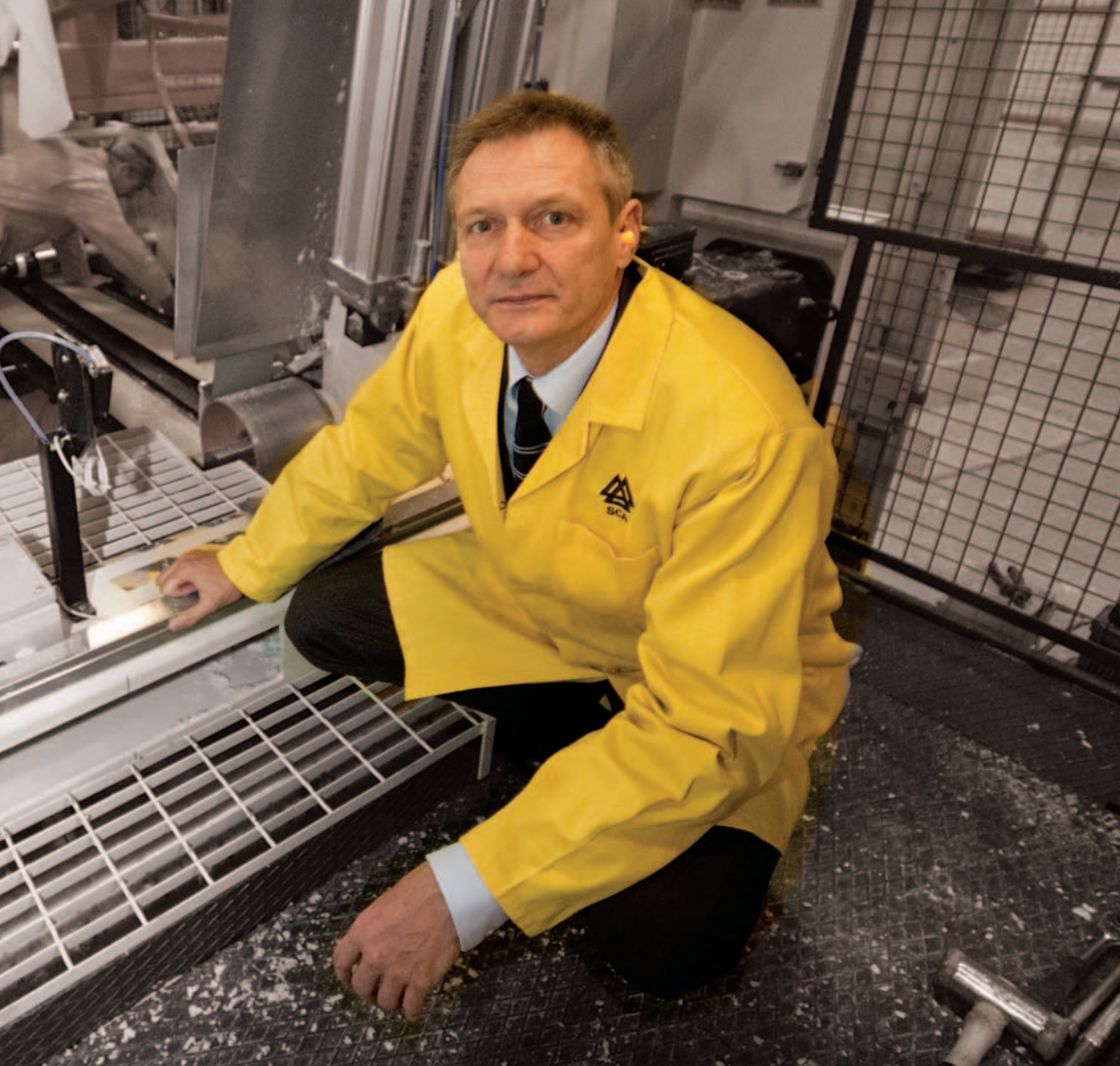
The bottom line is that 158 employees per 100,000 suffer a major injury or are killed as a result



of manufacturing, which is 50% more than the all-industry average. And in the waste and recycling sector, the figures are even worse: here, 416 employees per 100,000 suffered a major injury or were killed at work – down 10% on the previous year, but still more than four times the average across all industries.

What's more, according to EU-OSHA (the European Agency for Safety and Health at Work), which launched its Europe-wide safe maintenance campaign earlier this year, as many as 20% of those workplace accidents are connected with maintenance operations – more than half in some sectors. Indeed, across Europe, no fewer than 10–15% of all fatal accidents at work are related to maintenance and HSE puts that number at nearer 25–30% in British manufacturing industry.

As Geoff Cox, head of manufacturing for the HSE, states: "We are encouraged that there are fewer deaths and injuries in manufacturing this year, but we cannot afford to become complacent. The actual rate of death and injury, though that has fallen too, is



Kenn Elliott

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still significantly higher than that taken from across all workplaces.” And commenting on the waste and recycling sector, he adds: “The injury rate, which is stubbornly consistent with that of the previous year, paints a stark picture of how much more needs to be done.”

And for Cox, there is another worry: “As Britain moves out of recession and work starts up again, we must continue to focus on real health and safety. History shows that accident rates rise in such periods, as new workers are taken on and industry works closer to its capacity. We don’t want the latest improvements to be lost in the economic recovery.”

Stay vigilant

That is a serious danger, and plant engineers and engineering managers reading these figures need to be in no doubt that the onus is on all of them to be vigilant. As Cox points out: “The same things are still injuring and maiming people in manufacturing and process plant: machinery with guards left off; isolation switches not used; lifting operations where not enough thought has gone into planning, or equipment is poorly maintained; LEV [local equipment ventilation] hoods maladjusted or systems changed to look after too many machines... We’re not talking about new technology with weird new hazards. It’s everyday stuff and it’s astonishing that technicians and plant managers don’t seem to see

the problems, given that so little has changed.” Part of the solution, according to the HSE man, is real leadership on the part of those in management positions. However, getting health and safety right also requires worker and technician involvement, he insists – reminding us of the importance of engineering competence and the value of looking at traditional problems in alternative ways.

“Leadership is not just some high-falutin idea; what I mean is that senior staff should make it their business to check what’s happening, in terms of maintenance on the shopfloor – and, if they notice something wrong, they need to do something about it,” explains Cox. “Maintenance work is often seen simply as a disruption to normal service, but it is fundamental to the integrity of every system, and to the health and safety of workers,” he adds.

And it’s a similar story with worker involvement. “Those running machines or processes day-in, day-out, are the ones with the intimate knowledge of their plant. So, if they can harness that knowledge to make maintenance safer and more effective, that’s to everybody’s benefit. It’s not just about improving productivity; it’s also about improving health and safety,” says Cox.

Specifically for plant technicians, the way forward is to make a conscious effort to get away from the old world of poorly managed maintenance procedures, in order to reduce the risk potential of

The HSE's safe maintenance health check challenge

- Do our staff always isolate machines before doing maintenance? If you aren't sure, you need to watch what happens in practice and speak to the staff.
- Have all our maintenance staff got their own isolation padlocks and warning boards? If you don't know, speak to the staff concerned.
- Do we know if we've got asbestos in the building and where it is? Ask to see the relevant plans, drawings or reports.
- Do we use this asbestos information when we plan building maintenance jobs?
- Are we thinking about what access equipment is right for the job or just using whatever we have to hand?
- Are we thinking through proper lifting plans before lifting heavy loads? Substantial advice is contained in the 71-page LOLER Approved Code of Practice, but for basic advice see 'Planning and supervising lifts' and 'Temporary instability of heavy items'.
- Are any of us competent enough to take charge of non-standard lifting jobs?
- Do we use 'permits to work' properly when we need them? If you aren't sure, you need to watch what happens and speak to staff. For basic advice, see 'Isolation and permits to work'.
- Do we have any confined spaces? Again, for basic advice see the 'Isolation and permits to work' guide.
- Do our managers and supervisors stop maintenance work, if it isn't being done safely? This is the \$64,000 question. You need to watch what happens, speak to the staff concerned and make your expectations crystal clear.

workplace incidents. Part of that is about raising awareness of maintenance-related risks, quite simply because, without awareness of the hazard, nothing is likely to change. And that, says Cox, is precisely why he instigated the 'safe maintenance health check' questionnaire on the HSE's website (see panel), as part of HSE's 'one stop shop' contribution to the European Safe Maintenance campaign.

"I urge plant engineers and managers to take time out to look at the safe maintenance health check. There are just 10 questions, each designed to probe areas where accidents or ill health can result. They're deliberately designed to be slightly difficult to answer – to promote thought and then action.

Probing questions

"Do you, for example, know where all your confined spaces are? I'm not looking for a 'yes' or 'no' answer: I'm expecting people to say 'I'm not sure what the definition of confined space is', so that they talk to others about the issue and then talk again about what they should be doing."

Cox also points to the fact that underneath each question is a link to the relevant part of the HSE website, providing free downloads with advice, guidance and the codes of practice. "I want management to do this for themselves, but I also want them to get their maintenance departments involved. For example, get them to ask themselves: 'Do we always use the isolation lock arrangements?'. Answering these questions should be seen as a prompt to self examination and, if they

spark debate, then they have proved their worth."

If anyone feels they need a spur to do this, look no further than the new 'Learning from experience' pages, also on the HSE's site. Cox explains that this section essentially summarises HSE prosecutions involving maintenance nationally, while also providing monthly digests of enforcement notices from around the country, with one region per month.

"It's a sobering read and well worth a look," comments Cox. "Isolation failures often crop up. Occasionally the problem turns out to have been that it didn't work, but mostly the injury or death was caused because the isolation switch was sited somewhere difficult to reach."

Examples of HSE-led litigation from September include a sawmill being prosecuted twice for two incidents. In the first, a worker fell through a gap in a raised walkway that had been opened up during work on a conveyor. In the second, a worker had his head and neck crushed by a hoist mechanism that was still switched on while he was working on it.

Separately, a food manufacturer was prosecuted when a metal pillar fell on a maintenance engineer and crushed his skull during work that had not been properly planned. Meanwhile, a tile manufacturer was prosecuted after a production supervisor had his fingers and a thumb severed while attempting to unblock a waste extraction system: production workers had access to tools to remove the guards and HSE describes the isolation system as below expected standards.

This is harrowing stuff and deliberately so. July's list of prosecutions is just as shocking, with three incidents, all involving lax isolation practice, being cited. In the first, a maintenance worker was left with serious injuries after being struck by a manufacturing robot while viewing its operating cycle from within a guarded area – something that, incredibly, had become common practice.

In the second case, a night shift worker at an agricultural feed company had his arm sliced off when cleaning a rotary valve to avoid it getting choked with oat products. The court heard that the machine had not been isolated, because the isolation facilities were difficult to access.

And the third reported prosecution concerned a female employee who lost two fingers when cleaning a hopper dispensing oats to a screw conveyor at a biscuit factory. In this case, the isolator switches were on top of an unguarded platform that had to be accessed by a vertical hooped ladder.

"Reading about these prosecutions and enforcement notices should open plant managers' eyes. Managers often wonder why engineers and technicians don't use the isolation fitted before they get in and repair a machine. But the fact is, if they have to make a real effort to do so, and they're under pressure to get the plant running again, somebody, some time, is not going to bother." 