

Hold the phone!

We're living in a new age. An age of instant communication, an age where we are permanently in need of access to the lives of our friend's colleagues and celebrities but at what cost asks GGF health and safety director Phil Pinnington



Towards the end of last year I was notified of a factory fatality. The work being done appeared not to be a contributory cause but what did seem to be relevant was the distraction of a mobile phone. I have discussed this incident with many business owners and managers recently and it does bring up a wider issue.

The rules for those driving for work are already established in law yet how often do we see drivers holding the handset while driving? In the workplace one would think that control would be easy. Put a notice up banning phones. Make it a disciplinary offence: if you are spotted using a mobile in the factory or warehouse there will be consequences. But is it that simple?

I'm a firm believer in encouraging group norms. The principle isn't new it is one of the basics of a society but often businesses take the stick approach first rather than the carrot. In the case of mobile devices that can often be a huge problem. I've heard many ludicrous reasons why an employee is carrying a mobile in an area where it's banned.

The danger zone

In my career I've worked in the downstream oil industry and for years it said mobiles can cause explosions. It didn't stop customers using their phones on forecourts because the hazard was inflated but the hazard that is not, in my view, considered, is the more serious one of people

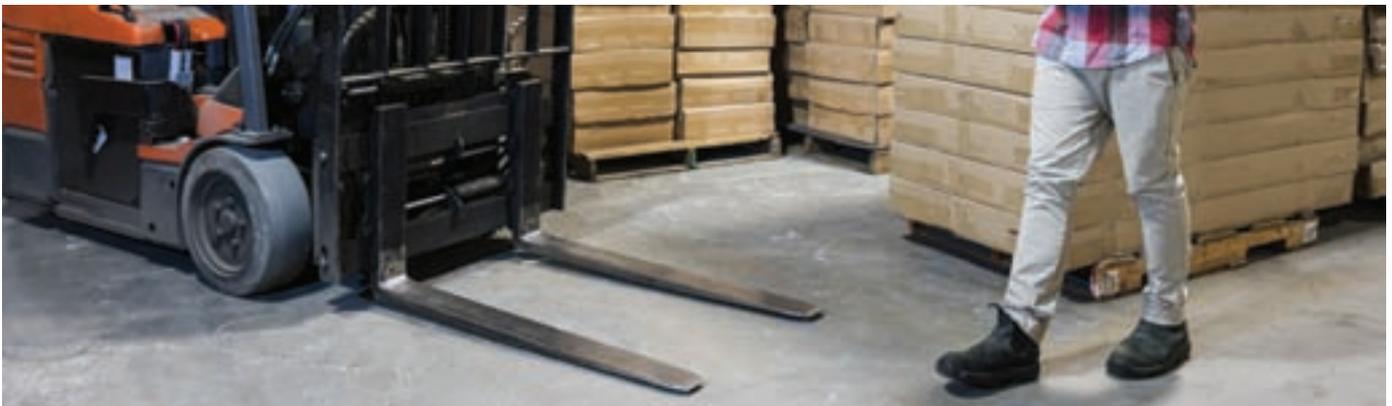
walking across a forecourt on the phone as cars are driving in and out. In the same way I believe employers need to have the discussion with their staff about the hazards of using a mobile in certain areas and situations.

Treat it like it's normal – it will be normal

So, I would urge employers to review their policy. If you issue a mobile you, I believe, should be making clear what it can be used for and where it shouldn't be used. In your factory or warehouse you should be talking to your employees using the example of the fatality I mentioned earlier as a springboard to a sensible discussion. These discussions should result in the development of group norms which in turn will form the basis of a cultural change. This doesn't negate your responsibility as the employer but what it does do is make the policing of the matter less onerous. Getting the employees committed makes it harder for an offender to go unchallenged.

Avoid the hazard, avoid the worst

I believe that by improving behavioural safety standards the risk of injuries, small or major, starts to reduce. No-one wants to have to face a next of kin to explain why their loved one was injured or killed at work. So every step, no matter how small, reduces the likelihood of being faced with having those difficult conversations. □





Andy Holland, technical and marketing manager at Rapiestar explains why poor quality fasteners could be putting window and door makers at great risk of injury

The fenestration sector and UK manufacturing as a whole has taken huge steps forward in recent decades to improve health and safety in the workplace. The religious enforcement of PPE usage, careful management and control of hazardous substances with comprehensive, audited training programmes are now the norm in the best window and door factories. Nonetheless, the cost of workplace injury in manufacturing to the UK economy was estimated to be £1.1bn in 2016/17 (HSE), and many operatives are still being put at risk of injury every day because of the screws that they are using.

Fasteners may be the smallest, lowest unit cost products on any fabrication line, but just like tools, their quality and suitability for the job can make a huge difference to how easily, efficiently and safely windows and doors can be assembled. Unfortunately, the importance of choosing the right screws is all too often overlooked because of the misguided perception that all fasteners are basically the same.

Manufacturing fasteners is a very complex process. A screw is not just an inconsequential object but an engineered product that must fulfil its function safely and reliably. There are three main factors why a fastener's design and manufacture enables safe and efficient window and door production, along with easier to deliver consistently high quality finished products.

Wobble and insertion speed

Rapiestar's screws are tested for wobble and insertion using precision instruments. Wobble gauging provides a means for determining the correct engagement of driver

bit and recess. A recess that exhibits excessive wobble characteristics will result in poor drivability, damaging the recess and accelerating driver bit wear. Poor drivability is both awkward and dangerous. It could cause a driver bit to slip with the potential for injury. We have seen horrible injuries over the past 25+ years, including screws being driven into forearms and even air-screwdrivers ripping into hands due to poor drivability.

Insertion testing checks the concentricity of a screw's shank to its recess. If a screw's recess is too far from alignment with the axis of its shank, driving tools will perform dangerously and, if using automated screw feeding equipment, this will jam. Poorly designed and manufactured screws can skid on the profile surface or cause the screwdriver bit to slip out of the fastener recess.

Variable air pressure is a common issue too, which can result in either very slow or too fast screwdriver speeds, resulting in snapping drill points or potentially overtightening screws causing stress fractures that may fail at a later date. Rapiestar can measure the speed of screwdrivers, to ensure around 1,800 RPM is maintained.

Fastener ductility and risk of breakages

Ensuring fastener ductility starts with using high-grade steel used to draw the wire from. Any impurities or an incorrect grade of steel could present weaknesses in the finished product. Rapiestar screws are produced from high-quality steels, tested and manufactured to exacting standards. Any microscopic weaknesses in the metal can cause screws to break during insertion and this could result in injury. That's why

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Page 10 the ductility of every batch of Rapiertstar screws is tested using calibrated test blocks conforming to acknowledged standards. Screws are only approved if no breakages occur and there is no sign of cracking.



Fastener dimensions

Screws need to have the correct depth of recess in the head, so the screwdriver bit fits tightly and securely. Occasionally, some manufacturing defects can also make it tricky and risky to drive the fastener as intended. To prevent these difficulties, all dimensions are checked on every batch of Rapiertstar screws, which is measured using finely calibrated test gauges. Precision is essential here, so any batches that are not up to scratch are simply rejected.



Andy Holland



Using fasteners correctly increases safety too

The way that windows and doors are manufactured often has room for improvement in respect of how the production line is set up for operatives to use their tools. It could be as simple as adapting a workstation to suit the operative or the particular assembly task or having screwdrivers accessible from an overhead position so that power cables and air lines do not get in the way.

These are the kind of areas that a Rapiertstar Fastener Health Check can highlight. This is a comprehensive audit programme built on 25+ years' experience in the supply and application of specialist fasteners for window and door manufacture. It picks up on health and safety issues as well as highlighting where incorrect fasteners are being used, advice on driver speed and torque settings and where rationalisation could reduce inventory and save money.

Ultimately, by having a 'fresh set of eyes' from a fastener perspective, many fabricators will benefit from a more efficient, safer and productive factory. Making a few subtle changes and giving more thought to the role of the fastener, which after all is a precision engineered product, is a worthwhile investment that will boost the bottom line. □

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