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| ACDM November Newsletter | |
| **HSE Injury and Ill Health Statistics Report 18/19**  Every year the Health and Safety Executive releases figures relating to ill health and injury at work. This covers all forms of ill health from musculoskeletal disorders to lung disease. Every year the construction industry is always ranked highly as one of the most dangerous and this year is no different.  In fact, the report shows a large statistical increase in the amount of injuries reported for the construction industry with roughly 2,420 workers out of every 100,00 experiencing an injury. This puts construction 2nd after agriculture, forestry and fishing. It also puts the industry above the all industries average which is currently 1,710 injuries per 100,000 workers. This highlights that there is still a need to learn from past experiences and to improve our collective attitudes towards health and safety so that we all make it home in one piece.  The estimated loss to the overall UK economy as a result of injuries and ill health in the workplace for the 17/18 period is roughly £15 Billion. This is split £8.6 Billion to individuals who have lost wages due to time off work and medical expenses, £3.4 Billion to the government and £3 Billion to employers. This shows that accidents and ill health have a very real impact on businesses and individuals on top of the physical immediate effects. Better attitudes to health and safety will lead to more money available for everyone, especially the individual.  A screenshot of a cell phone  Description automatically generated  For more information read the Health and safety at work Summary statistics for Great Britain 2019 report by the HSE –<http://www.hse.gov.uk/statistics/overall/hssh1819.pdf> | |
| **Design & Build Contracts**  The CDM 2015 Regulations set out the role of each duty holder clearly when applied to a traditionally procured project. Design and Build contracts are not so clear cut. The HSE issued a Q&A paper explaining their intentions in relation to D&B contracts and the Principal Designer role. Below is an excerpt from the document:  **Q1. Is there a requirement to appoint a PD on a D&B contract?**  Where there is more than one contractor working on any type of project, then the client must appoint in writing a PD in the pre-construction phase. It will be common for the D&B contractor to be appointed as both PD and principal contractor.  **Q2. If a D&B contractor takes over the PD role from A.N. Other, would they be responsible for ensuring the initial PD met their duties under CDM?** No. This would remain with the initially appointed PD – but some design review may be needed along with liaison with the original PD to ensure provision of design risk health and safety information.  **Q3. Can a D&B contractor meet the requirements to be appointed as both PD and PC?** Yes, irrespective of the project arrangements, the requirements for both the PD and PC role remain the same. Any individual or organisation appointed to D&B for a client must have the skills, knowledge and experience (SKE) to carry out all the functions of both the PD and PC throughout the life of the project. The D&B contractor must demonstrate to the client that they have the necessary capabilities. The client must take reasonable steps to satisfy themselves that this is the case.  **Q4. What if the D&B contractor refuses to take on the PD or PC role?**  Firstly, the client should review their selection of contractor as refusal or reluctance may indicate insufficient SKE or organisational capability for the client to be able to appoint. It may be that the buying or bringing in or additional expertise in specific areas will allow the D&B contractor to meet the requirements for appointment and allow the client to be satisfied that they have the right contractor for their project. Where the D&B does not take of the role of PD or PC, the client must appoint another party to take on those roles or take it upon themselves.  [**https://www.citb.co.uk/documents/cdm%20regs/cdm%202015%20-%20qa%207%20principal%20designer%20on%20a%20design%20and%20build%20project.pdf**](https://www.citb.co.uk/documents/cdm%20regs/cdm%202015%20-%20qa%207%20principal%20designer%20on%20a%20design%20and%20build%20project.pdf) | |
| **Worlds Largest 3D Printed Building**  The first general principle of prevention is to avoid the risk entirely. Many different methods of applying this have been developed from modular designs, that move significant amounts of working at height to ground floor factory levels, to 3D printing which removes the worker and allows a machine to carry out the work. The latter has seen very promising results in Dubai which has a huge and growing construction industry that is always looking for new and innovative ways for construction.  Dubai Municipality have recently unveiled the worlds largest 3D printed building. Just to clarify what this entails, only the walls of the building were 3D printed and the rest of the structure required more traditional methods of construction. The construction of the walls however only took 2 days with the rest of the building taking a further 4 months. This meant that only half of the normal workers were required and 60% less waste was produced as a result.  The building itself covers two stories standing 9.5 meters tall and covers a total area of 650 meters. The design incorporates lots of curves and unique shapes so that the researchers developing the technology could properly test what their system was capable of.  This technology is promising as it shows potential to accelerate the construction of smaller scale buildings whilst simultaneously lowering health and safety risks and lowering waste.  A building in the background  Description automatically generated  Original story - <https://www.thenational.ae/uae/government/dubai-unveils-world-s-largest-3d-printed-two-storey-building-1.927590> | |
| **Task specific COSHH guidance for welding, cutting and allied jobs**  As we have previously talked about in the June edition of our newsletter steel welding fumes have been linked to lung cancer. Following this the HSE released initial recommendations for employers to reduce exposures for employees.    If you want to catch up on this development you can read the HSE’s article here - <http://www.hse.gov.uk/safetybulletins/mild-steel-welding-fume.htm>  A picture containing person, outdoor  Description automatically generatedNews of the scientific study which showed the link broke in February, so some time has passed now and the HSE has further developed these initial recommendations. Now the HSE has released task specific guidance for specific COSHH jobs that will reduce the exposure to mild steel fumes and other related fumes. All employers who have welding related tasks will need to ensure all staff are familiar with the new safe working practices to comply with health and safety laws.  These can be found on the HSE website here - <http://www.hse.gov.uk/welding/guidance/index.htm> | |
| **Under Qualified Electricians Pose Fire Risk**  The Electrical Contractors Association (ECA) has warned of the risk that under qualified electricians pose in the light of the recent Grenfell inquiry. The ECA has cautioned that “several Inquiries” have concluded that installer competency is fundamental to public safety, particularly in the case of residential tower blocks, care homes and hospitals.  What makes matters worse is contractors claiming to be competent had, in some cases, only a matter of weeks of training. This has led the ECA to set out a series of recommendations regarding the competency of installers in a bid to raise the bar on expectations. These are as follows:   * All enterprises should have accredited third-party certification * All individuals must have Level 2 or 3 Of equal-regulated and competence-based qualifications. ECA strongly advocates technical apprenticeships for new entrants * The electrotechnical sector should use the Electrotechnical Certification card Scheme (ECS) * CPD should ensure workers are up to date with the latest regulations and other developments * All installers should have core, relevant knowledge of fire safety in buildings, with standardised and mandatory training   Full story here - <http://www.constructionmanagermagazine.com/news/eca-underqualified-workers-present-fire-risk/> | |
| **Recycled Plastic Makes Tower 1600 Tonnes Lighter**  A large long train on a steel track  Description automatically generatedA total of 1,613 tonnes of concrete and 136 tonnes in CO2 emissions have been saved by using recycled plastic in the construction of a 13-storey residential tower in Germany.  Steel-reinforced plastic air bubbles were used to replace up to 35% of the reinforced concrete required in the slabs. Void formers can go wherever concrete is not required for the slab’s shear load bearing ability. In this particular case roughly 60% of the slabs area could be filled with void formers without risking structural weakness. This process also allowed for thinner slabs.  Shallower floors allowed the design team to fall within a maximum height restriction of 53m in the area. Height restrictions are a problem in many areas around the world. With developers looking to maximise profits, every little helps, in order to fit as many floors in the restricted height imposed by local councils.  Removing concrete also allows for lighter buildings which saves on structural steel required for the building frame meaning cost savings. However, the installations of these void formers can create a logistical issue on cramped sites as these formers take up a large amount of space so deliveries may have to be carefully scheduled around the construction plan.  Full story here - <http://www.constructionmanagermagazine.com/news/recycled-plastic-makes-tower-1600-tonnes-lighter/> | |
| **Weptos Wave Generator**  In every month’s newsletter we like to talk briefly about an innovative green technology. This month the Wave energy Power Take Off System (Weptos) wave generator has caught our eye as a clever way to convert the immense amount of energy in our oceans into electricity to be used in our homes.  A boat in the water  Description automatically generated  The concept of the system is a series of buoyant sections which move up when a wave passes and moves down when the wave passes. This turns a common axel shared between all sections on one side. This axel is then attached to a generator which creates electricity. The V-layout of the system allows for it to change to adapt sea conditions to maximise outputs whilst minimising danger to the system.  Weptos Website - <http://www.weptos.com/>  YouTube channel for demonstration - <https://www.youtube.com/user/Weptos> | |
| **AI Rail Inspection**  A picture containing indoor, floor  Description automatically generated  a new system has been developed after two and a half years in a Knowledge Transfer Partnership between Omnicom, Balfour Beatty and the University of York, supported by Innovate UK. The system works by a camera attached to the front of the train which moves along rail tracks in need of inspection. It captures high-definition images of the rail track to generate data which is then analysed to highlight inaccuracies and faults on the tracks.  This system could save the rail industry up to £10m every year in track inspections and remove the dangers associated with operatives being on the track. The technology can not only identify faults but also assist in identifying where faults may occur which will allow for pre-emptive fixes and allow the line to remain open when perhaps it would be closed due to damage.  Full Story - <http://www.constructionmanagermagazine.com/news/balfour-beatty-develops-ai-driven-cameras-rail-ins/> | |
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