

# CEMENT

## DISAB CASE STUDY: H & T SERVICES

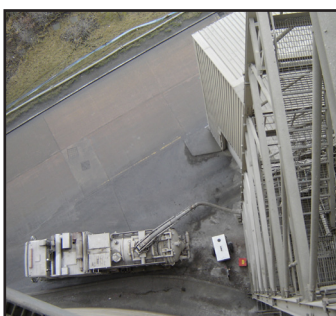
“Although we do a huge amount of ‘vacuumation’, as we like to call it, of spillages within cement plants with our DISABs, what we also do - as opposed to other contractors - is that we then use the blowing facility on our DISAB units to blow material back into the process etc. This facility reduces the need for tipping on-site and prevents any dust escaping into the atmosphere- allowing the materials to be re-used.”

Based near Rugby, a major part of the business undertaken by H&T Labour and Vacuumation Services is with some of the biggest names in the cement industry, and H&T plays a significant role when it comes to these companies setting, improving and achieving very high standards of environmental performance.

### THE H&T DISAB VACLOADER FLEET

H&T operates five DISAB Centurion LN200 8-1812 machines, along with a DISAB-Tella SDW 3.5 tonne ‘Big-Bag’ machine, identical to the BagVACs deployed by the UK subsidiary of the DISAB Group, Gotland Ltd. According to Dave Blundell, Operations Manager at H&T: *“The DISABs are unique – they provide higher levels of performance and a greater range of capabilities compared to any other similar truck-mounted machine. There’s nothing quite like a DISAB.”*

*“We are also big users of the DISA FLOW couplings system. These are light-weight and easy to handle by one man. We like the idea of the smooth inner surface which assists with the speed of material movement and reduces the possibility of build-up. Another advantage of this coupling system is that we only have to purchase male couplings which are joined flange-to-flange via a clamp ring.”*



## UNIQUE CAPABILITIES

*"To give you an idea of what that means, we recently carried out a job major cement plant in Rugby that involved their large storage silo that's used to hold clinker, the material that's then ground with gypsum to form cement. This silo is 50 metres in diameter and around 45 metres high to the top of the side wall, and that's where we had to get the suction hose from the DISAB on the ground."*

*"The problem was that the rubber seal around the top of the silo wall where the roof sat was filled with dust. The seal itself was failing and allowing dust to escape into the atmosphere, which contravenes dust regulations and creates a problem for neighbouring areas. So H&T was asked to find an environmentally sound solution for clearing the dust before the repair works could take place."*

*"We set up a vacuum line vertically up the side of a stair well and then around the perimeter of the silo, and then accessed the inside of the roof so that we could vacuum out all the dust from the seal. This enabled the maintenance contractor to follow up behind us and repair the seal. In essence that was the job, but just think about the logistics for a moment. We're working 45 metres up, and then as much as 80 metres from the point where the hose is now laid out horizontally around the roof walkway. The DISAB operators were harnessed up so that they could access the void between roof and the seal safely, and then suck out all the dust that was overloading up the seal."*

*"That means the vacuum suction power has to be effective 150+ feet straight up, plus a further 240+ feet around the tank walkway. That needs a massive amount of deliverable suction power, and that's where the DISAB comes into its own."*

## TYPICAL CEMENT SPILLAGE TASKS

*"For cement manufacturers the more typical jobs are sucking up spillages, and for one cement plant alone our DISABs are sucking up around 2,000 tonnes a year of spilled product, all of which can be recycled. That adds up to a lot of money, and that in turn justifies the use of the DISAB around a cement works for removal of valuable material and good housekeeping."*

*"One of the DISAB's other capabilities is that having sucked it all up, we can then blow all that spilled cementitious material back into the process. We also recycle materials such as sand, coal and clay back in to the process so that it can be re-used."*

## OTHER KINDS OF WASTE REMOVAL

*"Besides the cement works, H&T do some specialist waste removal tasks involving hazardous materials, typically needing to be removed from vessels into bags for off-site treatment. Examples are where we add water to coal dust to remove the risk of explosion, and again, the DISAB's ability to vacuum large quantities of material rapidly is key. Water is injected into the vacuum line carrying the dust creating a slurry which is then safe to handle- this means what was a big problem becomes one that is resolved very efficiently and cost-effectively."*

*"We also do a lot of EfW type of work in cement plants, cleaning up shredded fuel. We'll use a DISAB to vacuum it up, tip it out into skips that are taken away to reprocess the fuel. With more and more coal-fired plant being turned over to using shredded plastic and paper materials this is an expanding area of work. The problem is that the material is often kept in sealed units with no access for traditional plant such as skidsteers or telehandlers. The only way to exact material after a plant failure or during a shutdown is to vacuum it out. Confined space-trained operatives enter the stores and use suction hose to extract all the shredded materials safely and quickly."*

*"We do lots of similar waste to energy-related work, for example at a plant in Kent where we clean out ash and build up from the combustion chambers and Hi-Tip into bags for onward disposal. The Hi Tip feature of the DISABs gives us so much more flexibility in terms of discharging materials allowing us to fill big bags, IBCs or skips."*



## CAPABILITIES AT UNUSUAL DISTANCES

*"The length of pipe for working with cements and powders is typically up to 50-60 metres, assuming we can set up and park the DISAB as required. We can work up with to 120 metres of hose at maximum power. We have removed 20 tonnes of chalk powder from a duct 110 metres above ground and have lifted sludge from a pipe system 45 metres below ground. That's amazing suction power, but it's all about the operators' experience and getting the right air-to-material mix to ensure the most efficient vacuum transfer."*

*"So in other words, when it comes to vacuumation with a DISAB, there's a lot more to it than just parking up and sticking a hose into something!"*