Drones to Monitor Compliance in Construction?

In September 2018 there was an article in OHS Magazine pondering whether drones would be used to inspect constructions sites.

When you hear the word drone, you might think of those high-tech military devices that fly unmanned through the sky to spy on and attack political enemies. What you may not know, is that smaller, unarmed drones (also known as UAV's – Unmanned Aerial Vehicles) are already in use by Canadian police departments, including the OPP, RCMP and Halton Regional Police.

According to the National Institute of Occupational Safety and Health (NIOSH), "the emerging uses of UAVs in the construction industry range from aiding with construction project planning by aerial mapping of a construction site to extending the actual building of structures." Drones are now being used in various ways on construction sites to prevent injuries and fatalities.

"Drones can also be a cost-effective and efficient way to perform site inspections," says LHSFNA Management Co-Chairman Noel C. Borck. "Drone systems can be used to inspect sites for hazardous conditions or unstable structures without placing workers at risk."

In addition to remote safety inspections, drones are being used for many other tasks in the construction industry:

Monitor the progress of construction work and jobsite logistics without disrupting ongoing work

- Access and determine the integrity of structures
- Identify problems before they develop through the use of maintenance assessments
- Facilitate communication and surveillance
- Assist search and rescue operations
- Document jobsite conditions from beginning to end
- Increase the scope and frequency of inspections

In the case of highway work zones, drones can inspect the entire expanse of road or an adjacent structure when fast-moving traffic presents a serious hazard for workers.

In April 2019 Safetyline we invited you to read the Ministry of Labour executive summary. In Section 8, page 47 of the full report the project advisory committee suggestions the use of drones to monitor worker/ company compliance. It states "There is no reason drone technology cannot be used for surveillance and to ensure that workers are wearing appropriate fall arrest in high risk industries such as roofing. This can give 'real time' information to the inspectorate and target high risk areas. The very knowledge to employers and workers that there is an eye in the sky watching may also change behavior." That should have caught your interest. Could you be using this technology too?

Test Yourself

Where in the industrial regulations does it require employers to protect workers from vehicular traffic?

First Correct answer wins a prize – answer to be published on the web site.

Send your answer by email to: newsletter@safetyscope.net

This Months Tip: It's Hot

Temperatures have started to increase creating dangerous work environments for workers both in and outdoors. Employers need to protect their employees from the ill and costly effects of heat stress related injuries that include:

- Heat Stress Training
- Proper hydration
- Ability to cool the workers with cooling apparel

Think about it.

Safetyscope Upcoming courses

Working at Heights
July 12, 26
Confined Space Awareness
July 15-16
Competent Supervisor
July 18
Standard First Aid
Aug 7-8

Contact Us with your training needs training@safetyscope.net

The Safety Line June 2019

Drone Safety Service

Safetyscope is partnering with David Cormier of Workplace Safety Consulting to offer Drone Safety services to inspect sites for hazardous conditions or unstable structures without placing workers at risk."

Safetyscope will also be hosting training through ING Robotic Aviation, recognized by Transport Canada as the Gold Standard of Drone/ Remotely Piloted Aircraft System (RPAS) Training.

For more information on these training courses click here.

In the Courts

June 28 J.N.D. Erectors Ltd. Fined $200,000 - Worker Killed by Falling Concrete

A worker was killed when a concrete panel fell from a flatbed truck while it was being transferred with a crane and hoist.

The worker unhooked the chains connecting two panels The first panel was hoisted away by crane. While preparing the second panel, it shifted and toppled onto the worker. The panel weighed over 6,000 lbs. A MoL structural engineer stated in a report that the toppling would have been avoided if the panel had been secured at all times.

The company was found guilty of failing as an employer to ensure that the measures and procedures prescribed by S 38 of Reg. 213/91 were carried out. The regulation provides that "material or equipment at a project shall be stored and moved in a manner that does not endanger a worker."

June 25 Lakeshore Motors Ltd., Fined $45,000 - Two Workers Injured by Hoist

Two workers were injured when a hoist holding up a vehicle failed and the vehicle fell to the ground. A MoL engineer concluded that the restraint devices had not functioned properly for an extended period of time. A privately retained hoist inspector concluded that the hoists showed years of wear and identified a number of items that needed to be addressed in each hoist.

The investigation revealed no daily inspections had taken place on any of the hoists. Due to lack of training the hoist that failed had not been inspected prior to use. Furthermore, the JHSC had not performed any monthly inspections of the workplace during that time.

The company failed to provide information, instruction and supervision on the safe operation and inspection of automotive hoists contrary to S 25(2)(a) of the OHSA.

June 21,K-G Spray-Pak Inc Fined $60,000 Temporary Worker Injured by Lift Truck

A temporary worker was using a manual pump. While walking backwards, pulling the full pump behind, the worker was struck by a moving lift truck which was being operated in reverse. The worker suffered injuries as a result. A MoL investigation into the incident determined that there were no barriers, warning signs or other safeguards in that area of the plant, to protect workers from vehicular traffic.

K-G Spray Pak also failed to ensure that S 20 of Reg 851 prescribes that "barriers, warning signs or other safeguards for the protection of all workers in an area shall be used where vehicle or pedestrian traffic may endanger the safety of any worker" were complied with. This is an offence pursuant to S 66(1) of the act.

Click for more Information

The Safety Line June 2019

June 20 Accuristix Inc Fined $125,000 After Worker Killed

A worker was fatally injured when struck by a truck leaving the loading dock of the warehouse facility.

A MOL investigation determined that the employer failed to ensure that barriers, warning signs or other safeguards were used where vehicle traffic endangered the safety of a worker. This contravened section 25(1)(c) of the OHSA as prescribed by S 20 of Regulation 851.

June 20, 2019 Continuous Colour Coat Limited Fined $70,000 Guarding Injury

While inspecting the metering roll, the worker's hand was drawn between the roll and a paint tray, causing injuries. A MoL investigation determined that a guard was not in place at the time the worker was inujred.

The employer failed to ensure that the exposed pinch point hazard on the metering roll was equipped with a proper guard to prevent access to the in-running nip hazard. This contravened section 25(1)(c) of the OHSA as prescribed by S 25 of Reg 851.

June 20, 2019 Waynco Limited Fined $110,000 After Worker Killed – Failure to Lockout

On December 8, 2017, a worker was using a Pioneer crusher to break down pieces of aggregate while another worker operated a loader. Occasionally, aggregate material has to be removed manually from the grizzly deck to prevent the machine from jamming. A MoL investigation determined that the crusher had an unguarded pinch point.

Waynco Limited failed as an employer to ensure that before any work was done on a machine that it was stopped, all hydraulic, pneumatic or gravity stored energy was dissipated or contained, and that energy isolating devices were engaged, locked and tagged. This was contrary to S 185(7) of Reg. 854/90.

June 12, 2019 O'Connor Electric Ltd fined $55,000 and Crew Supervisor, Mike Walker, Fined of $5,000 After Workers Suffered Burns

A six-person crew, including supervisor Mike Walker, were working to upgrade the electrical services. While workers working an arc flash occurred, which meant the system was in fact energized.

The employer failed to establish and implement written measures and procedures as prescribed in S 190(2)(a) of Reg. 213/91.S 190(2)(a) of the regulation provides that an employer shall establish and implement written measures and procedures to ensure that workers are adequately protected from electrical shock and burn.

Supervisor Mike Walker failed as a supervisor to ensure workers had followed S 190(4) which requires "the power supply to the electrical equipment, installation or conductor shall be disconnected, locked out of service and tagged ... before the work begins, and kept disconnected, locked out of service and tagged while the work continues."

Click for more Information

Ministry of Labour Communiqué 2019-01 on Knots in Lifelines

The Ministry of Labour is requesting working at heights training providers to modify their training material with regards to the practice of placing a knot past the fall arrestor in a lifeline as a back-up in case the fall arrester would fail or come loose.

Placing a knot in the load bearing section of a lifeline has been well known and recognized as an incorrect practice and is not at issue here. Such knots could potentially reduce the strength of the lifeline by as much as 40 to 50 percent.

The issue this communiqué is highlighting is the practice of placing a knot beyond the fall arrester in what is considered to be a non-load-bearing part of the rope specifically in a travel restraint system. Many have put forward the rationale for this practice was that the loose knot is only meant to prevent the fall arrester from being dislodged inadvertently and moving beyond the point it was set to prevent the worker from reaching the fall hazard.

This rationale does not withstand scrutiny and is unacceptable for the following reasons:

1. Reg. 213/91 it is subsection 26.9(5) prohibits the use of knots except at the connection point to a fixed support . A horizontal or vertical lifeline shall be kept free from splices or knots, except knots used to connect it to a fixed support

2. The non-load bearing section of a lifeline in one utilisation could become the load bearing section of the lifeline in another utilisation (as the purpose of the knot is allow long lifelines to be used on shorter spans as well). Having had the knot in the lifeline (even on the non-load bearing section) could alter the lifeline diminishing its load bearing capacity, namely when such lifeline is used again with the previous knot placement being on the load bearing side of it.

3. Manufacturers' instructions for lifelines prohibit the use of knots – except for knots made by the manufacturers at one termination of the lifeline.

4. Lifelines manufactured in compliance with CSA Z259.2.5-12 must be free of splices and knots except at the terminations – in which case a knot may be made by the manufacturer.

Why knots must not be placed next to a fall arrester in a travel restraint system:

- A horizontal or vertical lifeline shall be kept free from splices or knots, except knots used to connect it to a fixed support. (O. Reg. 213/91, ss. 26.9 (5)). o Such knots are only allowed by the regulation when accepted by manufacturers' operating manuals (O. Reg. 213/91 subsection 93(3)

- The applicable standard CSA Z 259.2.5-12 referenced in subsection 26.1(3) of O. Reg. 213/91 for fall arresters and vertical lifelines in its article 4.5 (h) states the following about lifelines: (h) they shall be free of splices and knots, except at the terminations. Additionally, about the lifeline termination, CSA Z259.2.5-12, article 4.5(d) states a lifeline must have a manufactured termination that prevents the fall arrester from passing through that termination (e.g. a factory sealed back splice).

- Manufacturers do not test fall arresters to have fall arrest forces applied to the device while resting against a knot. It is unknown how the fall arrester would handle these forces. To date, no manufacturer has accepted this practice.

- To date no lifeline manufacturer has recommended or approved of placing knots in a lifeline.

Georgian College Courses being offered at Safetyscope

MED SDV-BS - Small Domestic Vessel Basic safety (MED A3)

The MED SDV-BS course is for crew members of small non-pleasure vessels less than 150 gross tons, including fishing vessels operating not more that 25 miles offshore and passenger vessels, not including ferries, with unberthed accommodations, only on Near Coastal 2 and sheltered waters.

It is designed top provide safety training to new crewmembers in the marine industry that have no previous marine safety training. No prerequisites are required for this course. It is an eight hour classroom course with a small practical component: Donning immersion suit, lifejackets and PFD.

There is a Transport Canada accredited exam consisting of 25 multiple-choice questions. Participant must attain a minimum of 70% to receive the TCMSS Certificate. 100% attendance and participant required

The other course available is Small vehicle vessel operators proficiency (SVOP)

Go online to Georgian College get more information on the course or contact carol.record@georgiancollage.ca or marinetraining.ca

Safetyscope Continuing to Maintaining Registration as an OWWCO Training Provider

These courses meet the criteria in subsection 29(4) of O.Reg. 128, Certification of Drinking Water System Operators and Water Quality Analysts. On Completion of training all participants will receive a certificate of completion with corresponding CEU Value.

1.	Working at Heights	.7 CEU
2.	WHMIS 2015	.4 CEU
3.	TDG	.4 CEU
4.	Working in Confined Spaces Rescue Level	2.8 CEU
5.	Confined Spaces Attendant Non Entry	1.3 CEU
6.	Confined Spaces Advanced Awareness	.7 CEU
7.	Confined Spaces Attendant Refresher	.7 CEU
8.	Confined Spaces Rescue Refresher	.7 CEU
9.	Standard First Aid	1.4 CEU
10.	Self Contained Breathing Apparatus	.4 CEU
11.	Spill Response	.7 CEU
12.	Trenching Hazards	.4 CEU

Safetyscope is a TSSA Approved Training Provider

Safetyscope is an approved training provider for CH-02 construction heaters under 4000,000 btu and tiger torch under the TSSA Authorization Number 000287944.

Safetyscope is an approved provider for Corrections Canada

Safetyscope has a 4 year standing offer contract to teach 12 one week courses for inmates at various prisons in Ontario.

The one week course content will include the Workers Asbestos Type 3 Course (2 day), Awareness to Lead and Mold, Awareness to environmental legislation, Confined space awareness, Respirator training (including care, use, and maintenance and fitting of respirators) and to complete the week, a sessions to preparing student to write the MTCU asbestos worker 253W exam.