

Study Projects Marked Increase in Use of Robots in Manufacturing



The idea of robots in a workplace may seem futuristic but in some industries, especially manufacturing, robots are fairly common. And according to a recent study, the use of robots may be dramatically increasing.

Why should safety professionals care about this trend? Because although robots are very useful, they also pose safety hazards to the human workers who work alongside of them. (Learn about the requirements in the OHS laws for industrial robots.)

Example: A worker started an assembly line that had a 'robot cell' that is, a guarded area containing a robot that does specific work. The conveyor belt in the robot cell malfunctioned. When the worker entered the cell to fix the problem, the robot automatically restarted, striking him in the arm and breaking it. The MOL concluded that the worker was supposed to put the robot in manual mode before entering the cell. The company pleaded guilty to failing to ensure that the robot cell controller key couldn't be removed from the switch when the robot was in automatic mode. The court fined it \$100,000 [*Linamar Holdings Inc.*, Govt. News Release, March 24, 2010].

The Boston Consulting Group (BCG) did a study, which projects that investment in industrial robots will accelerate markedly over the next decade' from annual growth that now averages 2-3% to around 10%.

As a result, productivity will increase while the total cost of manufacturing labor in 2025 could be 16% lower, on average, in the world's 25 largest goods-exporting nations than they would be otherwise. For example, the study estimates that robots will cut labour costs by 24% in Canada

Although industrial robots have been used in factories for decades, robots currently perform only around 10% of manufacturing tasks, on average. By 2025, BCG estimates that the portion of tasks performed by robots will near 25% for all manufacturing industries worldwide.

There are several reasons for this trend. One is the declining cost of industrial robots. For example, the cost of an advanced robotic spot welder has dropped 27%. At the same time, the performance of robotics systems is likely to

continue improving by around 5% each year. Thus, robots are cheaper, smarter and a lot more useful in a wider range of applications.

The good news for safety professionals is that some of these improvements are in the area of safety. For example, robots are now being designed so that no safety barricades or equipment are needed. These robots can be operated safely near and even with human workers.