

Sent: Thursday, September 30, 2021 8:33:28 AM

Good Morning,

The Occupational Safety and Health Administration (OSHA), in collaboration with the National Institute for Occupational Safety and Health (NIOSH) and Association for Advancing Automation (A3) through an existing Alliance, developed the updated Technical Manual, Section IV, Chapter 4, Industrial Robot Systems and Industrial Robot System Safety to provide technical information to Compliance Safety and Health Officers and others, who may be performing inspections at facilities with robot systems.

Robots are appearing in an increasing number of workplaces and in industries that have not historically used robot systems. It is estimated that as of the end of 2018, there were more than 2 million robots in workplaces worldwide, with more than 40,000 installed in 2018 in the United States alone, and an anticipated growth of 12 percent per year through 2022 (International Federation of Robotics). This chapter is intended as a guide to robot systems found in industrial applications and covers the following areas:

- A description of typical industrial robot systems including newer systems and technology
- Hazards associated with robot systems
- Safety considerations for employers and workers
- Risk assessment and risk reduction methods

A summary of applicable OSHA and consensus industry standard requirements for design, operation and maintenance of robotic systems

Please share this information with your members and stakeholders, as appropriate.

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[Association for Advancing Automation \(A3\) and National Institute for Occupational Safety and Health \(NIOSH\) | Occupational Safety and Health Administration \(osha.gov\)](#)

[OSHA Technical Manual \(OTM\) - Section IV: Chapter 4 | Occupational Safety and Health Administration](#)