



MNOSHA Instruction **STD 1-12.9A**

April 13, 2017

**Reissued in accessible format:** January 26, 2022

## **SUBJECT: Guarding Belt Conveyors**

### **PURPOSE:**

To clarify requirements for guarding of belt conveyors.

### **SCOPE:**

This instruction applies MNOSHA-wide.

### **REFERENCES:**

1. **ANSI B20.1-1957** "Safety Standard for Conveyors and Related Equipment" was the ANSI standard in effect at the time the 1910 Standards were promulgated.
2. **ANSI B20.1-1976** was an extensive revision from the 1957 code. Since that time there have been several revisions, 1987, 1990, 1993, an Addenda in 1992, 2003, 2009, 2012, and 2015.
3. **1910.212(a)(1)** requires one or more methods of machine guarding to protect the operator and other employees in the machine area from hazards created by in-going nip points and rotating parts.
4. **1910.219** requires guarding of the power transmission apparatus which includes components of the drive motor, reducer, chains and sprockets, belts and pulleys, etc. but excludes the driving pulley on which the conveyor belt runs.
5. **1910.261(c)(15)** applies only to conveyors used in pulp, paper, and paperboard mills. This section requires the guarding of turning drums, and in-running nips between chains and sprockets. It also requires an emergency stop cable extending the length of the conveyor so it may be stopped from any location along the line, or conveniently located stop buttons within 10 feet of each work station in accordance with ANSI B20.1- 1957.

6. **1910.147** requires Lockout/Tagout procedures and training for employees servicing or doing maintenance work on machinery.
7. **1926.555** applies to conveyors used in construction. It does not specifically require guarding of nip points but it does contain requirements for emergency stop switches and audible warning signals and does require compliance with ANSI B20.1-1957.
8. **1910.36** requires a clearance of at least 6' 8" for exit routes.
9. Other references to ANSI B20.1-1957 are contained in 1910.218 (Forging Machines), 1910.265 (Sawmills), and 1910.266 (Pulpwood Logging).

## **CANCELLATION:**

This instruction supersedes MNOSHA Instruction STD 1-12.9, "Guarding Belt Conveyors", dated 11/21/11.

## **ACTION:**

- A. For belt conveyors in paper or pulp mills, section 1910.261(c)(15) applies and shall be cited as appropriate.
- B. In construction, 1926.555 applies, as do the applicable portions of ANSI B20.1-1957 referenced in 1926.555(a)(8).
- C. For other applications in General Industry, employees must be protected against the hazards of in-going nip points and rotating parts on conveyors. If a hazard is found to exist, and there is employee exposure, a citation shall be issued under the following guidelines:
  1. Power transmission equipment on conveyor belts (e.g., belts/pulleys, chains and sprockets, etc.) is to be guarded in accordance with the requirements of 1910.219, or the appropriate section of 1910.219 shall be cited.
  2. In-going nip points, shear points, or rotating parts are to be guarded. If they are not guarded, 1910.212(a)(1) shall be cited. It is allowable to provide guarding by location, 8' or more above the floor.
  3. When employees are required to remove or bypass a guard or other safety device during servicing or maintenance of a conveyor, a lockout/tagout program with formalized procedures and training must be in place. If such a program is not in place, 1910.147 shall be cited in accordance with STD 1-7.3.

**NOTE:** ANSI B20.1 2015 states that conveyors can be lubricated during operation only if it is impractical to shut them down for lubrication, and only if trained and qualified personnel who are aware of hazards of the conveyor in motion are allowed to lubricate a conveyor that is operating.

4. When conveyors are installed above exit passageways, aisles, or corridors, there should be a clearance of at least 6' 8". If this clearance is not provided, 1910.36(g)(1) shall be cited.

D. When requirements in ANSI B20.1 2015 contain a "shall" provision, MN Stat. 182.653 subd.2 can be cited, provided all criteria for a General Duty Clause citation are met. For example, in writing such a violation, use the General Duty SAVE followed by an AVD such as:

"Remotely and automatically controlled conveyors were not furnished with emergency stop buttons, pull cords, limit switches, or similar emergency stop devices."

or

"Spill guards, pan guards, or equivalent means were not provided where material may fall off the conveyor and endanger personnel."

---

James Krueger, Director MNOSHA Compliance  
For the MNOSHA Management Team

Distribution: OSHA Compliance and WSC Director

NOTICE: Minnesota OSHA Directives are used exclusively by MNOSHA personnel to assist in the administration of the OSHA program and in the proper interpretation and application of occupational safety and health statutes, regulations, and standards. They are not legally binding declarations and they are subject to revision or deletion at any time without notice.