STANDARDS UPDATE NOTICE (SUN)
ISSUED: October 7, 2019

STANDARD INFORMATION

Standard Number: ASME B20.1
Standard Name: Safety Standard for Conveyors and Related Equipment
Standard Edition and Issue Date: 2018 Edition Dated June 22, 2018
Date of Revision: June 22, 2018
Date of Previous Revision of Standard: 2015 Edition Issued November 30, 2015

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 22, 2020**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

- New provisions for tow conveyors, specifically stipulating warnings for when carts start automatically, and providing the means to allow the operator to disengage the tow pin from the conveyor pusher without being in front of the cart.
- New guidelines for mobile hopper railcar/hopper bottom truck unloader conveyor
- New guidelines for electrified monorail conveyors used for assembly/inspection/testing processes

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
5	Info	**General Safety Standards**
5.11		**Electrical Code** All electrical installations and wiring shall conform to the National Electrical Code (Article 670 and other applicable articles) <u>and NFPA 79 Electrical Standard for Industrial Machines</u> as published by the National Fire Protection Association and as approved by the American National Standards Institute.
5.11.2		**Control Station** (a) Control stations should be so arranged and located so that the operation of the affected equipment is visible from them. Control stations shall be clearly marked or labeled to indicate the function controlled. (b) A conveyor <u>that is not completely visible from the control station, is automatically controlled, or must be controlled from a remote location</u> ~~that would cause injury when started~~ shall not be started until personnel in the area are alerted by a signal or designated person that the conveyor is about to start. <u>The locations on the conveyor where the design, function, and operation of the conveyor as determined by a risk assessment to not present a hazard to personnel, a signal is not required at those locations.</u> (1) ~~When a conveyor that would cause injury once started is automatically controlled or must be controlled from a remote location~~, An audible device or devices shall be provided that can be clearly heard at all hazardous points along the conveyor where personnel may be present. The audible warning shall be actuated by the controller device starting the conveyor and continue for a required period of time before the conveyor starts. A flashing light or similar visual warning may be used in conjunction with, or in place of, the audible device if a visual warning is more effective. (2) Where system function would be seriously hindered or adversely affected by the required time delay, or where the intent of the warning may be misinterpreted (i.e., a work area with many different conveyors and allied devices), a clear, concise, and legible warning sign shall be provided. The warning sign shall indicate that conveyors and allied equipment may be started at any time, danger exists, and personnel must keep clear. These warning signs shall be provided along the conveyor at areas not guarded by position or location.

CLAUSE	VERDICT	COMMENT
		(c) ~~Remotely and automatically controlled conveyors and conveyors where operator stations are not manned or are beyond voice or visual contact from drive areas, loading areas, transfer points, and other potentially hazardous locations on the conveyor path not guarded by location, position, or guards shall be furnished with emergency stop buttons, pull cords, limit switches, or similar emergency stop devices.~~ Stop or Emergency Stop Pushbuttons are to be located at each operator control station. Emergency Stop devices shall be furnished in drive areas, loading areas, transfer points, and other potentially hazardous locations on remotely and automatically controlled conveyors where the operator stations are not manned or are beyond the voice or visual contact from the control station. (1) All such emergency stop devices shall be easily identifiable in the immediate vicinity of such locations unless guarded by location, position, or guards. The locations on the conveyor where the design, function, and operation of such a conveyor ~~clearly is not hazardous~~ is determined by a risk assessment to not present a hazard to personnel, an emergency stop device is not required at those locations. (2) The emergency stop device shall act directly on the control of the conveyor concerned and not depend on the stopping of any other equipment. The emergency stop devices shall be installed so that they cannot be overridden from other locations. (d) Inactive and unused actuators, controllers, and wiring should be removed from control stations and panel boards, together with obsolete diagrams, indicators, control labels, and other material that may confuse the operator.
6	Info	**Specific Safety Standards**
6.17.2.1		**Safety Considerations** (a) Means shall be provided to sense overloads where these loads could cause injury. (b) Loading and unloading areas shall be provided with means to detect personnel on or in unauthorized proximity to the conveyor and automatically stop or prevent motion. (c) Means shall be provided to physically restrict people from the path of the towed vehicle. (d) Riding or walking on the conveyor or towed vehicle shall be forbidden. Warning signs to this effect shall be prominently posted at each point of access and control station. (e) Where possible, means should be provided to physically restrict the entry of unauthorized carts into the conveyor. (f) Means shall be provided to restrict the entry of unauthorized carts into the area where the conveyor is located. At a minimum, warning signs shall be prominently posted at the loading point of each conveyor indicating that only carts specifically designed for use on the conveyor are allowed.

CLAUSE	VERDICT	COMMENT
6.17.2.2		**Guarding** Where a parted chain, cable, belt, tow pin, or other linkage would permit a runaway condition on an incline or decline, ~~antirunaway/backstop devices~~ means shall be provided to prevent runaway carts from exiting the ramp zone and entering pedestrian areas.
6.23		***New clause added;*** Mobile Hopper Rail Car / Hopper Bottom Truck Unloader Conveyor These mobile unloaders are for bulk products. They are identified by a low-profile tail end loading section that transitions to an incline. At the transition they utilize hold-down wheels riding on the belt's carrying side. Manually operated gates under the rail car or truck which are used to regulate the flow of material onto the conveyor, must oftentimes be adjusted with the belt moving. The combination of a low-profile conveyor belt near the hold-down mechanism(s) results in a dangerous condition. Further, with the low-profile belt, an operator working alongside the conveyor to adjust the rail-car or truck gate(s), risks being entangled with the belt and/or the hold-down mechanism(s). For this reason, a risk assessment should be performed to determine the best method to address these specific hazards. The risk assessment should also identify the need for any warnings and specialized training requirements. A site-specific risk assessment should also be performed to identify local hazardous conditions. See section 5.16. Where manual gate adjustment exposes an operator to the hold-down mechanism or conveyor, the low-profile loading section shall be guarded to prevent operators from crossing or falling on the belt. Where it is not feasible to guard, warning signs shall be posted.
6.25		***New section added;*** **Electrified Monorail Conveyors**
6.25.1		**Electrified Monorail Conveyors Used for Assembly / Inspection / Testing Processes.**
6.25.1.1		**Safety Considerations** (a) Where, as in the automotive and aircraft industries, electrified monorail conveyors are used in assembly, inspection and testing operations which necessitate the conveying and positioning of the conveyor, its carrier and the product above personnel: (1) risk assessment and related risk reduction per Paragraph 5.16 shall be mandatory.

CLAUSE	VERDICT	COMMENT
		(2) mechanical load-bearing components coupling the trolley and carrier shall be designed with an allowable stress not to exceed 20% of the minimum ultimate strength of the material. (5:1 safety factor) (3) carrier positioning mechanisms/hoists shall incorporate sufficient redundancy or safety devices to ensure a single point component failure will not result in uncontrolled carrier descent. (b) Overtravel device(s) shall be provided in any case in which overtravel could cause injury to a person or serious damage to the carrier or trolley. (c) Where carrier stability could create a hazard, means shall be provided for fore/aft and side to side stabilization. (d) Means shall be provided to prevent hazard to personnel in the event of a power failure.
6.25.1.2		**Guarding** The conveyor shall be guarded so as to prevent injury from inadvertent contact with the moving parts of the equipment.
6.25.1.3		**Operation and Maintenance** Where a safeguard could be compromised by long term use, the integrity of the safeguards incorporated in the conveyor as a result of the risk reduction effort [Paragraph 6.25.1.1(a)(1)] shall be ensured by utilization of computer supervision or scheduled inspections.
Appendix I	Info	**Specifications for Design, Installation, Commissioning, and Periodic Inspection of Vertical Reciprocating Conveyors**
I-3.5.1		Hydraulically Driven. Where a hydraulic cylinder(s) or ram(s) acts to raise and lower the carrier, lowering of the carrier may be a function of gravity when the holding valve is opened allowing hydraulic fluid to drain back to the reservoir. The lowering speed shall be controlled by a pressure-compensated flow control valve. The hydraulic cylinder(s) or ram(s) shall be fitted at the pressure port with an excess flow protector. The hydraulic circuit shall prevent carrier movement if the power is removed. Where the hydraulic cylinder(s) or ram(s) is connected using flexible lifting means such as chain(s), cable(s), or belt(s) to suspend the carrier, a mechanical antirunaway device ~~carrier backstop device~~ as defined in para. 6.21.1(a) shall be required to be installed on the carrier to avert freefall in case of failure of the suspension means. Where the hydraulic cylinder(s) or ram(s) is connected directly to the carrier such that the vertical travel is a 1:1 ratio to the cylinder(s) or ram(s) travel, a carrier mounted mechanical antirunaway device as described above ~~carrier backstop device as defined in para. 6.21.1(a)~~ is not required.

CLAUSE	VERDICT	COMMENT
I-3.5.2		Mechanically Driven. Where an electric motor with fail-to-safe brake and a geared reduction acts to raise and lower the carrier and where the carrier is suspended by a flexible lifting means such as chain(s), cable(s), or belt(s), a ~~carrier backstop~~ mechanical antirunaway device as defined in para. 6.21.1(a) shall be required to be installed on the carrier to avert freefall in case of failure of the suspension means.
		CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.