

*** DRAFT - NOT YET FILED ***

4123:1-9-01

Scope and definitions.

(A) Scope.

The purpose of these safety requirements is to provide reasonable safety for life, limb and health of employees. In cases of practical difficulty or unnecessary hardship, the Ohio bureau of workers' compensation may grant exceptions from the literal provisions of these requirements or permit the use of other devices or methods when, in the opinion of the industrial commission, equivalent protection is thereby secured.

These specific requirements supplement those of Chapter 4123:1-5 of the Administrative Code, "Specific Safety Requirements of the Ohio Bureau of Workers' Compensation Relating to All Workshops and Factories," and are minimum requirements of an employer for the protection of such employer's employees and no others and apply to steel making and the processes used in conjunction with steel manufacturing and fabricating but do not apply to the manufacture of foundry type operations.

Installations or constructions built or contracted for prior to the effective date of any requirement shall be deemed to comply with the provisions of these requirements if such installations or constructions comply either with the provisions of these requirements or with the provisions of any applicable specific requirement which was in effect at the time contracted for or built.

(B) Definitions.

- (1) "Approved" means accepted or certified by a nationally recognized testing agency, such as "Underwriters' Laboratories," "Factory Mutual Engineering Corporation," or a responsible governmental agency.
- (2) "Bosh tank" means a tank used to collect circulating discharge water from furnaces.
- (3) "Danger zone" means the point of operation where a known critical hazard exists.
- (4) "Guard" means the covering, fencing, railing, or enclosure which shields an object from accidental contact.
- (5) "Guarded" means that the object is covered, fenced, railed, enclosed or otherwise shielded from accidental contact.

- (6) "Mixer" means a vessel that contains a supply of molten pig iron available when needed for charging into open hearth furnaces and for holding successive casts or lots of iron from blast furnaces to reduce irregularities in the iron.
- (7) "Operator" means any employee assigned or authorized to work at the specific equipment.
- (8) "Shall" is to be construed as mandatory.
- (9) "Substantial" means construction of such strength, of such materials, and of such workmanship that the object will withstand the wear, usage, or shock for which it is designed.
- (10) "Standard guard railing" means a substantial barrier constructed in accordance with paragraph (E) of rule 4123:1-5-02 of the Administrative Code.

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4123:1-9-02

Coke plants.

(A) Warning signs and devices.

(1) Signs.

All approaches leading to rooms or buildings where coal dust or flammable gas may accumulate shall bear warning signs forbidding smoking or open flames.

(2) Quenching car locomotives, pushers and larry cars (charging cars) shall be equipped with audible and visual warning devices.

(B) Electrical equipment.

Approved electrical equipment shall be used in coal handling and by-product operations.

(C) Gas-carrying lines.

(1) A line carrying blast furnace gas shall be purged before opening or entering.

(2) A line carrying coke gas shall be purged before opening or entering.

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4123:1-9-03

Blast furnaces.

(A) Communication system.

A means of communication shall be provided between the furnace, the cast house, the blower's office, and the skip operator's station. Additionally, a system for voice communication shall be provided between the furnace top and the cast house when employees are required to perform work on the top of an operating blast furnace.

(B) Passageways under skip car tracks.

Passageways under skip car tracks shall be guarded from falling material.

(C) Gas-carrying lines.

(1) A line carrying blast furnace gas shall be purged before opening or entering.

(2) A line carrying coke gas shall be purged before opening or entering.

(D) Repairs to chimney stoves and furnace.

Before interior repairs are made to any chimney stove or furnace, gas lines shall be blanked off.

(E) Cast house.

The cast house shall have an exit on at least two different sides or two different ends.

(F) Iron and cinder runners.

All permanent gates in iron and cinder runners shall be operated at a distance of no less than three feet from the side of the runner.

(G) Dust catchers.

Operating devices for dumping dust catchers when pug mills are not provided shall be located a distance of no less than eight feet from the outlet of the hopper.

(H) Scale and transfer cars.

All scale and transfer cars shall be equipped with audible and visual warning devices and rail sweeps maintained in proper working order.

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4123:1-9-04

Steel making.

(A) Mixers.

- (1) All mechanically or electrically operated mixers shall be equipped with a counterbalance, automatic device, or the equivalent, designed to return the mixer to an upright position or to prevent it from further tipping in case of power failure.
- (2) All hydraulically powered mixers shall be equipped with an emergency valve so arranged that if the main operating valve fails while the mixer is pouring, the emergency valve can be operated immediately to return it to an upright position or to prevent it from further tipping.

(B) Mixer building.

The mixer building shall be equipped with an audible warning device which shall operate automatically during any pouring operation.

(C) Auxiliary hoists (mixer ladle cranes).

Auxiliary hoists on mixer ladle cranes shall be equipped with a type of hook which can be attached to the ladle after the ladle has been hoisted into pouring position.

(D) Oxygen furnaces - blown basic steelmaking process.

- (1) Each oxygen furnace - blown basic steelmaking process - shall be equipped with a means of communication connecting the charging crane, the charging floor, each operating floor and each pulpit.
- (2) Charging floors and operating floors shall be provided with approved handrails and toeboards. This does not apply to pouring and mold preparation platforms.
- (3) Pit areas on charging and tapping sides of steelmaking processes shall be provided with drainage.
- (4) Provision shall be made to shut off the oxygen when a furnace is shut down for repairs.

(5) Tapping platforms and charging floors.

- (a) Tapping platforms and charging floors shall be provided with standard guardrailings. This does not apply to pouring and mold preparation platforms.
- (b) A guard shall be provided to protect the opening in the railing of a tapping platform used for spouts and runners, which may be removed when work is being performed at that point.

(E) Electric furnaces.

- (1) Provision shall be made to lock out the source of power when work is performed in or on an electric furnace.
- (2) Transformer vaults for electric furnaces shall be kept locked at all times and accessible only to authorized personnel.
- (3) Tapping platforms and charging floors.

- (a) Tapping platforms and charging floors shall be provided with standard guardrailings. This does not apply to pouring and mold preparation platforms.
- (b) A guard shall be provided to protect the opening in the railing of a tapping platform used for spouts and runners, which may be removed when work is being performed at that point.

(F) Muffle furnaces.

Muffle furnaces shall be equipped with a safe means of lighting.

(G) Scrap breakers.

Where a demolition weight is used to break skulls and scrap, the operation shall be performed in a restricted or guarded area identified by appropriate signs and away from employees not involved in demolition work.

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Rolling operations.

(A) Subways or crossovers.

Subways with overhead protection or crossovers shall be provided at established passageways which cross the rolling line.

(B) Coupling boxes, spindles and wobblers.

Coupling boxes, spindles and wobblers seven feet or less above floor level shall be guarded.

(C) Access to top of housing.

Steps or equivalent means shall be provided for reaching the top of housing(s) four feet or more above floor level.

(D) Rolling tables.

Stop guards shall be placed at the dead end of all rolling tables.

(E) Bosh tank.

The top of the bosh tank shall be guarded unless it is at least forty-two inches above floor level.

(F) Stop guards.

Adjustable stop guards shall be installed at the outside of hot beds and skids.

(G) Looping posts.

Looping posts shall be used on small non-automatic repeater type mills where bars are being rolled in more than one pass in a continuous operation.

(H) Tubular products.

(1) Openings in welding and heating furnaces.

Charging and discharging openings in heating furnaces shall be provided with shields.

(2) Signal system.

A signal system shall be provided between the charging and discharging openings of all heating furnaces.

(3) Barring to prevent passage.

Space between ends of troughs, conveyors or tables and roll stands shall be barred to prevent passage of employees.

(4) Butt weld mills.

Movable draw benches and chains on butt weld mills shall be guarded.

(5) Cross roll troughs.

Stops or guards shall be provided at the delivery end of cross roll troughs.

(I) Wire mills.

(1) Overhead protection - passageways.

Passageways under hot wires from annealing furnaces shall be provided with overhead protection.

(2) Wire drawing machines.

Wire drawing machines shall be equipped with an emergency stopping device such as an electric eye, trip cord, or similar means.

(3) Bull blocks.

All bull blocks shall be provided with a substantial back guard.

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