

4123:1-13-04 Other rubber and plastic processing machines.

(A) Extruders, strainers and tubing machines.

(1) Manually fed extruders, strainers and tubing machines shall have a hopper so designed as to allow a distance of no less than ten inches from the top edge of the hopper to the highest point of the screw or worm of the extruder, strainer or tubing machine.

(2) Rotating knives that may be located at the discharge end of extruders, strainers and tubing machines shall be guarded with interlocks provided to shut off the power if the guard is opened or removed.

(B) Rubber and plastic cutters.

(1) Cutters - circular cut-off power knives or blades.

Circular cut-off power knives or blades, used to cut rubber or plastic stock to length, shall be guarded.

(2) Manually fed guillotine bale cutters.

All manually fed guillotine bale cutters shall be equipped with a two-hand continuous control or a one-hand continuous control so located that the operator cannot reach the control and the danger zone at the same time.

(C) Wind-ups and power driven auxiliary rolls or drums.

Wind-ups, power driven auxiliary rolls or drums and festoon rolls, around which material travels, when exposed to contact, shall be provided with readily accessible safety trips or devices to disengage them from their immediate source of power.

(D) Hose winding machines.

Hose winding machines shall have a clutch or starting treadle running the full length of the machine so that the machine will stop automatically when the clutch or starting treadle is released.

(E) Curing or vulcanizing equipment.

An interlocking device shall be provided to prevent the admission of water, steam, or pressure into the unit before it is fully closed and locked to prevent the unit from being opened while it is under any residual pressure.

(1) Tire vulcanizers.

(a) Single or dual tire vulcanizers, which open and close by electrical power, shall be equipped with a safety bar or other mechanical sensing device installed at or across the front of the curing unit which will prevent the closing motion of the unit should the bar or other safety device be activated by contact with any portion of the employee's body as the unit closes.

(b) Brakes.

Brake capacity shall be sufficient to stop the motion quickly and capable of holding the moving parts at any point in their travel. Where friction brakes, equipped with release devices, are provided for stopping or holding moving parts of a press, postcure inflator, or accessories, they shall be set with compression springs and released by electrical, pneumatic, or mechanical means. Brakes that require electrical or pneumatic power to apply a holding force shall not be used.

(2) Horizontal curing units (vulcanizers).

A locking device shall be provided on doors in the open position to prevent them from closing accidentally on employees working underneath.

(3) Platen presses.

(a) Inserting or removing molds.

Molds shall be provided with lugs or handles for use when inserting or removing the molds from the platen presses by hand, otherwise a hook shall be provided for the purpose.

(b) Track stops.

Where tracks are used with platen presses they shall be equipped with stops to prevent the molds from being pulled or pushed off the tracks.

(c) Work tables.

(i) Stops.

Work tables used with platen presses ranging in sizes up to and including twenty-four inches wide by twenty-four inches long shall be equipped with stops to prevent the molds from being accidentally pulled off the front of the bench.

(ii) Size.

Work tables used with platen presses shall be no smaller than the press platens.

(4) Molding machines.

(a) Compression and transfer molding.

Compression and transfer molding machines shall be equipped with either:

(i) A metal gate which, when closed, completely encloses the molding area between the two front tie rods or side columns of the press and between the fixed and moving platens of the press and which is interlocked so that the press will not operate unless the gate is closed, or

(ii) Two-hand controls which must remain depressed during press closing.

(b) Injection and blow molding.

(i) The molding area of injection and blow molding machines shall be guarded by an interlocked safety door or gate with an insert of safety glass, impact-resistant plastic, or expanded metal.

(ii) Moving parts of the machine and mold not guarded by the safety door or gate shall be guarded by fixed or interlocked guards.

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