STATE OF NEW JERSEY

DEPARTMENT OF LABOR

Harry C. Harper

[redacted] Commissioner

TENTATIVE SAFETY CODE

MILLS AND CALENDERS

(used in manufacture of rubber goods and plastics)

BUREAU OF ELECTRICAL EQUIPMENT

C. George Krueger, Deputy Commissioner

Trenton, N. J.
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(Revised)

STATE OF NEW JERSEY
DEPARTMENT OF LABOR
John J. Toohey, Jr., Commissioner

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SAFETY CODE FOR MILLS AND CALENDERS
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SECTION 10. GENERAL

Rule 100. SCOPE

These requirements apply to all machines used in the rubber or plastics industries having in-running rolls, whether of the mill or calender type.

Rule 101. PURPOSE

The purpose of this code is to provide reasonable safety for life, limb and health. In cases of practical difficulty or unnecessary hardship, the Department of Labor may grant exceptions from the literal requirements of the code. The Department of Labor may also permit the use of other devices or methods, but only when it is clearly evident that equivalent protection is thereby secured.

Rule 102. OTHER CODES

For other applicable codes, which include power transmission hazards, lighting, walkway surfaces, boiler inspection, and electric power control, refer to current publications of the Department of Labor, Trenton, and the American Engineering Standards Committee, 29 W. 39th St., New York City.

Rule 103.

The word "shall" is to be understood as mandatory and the word "should" as advisory.

Rule 104.

The word "approved" means approved by the Department of Labor.

SECTION 11. LOCATION AND STANDARD HEIGHTS OF MACHINE

Rule 110. WORK SPACE AND AISLES

Mills and Calenders shall be so located as to give (a) enough clearance between machines so that

the movement of one operator will not interfere with the work of another; (b) ample room for cleaning machines and handling the work, including material and scrap; (c) aisles of sufficient width to permit the free movement of employees bringing and removing material.

Rule 111. MILL ROLL HEIGHT

All mills should be installed so that the top of the front roll is not less than 46 inches above the working floor level on which the operator stands, irrespective of the size of the mill.

SECTION 12. LOCATION OF SAFETY TRIP BARS AND CABLE CONTROLS

Rule 120. MILLS - SAFETY TRIP BARS

Safety trip bars shall be provided front and back of all mills to operate either up or down and shall be carried the full length of the rolls.

(a) The normal location of the safety trip bar over the front roll shall be 2 inches to 4 inches in from the edge of the front roll and when in its normal position shall be 21 inches from the top of the front roll, with provision made for adjustment either up or down of 3 inches in each direction.

(b) The normal location of the safety trip bar over the back roll shall be in the same horizontal plane as the safety trip bar over the front roll and the length of the lever from the fulcrum shall be the same; the fulcrum shall be located over the bite of the rolls when the rolls are together.

(c) The fixed rod sometimes used for construction purposes running the length of the roll shall be omitted.

Rule 121. CALENDERS - SAFETY TRIP BARS AND CABLES

Safety trip bars shall be provided in front and back of all calenders to operate in a horizontal plane by a push and a pull, and shall be carried the full length of the rolls.

(a) Safety trip bars on each calendar shall be at a height not in excess of 72 inches above the working floor level on which the operator stands and shall be in a line with the outside of the calender frame.

(b) Each safety trip bar shall have two safety trip cables at both ends of each bar. These cables shall be carried to within 6 inches of the floor level and

be effectively secured to the frame of the calender. Safety trip cables shall be connected with the trip bar mechanism and positioned at a distance of not more than 12 inches from the face of the roll and at a distance of not less than 1 inch from the calender frame.

SECTION 13. STOPPING LIMITS

Rule 130. INDIVIDUALLY DRIVEN MILLS

Every mill up to and including 16 inch diameter rolls and running empty at any speed shall be stopped within a distance of not more than 9 inches measured on the periphery of the front roll simultaneously with the operation of the trip.

Every mill having more than 16 inch diameter rolls, up to and including mills having 24 inch diameter rolls running empty at any speed shall be stopped within a distance of not more than 12 inches measured on the periphery of the front roll simultaneously with the operation of the trip.

Rule 131. GROUP DRIVEN MILLS

Group driven mills up to and including 16 inch diameter rolls and running empty at any speed shall be stopped within a distance of not more than 12 inches measured on the periphery of the front roll simultaneously with the operation of the trip.

Group driven mills having more than 16 inch diameter rolls, up to and including mills having 24 inch diameter rolls running empty at any speed shall be stopped within a distance of not more than 18 inches measured on the periphery of the front roll simultaneously with the operation of the trip.

Rule 132. INDIVIDUALLY OR GROUP DRIVEN CALENDERS

Every calender of any size of rolls when running empty shall be stopped within the following limits with the distances measured on the periphery of the drive roll simultaneously with the operation of the trip:-

(a) Calenders, the drive roll of which travels at not more than 30 feet per minute shall be stopped within a distance of not more than 3 inches.

(b) Calenders, the drive roll of which travels over 30 feet and not more than 60 feet per minute, shall be stopped within a distance of not more than 6 inches.

(c) Calenders, the drive roll of which travels over 60 feet and not more than 120 feet per minute, shall be stopped within a distance of not more than 24 inches.

SECTION 14. ISOLATION OF POINT OF OPERATION HAZARD

Rule 140.

When the bite of the rolls on mills or calenders is fully housed in so that operator cannot reach through, over, under or around and come in contact with bite, as in special processes, such as trough-fed mills with trough screened against entry of a human body member, then the following rule applies:-

Clutches, cut-off couplings, clutch pulleys, tight and loose pulleys, or equivalent means, shall be provided for every mill or calender on or immediately adjacent to such machine.

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