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for minors between 16 and 18 years of age:

- (1) Any work in any workroom in which (i) radium is stored or used in the manufacture of self-luminous compound, (ii) self-luminous compound is made, processed, or packaged, (iii) selfluminous compound is stored, used, or worked upon, (iv) incandescent mantles are made from fabric and solutions containing thorium salts, or are processed or packaged, (v) other radioactive substances are present in the air in average concentrations exceeding 10 percent of the maximum permissible concentrations in the air recommended for occupational exposure by the National Committee on Radiation Protection, as set forth in the 40-hour week column of table one of the National Bureau of Standards Handbook No. 69 entitled "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," issued June 5, 1959.
- (2) Any other work which involves exposure to ionizing radiations in excess of 0.5 rem per year.
- (b) *Definitions*. As used in this section:
- (1) The term *self-luminous compound* shall mean any mixture of phosphorescent material and radium, mesothorium, or other radioactive element:
- (2) The term *workroom* shall include the entire area bounded by walls of solid material and extending from floor to ceiling;
- (3) The term *ionizing radiations* shall mean alpha and beta particles, electrons, protons, neutrons, gamma and X-ray and all other radiations which produce ionizations directly or indirectly, but does not include electromagnetic radiations other than gamma and X-ray.

[22 FR 3657, May 24, 1957, as amended at 26 FR 8885, Sept. 21, 1961. Redesignated at 28 FR 1634, Feb. 21, 1963, and amended at 28 FR 3449, Apr. 9, 1963. Redesignated and amended at 36 FR 25156, Dec. 29, 1971]

\$570.58 Occupations involved in the operation of power-driven hoisting apparatus (Order 7).

(a) Finding and declaration of fact. The following occupations involved in the

operation of power-driven hoisting apparatus are particularly hazardous for minors between 16 and 18 years of age:

(1) Work of operating an elevator, crane, derrick, hoist, or high-lift truck, except operating an unattended automatic operation passenger elevator or an electric or air-operated hoist not exceeding one ton capacity.

(2) Work which involves riding on a manlift or on a freight elevator, except a freight elevator operated by an assigned operator.

(3) Work of assisting in the operation of a crane, derrick, or hoist performed by crane hookers, crane chasers, hookers-on, riggers, rigger helpers, and like occupations.

(b) *Definitions*. As used in this section:

- (1) The term *elevator* shall mean any power-driven hoisting or lowering mechanism equipped with a car or platform which moves in guides in a substantially vertical direction. The term shall include both passenger and freight elevators (including portable elevators or tiering machines), but shall not include dumbwaiters.
- (2) The term *crane* shall mean a power-driven machine for lifting and lowering a load and moving it horizontally, in which the hoisting mechanism is an integral part of the machine. The term shall include all types of cranes, such as cantilever gantry, crawler, gantry, hammerhead, ingotpouring, jib, locomotive, motor-truck, overhead traveling, pillar jib, pintle, portal, semi-gantry, semi-portal, storage bridge, tower, walking jib, and wall cranes.
- (3) The term *derrick* shall mean a power-driven apparatus consisting of a mast or equivalent members held at the top by guys or braces, with or without a boom, for use with a hoisting mechanism or operating ropes. The term shall include all types of derricks, such as A-frame, breast, Chicago boom, gin-pole, guy and stiff-leg derrick.
- (4) The term *hoist* shall mean a power-driven apparatus for raising or lowering a load by the application of a pulling force that does not include a car or platform running in guides. The term shall include all types of hoists, such as base mounted electric, clevis suspension, hook suspension, monorail,

overhead electric, simple drum and trolley suspension hoists.

- (5) The term high-lift truck shall mean a power-driven industrial type of truck used for lateral transportation that is equipped with a power-operated lifting device usually in the form of a fork or platform capable of tiering loaded pallets or skids one above the other. Instead of a fork or platform, the lifting device may consist of a ram, scoop, shovel, crane, revolving fork, or other attachments for handling specific loads. The term shall mean and include highlift trucks known under such names as fork lifts, fork trucks, forklift trucks, tiering trucks, or stacking trucks, but shall not mean low-lift trucks or low-lift platform trucks that are designed for the transportation of but not the tiering of material.
- (6) The term *manlift* shall mean a device intended for the conveyance of persons which consists of platforms or brackets mounted on, or attached to, an endless belt, cable, chain or similar method of suspension; such belt, cable or chain operating in a substantially vertical direction and being supported by and driven through pulleys, sheaves or sprockets at the top and bottom.
- (c) Exception. (1) This section shall not prohibit the operation of an automatic elevator and an automatic signal operation elevator provided that the exposed portion of the car interior (exclusive of vents and other necessary small openings), the car door, and the hoistway doors are constructed of solid surfaces without any opening through which a part of the body may extend; all hoistway openings at floor level have doors which are interlocked with the car door so as to prevent the car from starting until all such doors are closed and locked; the elevator (other than hydraulic elevators) is equipped with a device which will stop and hold the car in case of overspeed or if the cable slackens or breaks; and the elevator is equipped with upper and lower travel limit devices which will normally bring the car to rest at either terminal and a final limit switch which will prevent the movement in either direction and will open in case of excessive over travel by the car.
- (2) For the purpose of this exception the term *automatic elevator* shall mean

- a passenger elevator, a freight elevator, or a combination passenger-freight elevator, the operation of which is controlled by pushbuttons in such a manner that the starting, going to the landing selected, leveling and holding, and the opening and closing of the car and hoistway doors are entirely automatic.
- (3) For the purpose of this exception, the term *automatic signal operation elevator* shall mean an elevator which is started in response to the operation of a switch (such as a lever or pushbutton) in the car which when operated by the operator actuates a starting device that automatically closes the car and hoistway doors—from this point on, the movement of the car to the landing selected, leveling and holding when it gets there, and the opening of the car and hoistway doors are entirely automatic.

[16 FR 7008, July 20, 1951, as amended at 20 FR 6386, Aug. 31, 1955. Redesignated at 28 FR 1634, Feb. 21, 1963, and amended at 28 FR 3449, Apr. 9, 1963; 32 FR 15479, Nov. 7, 1967. Redesignated and amended at 36 FR 25156, Dec. 29, 1971]

§ 570.59 Occupations involved in the operations of power-driven metal forming, punching, and shearing machines (Order 8).

- (a) Finding and declaration of fact. The following occupations are particularly hazardous for the employment of minors between 16 and 18 years of age:
- (1) The occupations of operator of or helper on the following power-driven metal forming, punching, and shearing machines:
- (i) All rolling machines, such as beading, straightening, corrugating, flanging, or bending rolls; and hot or cold rolling mills.
- (ii) All pressing or punching machines, such as punch presses except those provided with full automatic feed and ejection and with a fixed barrier guard to prevent the hands or fingers of the operator from entering the area between the dies; power presses; and plate punches.
- (iii) All bending machines, such as apron brakes and press brakes.
- (iv) All hammering machines, such as drop hammers and power hammers.