

**§ 77.313 Wet-coal feedbins; low-level indicators.**

Wet-coal bins feeding thermal drying systems shall be equipped with both audible and visual low-coal-level indicators.

**§ 77.314 Automatic temperature control instruments.**

(a) Automatic temperature control instruments for thermal dryer system shall be of the recording type.

(b) Automatic temperature control instruments shall be locked or sealed to prevent tampering or unauthorized adjustment. These instruments shall not be set above the maximum allowable operating temperature.

(c) All dryer control instruments shall be inspected and calibrated at least once every 3 months and a record or certificate of accuracy, signed by a trained employee or by a servicing agent, shall be kept at the plant.

**§ 77.315 Thermal dryers; examination and inspection.**

Thermal dryer systems shall be examined for fires and coal-dust accumulations if the dryers are not restarted promptly after a shutdown.

**Subpart E—Safeguards for Mechanical Equipment**

**§ 77.400 Mechanical equipment guards.**

(a) Gears; sprockets; chains; drive, head, tail, and takeup pulleys; flywheels; couplings; shafts; sawblades; fan inlets; and similar exposed moving machine parts which may be contacted by persons, and which may cause injury to persons shall be guarded.

(b) Overhead belts shall be guarded if the whipping action from a broken line would be hazardous to persons below.

(c) Guards at conveyor-drive, conveyor-head, and conveyor-tail pulleys shall extend a distance sufficient to prevent a person from reaching behind the guard and becoming caught between the belt and the pulley.

(d) Except when testing the machinery, guards shall be securely in place while machinery is being operated.

**§ 77.401 Stationary grinding machines; protective devices.**

(a) Stationary grinding machines other than special bit grinders shall be equipped with:

(1) Peripheral hoods (less than 90° throat openings) capable of withstanding the force of a bursting wheel.

(2) Adjustable tool rests set as close as practical to the wheel.

(3) Safety washers.

(b) Grinding wheels shall be operated within the specifications of the manufacturer of the wheel.

(c) Face shields or goggles, in good condition, shall be worn when operating a grinding wheel.

**§ 77.402 Hand-held power tools; safety devices.**

Hand-held power tools shall be equipped with controls requiring constant hand or finger pressure to operate the tools or shall be equipped with friction or other equivalent safety devices.

**§ 77.403 Mobile equipment; falling object protective structures (FOPS).**

(a) When necessary to protect the operator of the equipment, all rubber-tired or crawler-mounted self-propelled scrapers, front-end loaders, dozers, graders, loaders, and tractors, with or without attachments, that are used in surface coal mines or the surface work areas of underground coal mines shall be provided with substantial falling object protective structures (FOPS). FOPS which meet the requirements of the Society of Automotive Engineers (SAE) Standard J 231 shall be considered to be a "substantial" FOPS. An authorized representative of the Secretary may approve a FOPS which provides protection equivalent to SAE J 231.

(b) When necessary to protect the operator of the equipment, forklift or powered industrial trucks shall be provided with substantial FOPS. Such FOPS shall meet the requirements of the State of California, Division of Industrial Safety, General Safety Orders, Register 72, Number 6, February 8, 1972,

§ 77.403-1

30 CFR Ch. I (7-1-06 Edition)

Article 25, Section 3655—"Overhead Guards for High-Lift Rider Trucks."

(Sec. 101(a), Federal Coal Mine Health and Safety Act of 1969, as amended (83 Stat. 745; 30 U.S.C. 811(a))

[39 FR 24007, June 28, 1974]

**§ 77.403-1 Mobile equipment; rollover protective structures (ROPS).**

(a) All rubber-tired or crawler-mounted self-propelled scrapers, front-end loaders, dozers, graders, loaders, and tractors, with or without attachments, that are used in surface coal mines or the surface work areas of underground coal mines shall be provided with rollover protective structures (hereinafter referred to as ROPS) in accordance with the requirements of paragraphs (b) through (f) of this section, as applicable.

(b) *Mobile equipment manufactured on and after September 1, 1974.* All mobile equipment described in paragraph (a) of this section manufactured on and after September 1, 1974 shall be equipped with ROPS meeting the requirements of the Department of Labor specified in §§ 1926.1001 and 1926.1002 of Part 1926, Title 29, Code of Federal Regulations—Safety and Health Regulations for Construction.

(c) *Mobile equipment manufactured prior to September 1, 1974.* All mobile equipment described in paragraph (a) of this section manufactured prior to September 1, 1974 shall be equipped with ROPS meeting the requirements of paragraphs (d) through (f) of this section, as appropriate, no later than the dates specified in paragraphs (1), (2), and (3) of this paragraph (c), unless an earlier date is required by an authorized representative of the Secretary under paragraph (c)(4) of this section:

(1) Mobile equipment manufactured between July 1, 1971, and September 1, 1974, shall be equipped with ROPS no later than March 1, 1975.

(2) Mobile equipment manufactured between July 1, 1970, and June 30, 1971, shall be equipped with ROPS no later than July 1, 1975.

(3) Mobile equipment manufactured between July 1, 1969, and June 30, 1970, shall be equipped with ROPS no later than January 1, 1976.

(4) Irrespective of the time periods specified in paragraph (c) (1) through (3) of this section an authorized representative of the Secretary may require such mobile equipment to be equipped with ROPS at an earlier date when necessary to protect the operator of the equipment under the conditions in which the mobile equipment is, or will be operated. The authorized representative of the Secretary shall in writing advise the operator that the equipment shall be equipped with a ROPS and shall fix a time within which the operator shall provide and install the ROPS. If such ROPS is not provided and installed within the time fixed a notice shall be issued to the operator pursuant to section 104 of the Act.

(5) Nothing in this § 77.403-1 shall preclude the issuance of a withdrawal order because of imminent danger.

(d) Except as provided in paragraph (e) of this section, mobile equipment described in paragraph (a) of this section, manufactured prior to September 1, 1974, shall be deemed in compliance with this section if the ROPS is installed in accordance with the recommendations of the ROPS manufacturer or designer. The coal mine operator shall exhibit certification from the ROPS manufacturer or designer in the form of a label attached to the equipment, indicating the manufacturer's or fabricator's name and address, the ROPS model number, if any, the machine make, model or series number that the structure is designed to fit, and compliance with the applicable specification listed in paragraph (c)(1) or (2) of this section, or he shall, upon request of the authorized representative of the Secretary, furnish certification from a registered professional engineer that:

(1) The ROPS complies with the Society of Automotive Engineers (SAE) Standard J 397, "Critical Zone—Characteristics and Dimensions for Operators of Construction and Industrial Machinery" or SAE J 397a, "Deflection Limiting Volume for Laboratory Evaluation of Rollover Protective Structures (ROPS) and Falling Object Protective Structures (FOPS) of Construction and Industrial Vehicles" and the following applicable SAE Standards: