

§ 1915.77

(2) When the ventilation ducts required by these regulations must pass through these means of access, the ducts shall be of such a type and so arranged as to permit free passage of an employee through at least two of these means of access.

§ 1915.77 Working surfaces.

(a) Paragraphs (b) through (d) of this section shall apply to ship repairing and shipbuilding operations, and shall not apply to shipbreaking. Paragraph (e) of this section shall apply to shipbuilding, ship repairing and shipbreaking operations.

(b) When firebox floors present tripping hazards of exposed tubing or of missing or removed refractory, sufficient planking to afford safe footing shall be laid while work is being carried on within the boiler.

(c) When employees are working aloft, or elsewhere at elevations more than 5 feet above a solid surface, either scaffolds or a sloping ladder, meeting the requirements of this subpart, shall be used to afford safe footing, or the employees shall be protected by safety belts and lifelines meeting the requirements of §§ 1915.159 and 1915.160. Employees visually restricted by blasting hoods, welding helmets, and burning goggles shall work from scaffolds, not from ladders, except for the initial and final welding or burning operation to start or complete a job, such as the erection and dismantling of hung scaffolding, or other similar, nonrepetitive jobs of brief duration.

(d) For work performed in restricted quarters, such as behind boilers and in between congested machinery units and piping, work platforms at least 20 inches wide meeting the requirements of § 1915.71(i)(1) shall be used. Backrails may be omitted if bulkheading, boilers, machinery units, or piping afford proper protection against falling.

(e) When employees are boarding, leaving, or working from small boats or floats, they shall be protected by personal flotation devices meeting the requirements of § 1915.158(a).

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Subpart F—General Working Conditions

§ 1915.91 Housekeeping.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking except that paragraphs (c) and (e) of this section do not apply to shipbreaking.

(a) Good housekeeping conditions shall be maintained at all times. Adequate aisles and passageways shall be maintained in all work areas. All staging platforms, ramps, stairways, walkways, aisles, and passageways on vessels or dry docks shall be kept clear of all tools, materials, and equipment except that which is in use, and all debris such as welding rod tips, bolts, nuts, and similar material. Hose and electric conductors shall be elevated over or placed under the walkway or working surfaces or covered by adequate cross-over planks.

(b) All working areas on or immediately surrounding vessels and dry docks, graving docks, or marine railways shall be kept reasonably free of debris, and construction material shall be so piled as not to present a hazard to employees.

(c) Slippery conditions on walkways or working surfaces shall be eliminated as they occur.

(d) Free access shall be maintained at all times to all exits and to all fire-alarm boxes or fire-extinguishing equipment.

(e) All oils, paints thinners, solvents, waste, rags, or other flammable substances shall be kept in fire resistant covered containers when not in use.

§ 1915.92 Illumination.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking.

(a) All means of access and walkways leading to working areas as well as the working areas themselves shall be adequately illuminated.

(b) Temporary lights shall meet the following requirements:

(1) Temporary lights shall be equipped with guards to prevent accidental contact with the bulb, except that guards are not required when the construction of the reflector is such that the bulb is deeply recessed.

(2) Temporary lights shall be equipped with heavy duty electric cords with connections and insulation maintained in safe condition. Temporary lights shall not be suspended by their electric cords unless cords and lights are designed for this means of suspension. Splices which have insulation equal to that of the cable are permitted.

(3) Cords shall be kept clear of working spaces and walkways or other locations in which they are readily exposed to damage.

(c) Exposed non-current-carrying metal parts of temporary lights furnished by the employer shall be grounded either through a third wire in the cable containing the circuit conductors or through a separate wire which is grounded at the source of the current. Grounding shall be in accordance with the requirements of § 1915.132(b).

(d) Where temporary lighting from sources outside the vessel is the only means of illumination, portable emergency lighting equipment shall be available to provide illumination for safe movement of employees.

(e) Employees shall not be permitted to enter dark spaces without a suitable portable light. The use of matches and open flame lights is prohibited. In nongas free spaces, portable lights shall meet the requirements of § 1915.13(b)(9).

(f) Temporary lighting stringers or streamers shall be so arranged as to avoid overloading of branch circuits. Each branch circuit shall be equipped with overcurrent protection of capacity not exceeding the rated current carrying capacity of the cord used.

[47 FR 16986, Apr. 20, 1982, as amended at 67 FR 44543, July 3, 2002]

§ 1915.93 Utilities.

The provisions of this section shall apply to ship repairing, shipbuilding, and shipbreaking except that paragraph (c) of this section applies to ship repairing and shipbuilding only.

(a) *Steam supply and hoses.* (1) Prior to supplying a vessel with steam from a source outside the vessel, the employer shall ascertain from responsible vessel's representatives, having knowledge of the condition of the plant, the

safe working pressure of the vessel's steam system. The employer shall install a pressure gauge and a relief valve of proper size and capacity at the point where the temporary steam hose joins the vessel's steam piping system or systems. The relief valve shall be set and capable of relieving at a pressure not exceeding the safe working pressure of the vessel's system in its present condition, and there shall be no means of isolating the relief valve from the system which it protects. The pressure gauge and relief valve shall be located so as to be visible and readily accessible.

(2) Steam hose and fittings shall have a safety factor of not less than five (5).

(3) When steam hose is hung in a bight or bights, the weight shall be relieved by appropriate lines. The hose shall be protected against chafing.

(4) Steam hose shall be protected from damage and hose and temporary piping shall be so shielded where passing through normal work areas as to prevent accidental contact by employees.

(b) *Electric power.* (1) When the vessel is supplied with electric power from a source outside the vessel, the following precautions shall be taken prior to energizing the vessel's circuits:

(i) If in dry dock, the vessel shall be adequately grounded.

(ii) The employer shall ascertain from responsible vessel's representatives, having knowledge of the condition of the vessel's electrical system, that all circuits to be energized are in a safe condition.

(iii) All circuits to be energized shall be equipped with overcurrent protection of capacity not exceeding the rated current carrying capacity of the cord used.

(c) *Infrared electrical heat lamps.* (1) All infrared electrical heat lamps shall be equipped with guards that surround the lamps with the exception of the face, to minimize accidental contact with the lamps.

§ 1915.94 Work in confined or isolated spaces.

The provisions of this section shall apply to ship repairing, shipbuilding and shipbreaking. When any work is performed in a confined space, except