

OSHA Directives

CPL 2-1.15A - New Meat Tenderizing Technology in the Meat Industry

- **Record Type:** Instruction
- **Directive Number:** CPL 2-1.15A
- **Standard Number:** 1910.303(a)
- **Subject:** New Meat Tenderizing Technology in the Meat Industry
- **Information Date:** 12/23/1981

OSHA Instruction CPL 2-1.15A December 23, 1981 Office of Compliance Programming

SUBJECT: Meat Tenderizing Technology in the Meat Packing Industry

A. Purpose. This instruction provides guidelines for inspection of possible electrically hazardous conditions associated with a meat tenderizing technology being introduced into the meat packing industry.

NOTE: This instruction shall not be construed as proof that any manufacturer's equipment or the total installation is unsafe in any way. This instruction is intended to be a guide for the inspection of this type of equipment, so that a determination can be made as to whether hazardous conditions exist.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction CPL 2-1.15, March 14, 1980 is canceled.

D. Action. OSHA Regional Administrators and Area Directors shall assure that:

1. Each CSHO is made aware of the technology on electrically tenderizing meat in the meat packing industry.
2. The CSHO devotes special attention to workplace hazards, if any, created by this technology and issues citations for violations of applicable standards to the hazards. (See E. of this instruction)
3. The CSHO during his inspection checks at least the following items:

- a. Whether the meat tenderizer operator is qualified in the sense of being knowledgeable about the electrical hazards of the installation and the working conditions.

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- b. Whether the design of the equipment and its installation are in accordance with the requirements of 29 CFR Part 1910, Subpart S by reviewing the installation and schematics of equipment and circuitry.
- c. Whether the operating procedures and working conditions are made safe by including such measures as: lock outs, alarms, flashing lights, danger signs, area restrictions, physical or electronic barriers, interlocks, necessary personal protective clothing, proper housekeeping, protection from water spraying of the carcass, a working GFCI, etc.

4. The meat packing officials, employees, unions, trade associations, etc., are notified about possible electrical hazards of the technology by whatever means appropriate. (Retain records of any notifications.)

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.
2. Explain the technical content of the change to the State designee as requested.
3. Ensure that State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

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4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance.

F. Applicable Standards. The following are some of the standards that may apply:

29 CFR Part 1910 Subpart 5

29 CFR 1910.303(a) Approval (as defined in 29 CFR 1910.399(a)(7)).

29 CFR 1910.303(g)(2) Guarding of live parts.

29 CFR 1910.304(f)(5) Supports, enclosures, and equipment to be grounded.

G. Background. The process of tenderizing meat by electrical stimulation has been developed apparently to improve the meat. Since it is gaining publicity in the industry, the use of meat tenderizing equipment is becoming widespread.

1. The electrical stimulation equipment operates at standard 120 Volt AC. By use of a transformer the voltage is stepped up to a range of 400V to 600V, and is applied to the carcass either manually or automatically. Before application of electricity, the carcass is cleaned and suspended, usually on a conveyor track. When the energized element (a probe or rub-bar) makes contact, the whole carcass becomes electrically "hot." Current flows through the carcass into the conveyor track or conductor back to its source.

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2. The electrical stimulation is performed on the carcass shortly after it is killed. Rigor mortis has not occurred, and the muscles will still contract upon stimulation by electric current. Due to the presence of water, size of carcass, violent movement of carcass, crowded conditions, speed of operation, elevated voltages and other factors, conditions are favorable for the possibility of electrical shock.

3. To our knowledge, only a few manufacturers are currently producing the stimulation equipment, although this does not necessarily mean others will not appear. The concept is simple; and the equipment, which is easy to manufacture, is being distributed and installed nationwide. Electrical stimulation equipment may possibly be found in many meat processing plants.

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