

## PROGRAM DIRECTIVE

Program Directive A-181  
Issued September 1, 1980  
Revised August 15, 2000

**SUBJECT:** Meat Tenderizing Technology in the Meat Packing Industry

**AFFECTED CODES/**

**DIRECTIVES:** OAR 437-02-1910.301-399, 1910.303(a), 1910.303(g)(2), and 1910.304(f)(5)

**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.

**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.

- A. The electrical stimulation equipment operates at standard 120 Volt AC. By use of a transformer the voltage is stepped up to 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.
- B. 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.
- C. To our knowledge, only four 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.

**ACTION:** OR-OSHA field offices shall assure that:

- A. Each compliance officer is made aware of the technology on electrically tenderizing meat in the meat packing industry.
- B. The compliance officer devotes special attention to workplace hazards, if any, created by this technology and issues citations for violations of applicable standards to the hazards.
- C. During the inspection, at least the following items should be checked:
  - 1. Whether the meat tenderizer operator is qualified in the sense of being knowledgeable about the electrical hazards of the installation and the working conditions.
  - 2. Whether the design of the equipment and its installation are in accordance with the requirements of 1910, Subdivision S, by reviewing the installation and schematics of equipment and circuitry.
  - 3. Whether the operating procedures and working conditions are made safer by including such measures as: lockouts, 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.
- D. 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.)

**EFFECTIVE**

**DATE:**

This directive is effective immediately and will remain in effect until cancelled or superseded.