

South Carolina Department of Labor, Licensing and Regulation
Division of Labor
Office of Occupational Safety and Health
Columbia, South Carolina 29211

OSH Program Directive Number 82-1910.Subpart S-2

Subject: Meat Tenderizing Technology in the Meat Packing Industry.

Standard: Subarticle 6, Subpart S, Rules and Regulations, Commissioner of Labor, State of South Carolina.

Cross Reference to Federal Standards: 29 CFR 1910.Subpart S.

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

- a. The electrical stimulation equipment operates at standard 120 volts AC. By use of a transformer, the voltage is stepped up to a range of 400 volts to 600 volts, 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 the carcass, crowded conditions, speed of operation, elevated voltages and other factors, conditions are favorable for the possibility of electrical shock.
- c. To OSHA's 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.

Interpretation:

The Assistant Director/OSH Compliance and all OSH supervisors 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. The compliance officer during his inspection checks at least the following items:
 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 requirement of Subarticle 6, Subpart S by reviewing the installation and schematics of equipment and circuitry.
 3. Whether the operating procedures and working conditions are made safe 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.
 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.)

Effective Date:

This instruction is effective upon receipt and will remain in effect until cancelled or superseded by amendment to the Rules and Regulations.

William M. Lybrand, Director
February 26, 1982