NORTH CAROLINA DEPARTMENT OF LABOR	No. 34-7
OSH DIVISION	Date: 10/2009
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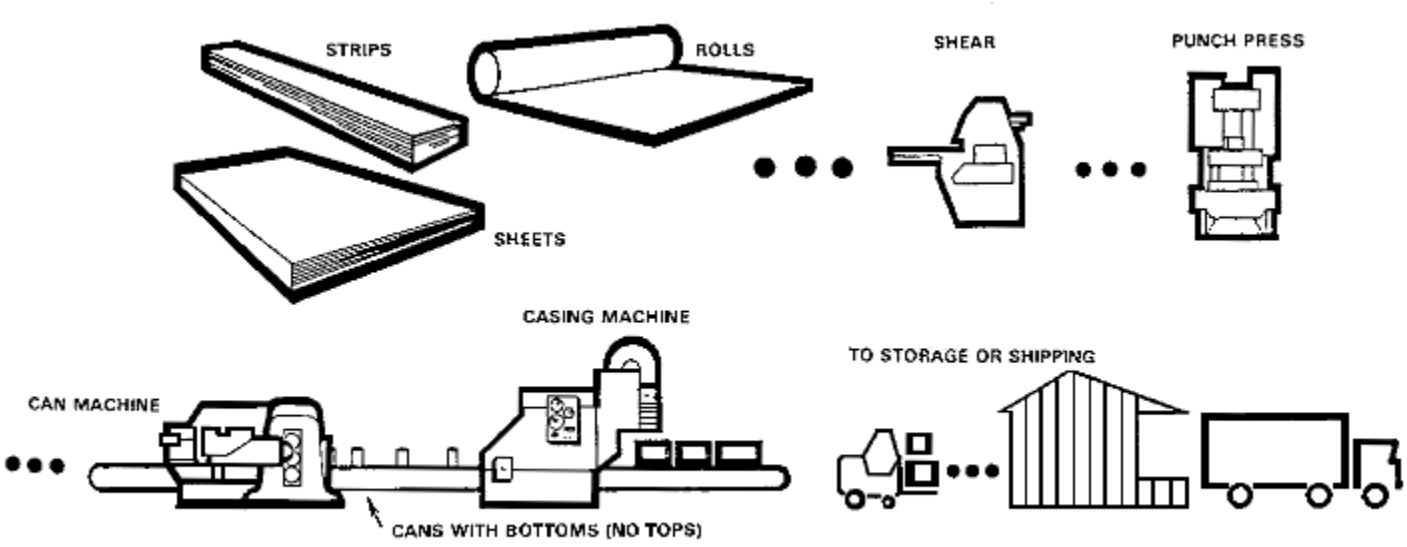
Industry: **Fabricated Metal Products**	Sub-Group: **Metal Cans**
SIC: **3411**	NAICS: **332431**

PROCESS DESCRIPTION: Metal cans are made from iron, tin or aluminum sheet metal. The metal is received in rolls, sheets or strips. It is cut to prescribed can sizes by mechanical shears and the tops and bottoms are cut to size by punch presses. Sides are formed in machines that roll, crimp, join and solder the metal into a cylinder. The bottoms and tops are normally identical. The bottom is crimped and soldered to the cylinder to form the topless can. This is normally done on the same machine that makes the side cylinder or on a separate machine designed for that purpose. The cans are then placed in a case with the tops included but unattached, thus ready for storage and shipments.

PROCESS FLOW:



Hazards Analysis

Major Hazards			Other Hazards		
Location	**Item**	**Hazard**	**Location**	**Item**	**Hazard**
Receiving	Heavy metal materials	Finger, hand and foot injuries from falling objects, caught between and cuts	Throughout plant	Noise	Hearing loss

Throughout plant	Sharp metal edges	Finger and hand cuts	Receiving, storage and shipping	Fumes from internal combustion engines	Asphyxiation and carbon monoxide poisoning
Cutting area	Punch press and shear	Amputations or crushed finger or hand			
Can forming	Moving parts of machines	Hand and finger injuries			
Storage warehouse	High storage	Head injuries			
Cutting area, shears and punch presses	Housekeeping scrap metal on floor	Trips, falls, cuts to legs, hands, arms and head			
Receiving storage and shipping	Mechanical handling equipment	Striking employees			
Can machine	Soldering	Lead expposure			

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
Subpart D	Walking and working surfaces
Subpart E	Means of egress
Subpart I	Personal protective equipment
Subpart O	Machinery and machine guarding
1910.95	Occupational noise exposure
1910.147	Control of hazardous energy (lock-out/tag-out)
1910.176	Handling Materials
1910.178	Powered industrial trucks
1910.179	Overhead and Gantry Cranes
1910.1000	Air contaminants
1910.1025	Lead
1910.1200	Hazard Communication

Inspection Analysis

The inspection should begin in the receiving area where heavy metal rolls, sheets or strips are received and stored. Powered industrial truck operators must be checked for authorization and training. Aisles and passageways shall be marked throughout and kept clear of obstructions. Personal protective equipment against hand, foot and head injuries is required in receiving and shipping. Hand and foot protection is required in material processing through cutting operation and hand protection through can making. Punch presses and shears must be inspected for proper point of operation, moving parts and power transmission guarding.

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Conveyors must be inspected for nip point guards and v-belt drive guards. Can forming machine moving parts, point of operation and power transmission must be guarded. The soldering material and techniques require industrial hygiene analysis for lead fumes exposure. Exposed moving parts on casing machine and v-belt or chain drives must be guarded. Mechanical handling equipment moving cases to the warehouse must be checked for safe condition and operation. Storing practices must be examined in the warehouse. Dock plates, chocks and other loading dock conditions must be checked at shipping.

Other Pertinent Comments: