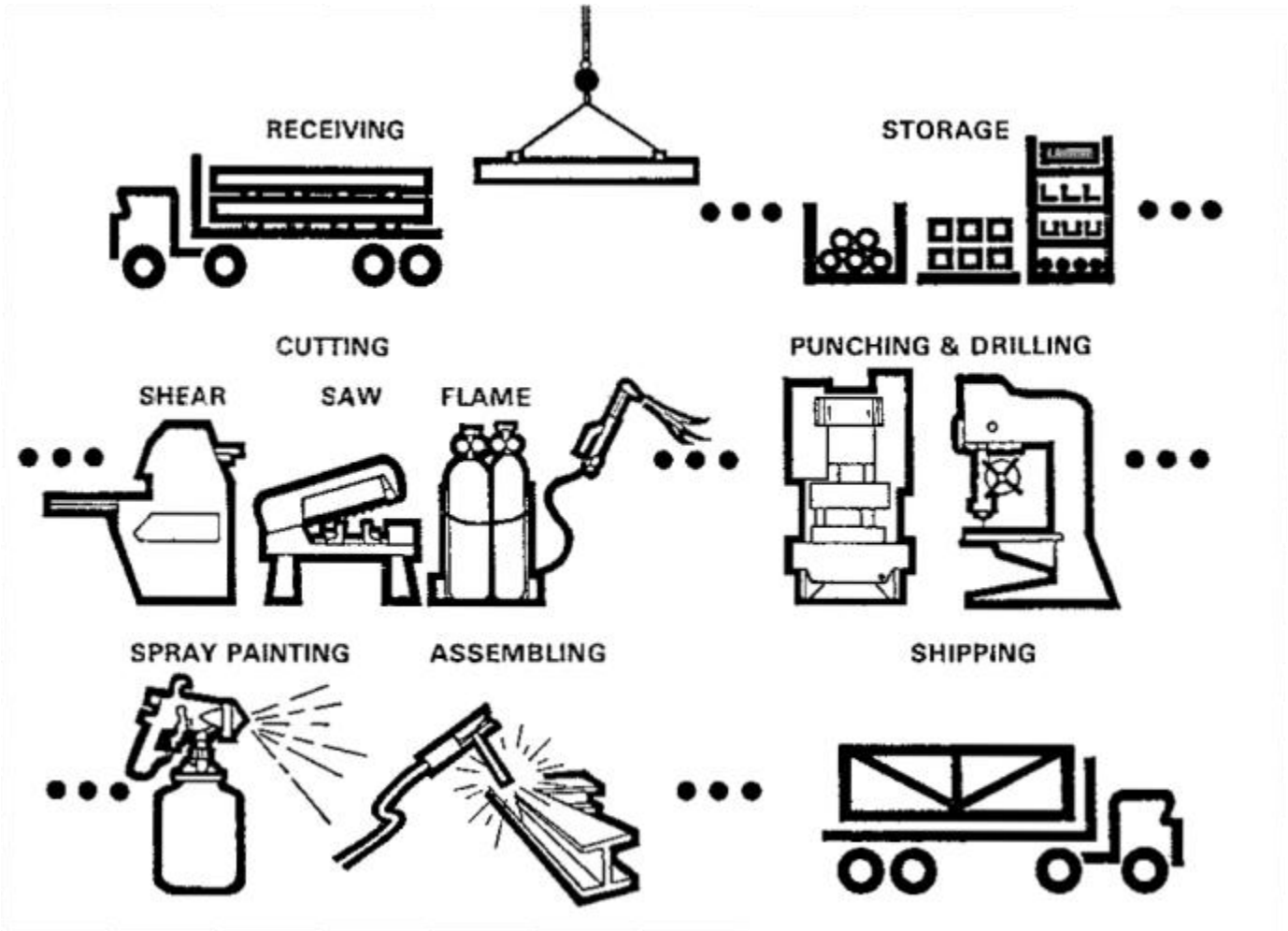
	NORTH CAROLINA DEPARTMENT OF LABOR	**No.** **34-1**
	OSH DIVISION	**Date:** **10/2009**
	OSHNC INDUSTRIAL DATA REPORT	**Pages:** **3**

Industry: **Fabricated Metal Products**	Sub-Group: **Fabricated Structural Steel**
SIC: **3441**	NAICS: **332312**

PROCESS DESCRIPTION: Raw materials are metals (ferrous and non-ferrous) in a variety of shapes and sections (sheets, strips, angles and beams). Finishing materials such as solvents, paints, lacquers, plating and galvanizing are used. Fastening devices such as screws, rivets, nuts and bolts are used. Plans and specifications concerning fabricated structural members and materials are prepared, raw material is cut to size and shape by shearing, sawing or flame cutting. Holes and/or notches are punched, drilled or flame-out. Parts may be formed or drawn to desired shapes. Parts are joined by welding, riveting, swaging or by separate fastening devices such as screws or nut and bolts. The fabricated item is smoothed by glass/sand-blasting and grinding, cleaned with solvents and finished by painting or galvanizing. Some small items may be anodized, electroplated or dip-painted. Fabricated members and sub-members may be moved or handled by crane, fork truck or conveyor. Structural members may be assembled in plant and knocked down for shipment to final assembly point.

PROCESS FLOW:



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Hazards Analysis

Major Hazards			Other Hazards		
Location	**Item**	**Hazard**	**Location**	**Item**	**Hazard**
Throughout	Material handling	Cuts and lacerations from sharp edges of metal, bulky and heavy items falling from carrying devices	Fastening	Welding	Welding flash
	Mechanical power transmission apparatus	Amputation and crushed limbs			
Cutting, punch punching, drilling	Punch presses, saws	Amputation and crushed limbs	Cutting, punching, drilling, finishing, assembly	Metal chips and welding slag	Eye injuries
Cutting, punching, drilling, fastening	Noise	Hearing loss	Finishing welding	Ventilation	Toxic fumes and gases from welding, fire, toxic vapors from solvent and paint operations
			Finishing	Vapors and residue	Fire and explosion

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
ANSI B30.6	Overhead underhung hoists
Subpart D	Walking and working surfaces
Subpart E	Means of egress
Subpart I	Personal protective equipment
Subpart O	Machinery and machine guarding
Subpart P	Hand and portable powered tools & other hand-held equipment

SIC: 3441
NAICS: 332312

Subpart Q	Welding, cutting and brazing
Subpart S	Electrical
1910.94	Ventilation
1910.95	Occupational noise exposure
1910.106	Flammable and combustible liquids handling and storage
1910.107	Spray finishing with flammable and combustible liquids
1910.151	Eyewash and emergency showers
1910.176	Handling materials
1910.178	Powered industrial trucks
1910.179	Overhead and gantry cranes
1910.180	Truck cranes
1910.181	Derricks
1910.1000	Air contaminants
1910.1200	Hazard communication

Inspection Analysis

The inspection should begin in the receiving and storage area. Check cranes, hooks, ropes, etc. powered industrial trucks, yard conditions and material stacking and loading procedures. The cutting operation must be closely checked for power transmission apparatus and point of operation guarding as well as safe practices in the flame cutting area. Throughout the plant be aware of the handling of heavy plates and beams. In the punching and drilling area inspect punch presses for proper barrier guarding or two hand controls. Also establish record keeping, die marking an die handling procedures for presses at this time. Some plants glass/sand blast and paint parts prior to assembly while others paint the end product. In most cases the finishing area will be an open spray area where wiring and other sources of sparks must be noted. The assembly area will have welding, riveting and bolting. In some cases hard hats will be required because of overhead work. Check shipping in the same manner as receiving.

Other Pertinent Comments: