



NORTH CAROLINA DEPARTMENT OF LABOR

No. 26-2

OSH DIVISION

Date: 10/2009

OSHNC INDUSTRIAL DATA REPORT

Pages: 3

Industry: Paper

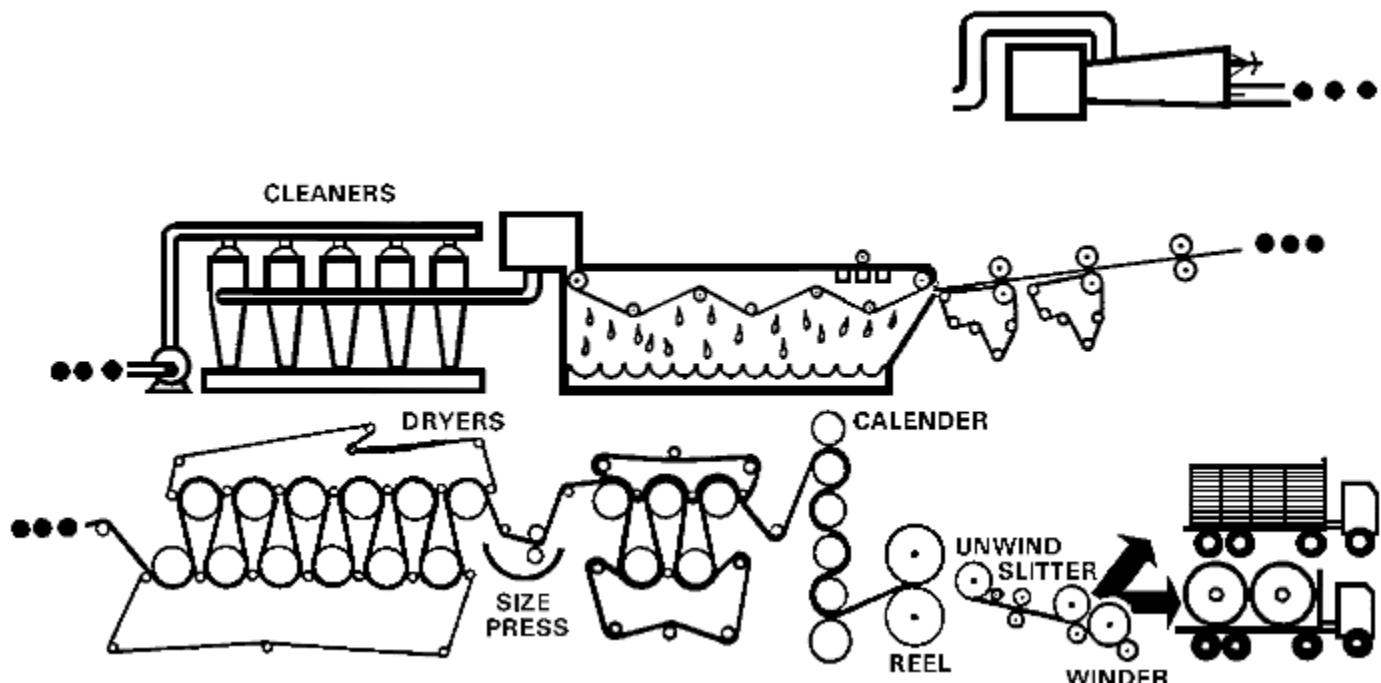
Sub-Group: Paper and Paperboard Mills

SIC: 2621 and 2631

NAICS: 322121 and 322130

PROCESS DESCRIPTION: Pulp stock is received from the pulp mill after being washed, bleached, and blended. Stock is received in head box of paper machine after which a moving screen collects a thin layer of the stock and transfers it to belts that convey the paper through a series of rollers that remove liquor, dry and size press the material. At the dry end of the paper machine the paper is routed through a series of calendars and onto a reel. The roll of stock is then unwound, slit to desired length and rewound. Finally the paper is custom finished as to the surface and size, and transported to the storage warehouse.

PROCESS FLOW:



Hazards Analysis

Major Hazards

Other Hazards

Location	Item	Hazard	Location	Item	Hazard
Stock prep area	Caustic soda and sulphuric acid	Severe burns; highly reactive, highly toxic	Stock prep area	Noise	Hearing loss


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Paper machine	Steam lines	Thermal burns	Paper machine	Noise	Hearing loss
	Nip points	Amputations and lacerations		Wet or cluttered walking working surfaces	Slips, trips, and falls
	Chlorine gas	Inhalation, burns		Handling paper reels	Crushed toes, feet
	Elevated work surfaces	Falls		Cleaning felts and rollers	Chemical burns; amputations and lacerations
	Revolving paper reels	Amputations, lacerations and burns		Floor opening and pit	Falls
	Maintenance	Inadvertent starting			
	Calendar Stack	Amputations, lacerations, static electricity			
Unwinder, slitter and winder (dry end)	Slitter knives	Cuts/unguarded	Unwinder, slitter and winder (dry end)	Handling paper rolls	Faulty chain hoists/hooks; mashed toes; back strains
Finishing department	Slitter knives	Cuts/unguarded	Finishing department	Handling paper rolls	Faulty chain hoist/hooks; mashed toes; back sprains
	Guillotine shears	Amputations			
	Revolving paper rolls	Amputations, lacerations and burns			
Warehouse	Unstable stacks	Crushed body or limbs from falling material			
	Motorized equipment	Pedestrian vehicle crash			
	Steel branding straps	Cuts on hand and face/eye injuries			

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
Subpart D	Walking and working surfaces
Subpart E	Exit Routes, Emergency Action Plans, and Fire Prevention Plans

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Subpart I	Personal protective equipment – where .261 does not apply	
Subpart O	Machinery and Machine Guarding – where .261 does not apply	
1910.95	Occupational noise exposure	
1910.119	Process safety management	
1910.147	Control of hazardous energy (lockout/tagout)	
1910.176	Handling Materials - general	
1910.178	Powered Industrial Trucks	
1910.179	Overhead and Gantry Cranes	
1910.184	Slings	
1910.261	Pulp, paper and paperboard mills	
1910.1000	Air contaminants	
1910.1200	Hazard Communication	
Inspection Analysis		
<p>Begin in the stock prep area with particular attention to the possibility of chemical and thermal burns, wet working surfaces, unguarded machinery, and noise levels. At the paper machine, look for slippery floor openings, emergency breathing apparatus, and exposed steam pipes. At the unwinder/slitter/winders, check for material handling procedures, guarded slitter knives, nip points, and unguarded turning rolls of paper. In the finishing room note guarded paper cutters, nip points, and chain hoists. In the warehouses observe stacking and material handling procedures.</p>		
<p>Other Pertinent Comments: Pulp mills combined with paper mills, and not separately reported, are included in this industry. Establishments primarily engaged in manufacturing converted paper products from purchased paper stock are classified in SIC codes 264 or 265. From a viewpoint of safety, there is no significant difference in the process of making paper and paperboard.</p>		