

	NORTH CAROLINA DEPARTMENT OF LABOR	No. 20-5
	OSH DIVISION	Date: 10/2009
	OSHNC INDUSTRIAL DATA REPORT	Pages: 3

Industry: Bakery Products

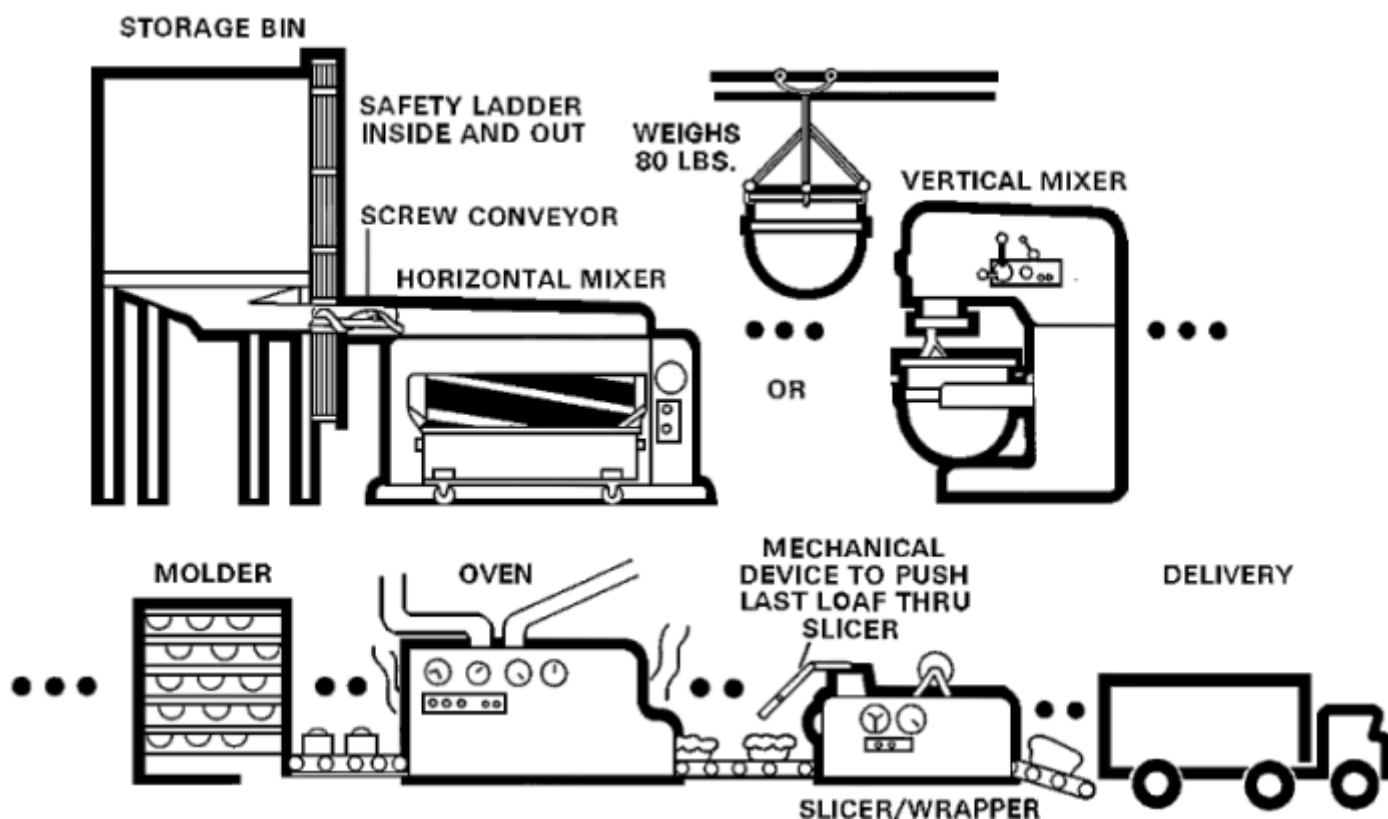
Sub-Group: Bread, Cake and Related Products: Cookies and Crackers


SIC: 2051, 2052 and 2053

NAICS: 311812, 311813, 311821 and 311919

PROCESS DESCRIPTION: Bakery goods include bread, cakes, pies, cookies, rolls, crackers and pastries. Ingredients consisting of flower, baked powder, sugar, salt, yeast, milk, eggs, cream, butter, lard shortening, extracts, jellies, syrup, nuts, artificial coloring and dried or fresh fruits are blended in a vertical or horizontal mixer after being brought from storage, measured, weighed, sifted and mixed. After mixing, the dough is raised, divided, formed and proofed. Fruit or flavored fillings are cooked and poured into dough shells. The final product is then baked in electric or gas-fired ovens, processed, wrapped and shipped. Loaves of bread are also sliced and wrapped.


PROCESS FLOW:



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Hazards Analysis						
Major Hazards			Other Hazards			
Location	Item	Hazard	Location	Item	Hazard	
Throughout plant	Mechanical power transmission apparatus	Amputation and crushed limbs from contact with gears, shafts, pulleys, belts, chains and sprockets	Mixing	Cranes and hoists	Broken chain links and pulleys causing mixing bowls to fall on employees	
	Housekeeping	Slipping, tripping and falling hazards				
	Point of operation	Amputation and crushed limbs from nip points and sharp blades				
	Electrical connections	Electrocution from inadequate grounding				
Mixing and baking areas	Ovens and open fat kettles	Burns, carbon monoxide and gas/propane explosion	Mixing and loading dock	Lifting	Back strains and pulled muscles	
			Storage	Combustible dusts	Explosion or fire	
			Shipping	Fork lifts	Carbon monoxide exposure, unsafe/untrained operators, collisions	
			Maintenance	Repair / cleaning of equipment	Converging sides, hazardous atmospheres and rotating/moving parts	
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		
Subpart S	Electrical – where 1910.263 does not apply		
Subpart O	Machinery and machine guarding – where 1910.263 does not apply		
1910.95	Occupational noise exposure		
1910.146	Permit-required confined space entry		
1910.147	Control of hazardous energy (lockout /tagout) – where 1910.263 does not apply		
1910.263	Bakery equipment		
1910.1000	Air contaminants		
1910.1026	Hexavalent Chromium		
1910.1200	Hazard Communication		
Inspection Analysis			
<p>The inspection should begin in the receiving and storage areas where bins must be checked for safety ladders of non splintering material. Any Class II hazardous locations must have approved electrical fixtures. Mixers should then be checked for interlocks and agitator guards, size of openings and cranes for moving bowls over 80 lbs. Bread rollers must have in-running rollers guarded and the slicing machine must have a device to push the last loaf of bread through and be interlocked. Assess personal protective equipment for hot fat kettles. Machines must be grounded and have power transmission apparatus guarded throughout. Any hot water and steam pipe must be guarded, especially in mixing and oven areas. Conveyors passing over aisles must be guarded to protect employees passing underneath baking machinery. Dividers, dough breaks, biscuit and cracker equipment, sugar and spike pulverizes, cheese and fruit cutters, and dough sheeters must have guards to protect nip points and points of operation. Aisles must be clear of all tripping and slipping hazards particularly at open fat kettles. High noise areas must be surveyed.</p>			
<p>Other Pertinent Comments: An industrial hygiene referral must be made for flour dust which can cause rhinitis, buccopharyngeal disorders, bronchial asthma and eye diseases. There is a high incidence of pulmonary tuberculosis among bakers. Combustible Dust issues should be investigated.</p>			