

disposed of regularly and the containers cleaned before reuse. Accumulation of dry waste paper and cardboard shall be kept to a minimum and disposed of in a manner that is environmentally acceptable.

§ 58.128 Equipment and utensils.

(a) *General construction, repair and installation.* The equipment and utensils used for the processing of milk and manufacture of dairy products shall be constructed to be readily demountable where necessary for cleaning and sanitizing. The product contact surfaces of all utensils and equipment such as holding tanks, pasteurizers, coolers, vats, agitators, pumps, sanitary piping and fittings or any specialized equipment shall be constructed of stainless steel, or other materials which under conditions of intended use are as equally corrosion resistant. Non-metallic parts other than glass having product contact surfaces shall comply with 3-A Sanitary Standards for Plastic or Rubber and Rubber-Like Materials. Equipment and utensils used for cleaning shall be in an acceptable condition, such as not rusty, pitted or corroded. All equipment and piping shall be designed and installed so as to be easily accessible for cleaning, and shall be kept in good repair, free from cracks and corroded surfaces. New or rearranged equipment, shall be set away from any wall or spaced in such a manner as to facilitate proper cleaning and to maintain good housekeeping. All parts or interior surfaces of equipment, pipes (except certain piping cleaned-in-place) or fittings, including valves and connections shall be accessible for inspection. Milk and dairy product pumps shall be of a sanitary type and easily dismantled for cleaning or shall be of specially approved construction to allow effective cleaning in place.

All C.I.P. systems shall comply with the 3-A Accepted Practices for Permanently Installed Sanitary Product, Pipelines and Cleaning Systems.

(b) *Weigh cans and receiving tanks.* Weigh cans and receiving tanks shall comply with the 3-A Sanitary Standards for Weigh Cans and Receiving Tanks for Raw Milk and shall be easily accessible for cleaning both inside and outside and shall be elevated above the

floor and protected sufficiently with the necessary covers or baffles to prevent contamination from splash, condensate and drippage. Where necessary to provide easy access for cleaning of floors and adjacent wall areas, the receiving tank shall be equipped with wheels or casters to allow easy removal.

(c) *Can washers.* Can washers shall have sufficient capacity and ability to discharge a clean dry can and cover and shall be kept properly timed in accordance with the instructions of the manufacturer. They should be equipped with proper temperature controls on the wash and rinse tanks and the following additional devices: Prerinse jet, wash tank solution feeder, can sanitizing attachment, forced air vapor exhaust, and removable air filter on drying chamber. The water and steam lines supplying the washer shall maintain a reasonably uniform pressure and if necessary be equipped with pressure regulating valves. The steam pressure to the can washer should be not less than 80 pounds, and the temperature of the wash and final rinse solution should be automatically controlled and not exceed 140 °F.

(d) *Product storage tanks or vats.* Storage tanks or vats shall be fully enclosed or tightly covered and well insulated. The entire interior surface, agitator and all appurtenances shall be accessible for thorough cleaning and inspection. Any opening at the top of the tank or vat including the entrance of the shaft shall be suitably protected against the entrance of dust, moisture, insects, oil or grease. The sight glasses, if used, shall be sound, clear, and in good repair. Vats which have hinged covers shall be easily cleaned and shall be so designed that moisture, or dust on the surface cannot enter the vat when the covers are raised. If the storage tanks or vats are equipped with air agitation, the system shall be of an approved type and properly installed in accordance with the 3-A Accepted Practices for Supplying Air Under Pressure. Storage tanks or vats intended to hold product for longer than approximately 8 hours shall be equipped with adequate refrigeration and/or have adequate insulation. New or replacement storage tanks or vats

shall comply with the appropriate 3-A Sanitary Standards for Storage Tanks for Milk and Milk Products or Sanitary Standards for Silo-Type Storage Tanks for Milk and Milk Products and shall be equipped with thermometers in good operating order.

(e) *Separators.* All product contact surfaces of separators shall be free from rust and pits and insofar as practicable shall be of stainless steel or other equally noncorrosive metals.

(f) *Coil or dome type batch pasteurizers.* Coil or dome type batch pasteurizers shall be stainless steel lined and if the coil is not stainless steel or other equally noncorrosive metal it shall be properly tinned over the entire surface. Sanitary seal assemblies at the shaft ends of coil vats shall be of the removable type, except that existing equipment not provided with this type gland will be acceptable if the packing glands are maintained and operated without adverse effects. New or replacement units shall be provided with removable packing glands. Dome type pasteurizer agitators shall be stainless steel except that any non-metallic parts shall comply with 3-A Sanitary Standards for Plastic or Rubber and Rubberlike Materials, as applicable. Each pasteurizer used for heating product at a temperature of 5 °F. or more above the minimum pasteurization temperature need not have the airspace heater. It shall be equipped with an airspace thermometer to insure a temperature at least 5 °F. above that required for pasteurization of the product. There shall be adequate means of controlling the temperature of the heating medium. Batch pasteurizers shall have temperature indicating and recording devices.

(g) *Short time pasteurizing systems.* When pasteurization is intended or required, an approved timing pump or device, recorder-controller, automatic flow diversion valve and holding tube or its equivalent, if not a part of the existing equipment, shall be installed on all such equipment used for pasteurization, to assure complete pasteurization. The entire facility shall comply with the 3-A Accepted Practices for the Sanitary Construction, Installation, Testing and Operation of High Temperature Short Time Pasteurizers. After the unit has been tested accord-

ing to the 3-A Accepted Practices, the timing pump or device and the recorder controller shall be sealed at the correct setting to assure pasteurization. The system should be rechecked semi-annually to assure continued compliance with the 3-A Accepted Practices. Sealing and rechecking of the unit shall be performed by the control authority having jurisdiction. When direct steam pasteurizers are used, the steam, prior to entering the product, shall be conducted through a steam strainer and a steam purifier equipped with a steam trap and only steam meeting the requirements for culinary steam shall be used.

(h) *Thermometers and recorders—(1) Indicating thermometers.* (i) Long stem indicating thermometers which are accurate within 0.5 °F., plus or minus, for the applicable temperature range, shall be provided for checking the temperature of pasteurization and cooling of products in vats and checking the accuracy of recording thermometers.

(ii) Short stem indicating thermometers, which are accurate within 0.5 °F., plus or minus, for the applicable temperature range, shall be installed in the proper stationary position in all pasteurizers. Storage tanks where temperature readings are required shall have thermometers which are accurate within 2.0 °F., plus or minus.

(iii) Air space indicating thermometers, where applicable, which are accurate within 1.0 °F., plus or minus, for the proper temperature range shall also be installed above the surface of the products pasteurized in vats, to make certain that the temperature of the foam and/or air above the products pasteurized also received the required minimum temperature treatment.

(2) *Recording thermometers.* (i) Recording thermometers that are accurate within 1 °F., plus or minus, for the applicable temperature range, shall be used on each heat treating, pasteurizing or thermal processing unit to record the heating process.

(ii) Additional use of recording thermometers accurate within 2 °F., plus or minus may be required where a record of temperature or time of cooling and holding is of significant importance.

(iii) Recorder charts shall be marked to show date and plant identification,

reading of the indicating thermometer at a particular referenced reading point on the recording chart, amount and name of product, product temperature at which the “cut-in” and “cut-out” function, record of the period in which flow diversion valve is in forward-flow position, signature or initials of operator.

(i) *Surface coolers.* Surface coolers shall be equipped with hinged or removable covers for the protection of the product. The edges of the fins shall be so designed as to divert condensate on nonproduct contact surfaces away from product contact surfaces. All gaskets or swivel connections shall be leak proof.

(j) *Plate type heat exchangers.* Plate type heat exchanger shall comply with the 3-A Sanitary Standards Plate Type Heat Exchangers for Milk and Milk Products. All gaskets shall be tight and kept in good operating order. Plates shall be opened for inspection by the operator at sufficiently frequent intervals to determine if the equipment is clean and in satisfactory condition. A cleaning regimen should be posted to insure proper cleaning procedures between inspection periods.

(k) *Internal return tubular heat exchangers.* Internal return tubular heat exchangers shall comply with the 3-A Sanitary Standards for Internal Return Tubular Heat Exchangers for Use with Milk and Milk Products.

(l) *Pumps.* Pumps used for milk, and dairy products shall be of the sanitary type and constructed to comply with 3-A Sanitary Standards for Pumps for Milk and Milk Products. Unless pumps are specifically designed for effective cleaning-in-place they shall be disassembled and thoroughly cleaned after use.

(m) *Scales.* All scales shall comply with National Bureau of Standards Handbook 44. (Latest revision).

(1) Small capacity scales shall be capable of the following accuracy, and shall be graduated in no higher than one ounce graduations. (This table taken from the presently effective 1973 revision.)

	Minimum tolerance	
	Ounces	Pounds
Load in pounds:		
0 to 4 inclusive	1/32	0.002
5 to 10 inclusive	1/16	.004
11 to 20 inclusive	1/8	.008
21 to 30 inclusive	3/16	.012
31 to 50 inclusive	1/2	.031
51 to 500 inclusive	3/4	.047

(2) Large capacity scales shall be capable of the following accuracy, and shall be graduated in no higher than 1/4 pound graduations for scales of capacity of up to 250 pounds; 1/2 pound graduations for scales above 250 pounds capacity.

(This table taken from the presently effective 1973 revision.)

	Minimum tolerance	
	Ounces	Pounds
Load in pounds:		
101 to 150 inclusive	1 1/4	0.078
151 to 250 inclusive	2	.125
251 to 500 inclusive	4	.250
501 to 1000 inclusive	8	.500
1001 to 2500 inclusive	1.0

Compliance shall be determined by the appropriate regulatory authority.

(n) *Homogenizers.* Homogenizers and high pressure pumps of the plunger type shall comply with the 3-A Sanitary Standards for Homogenizers and Pumps of the Plunger Type and shall be disassembled and thoroughly cleaned after use.

(o) *New equipment and replacements.* New equipment and replacements, including all plastic parts and rubber and rubberlike materials for parts and gaskets having product contact surfaces, shall comply with the then current 3-A Sanitary Standards. If 3-A Sanitary Standards are not available, such equipment and replacements shall meet the general requirements of this section. Only material that is sanitary, readily cleanable and non-toxic shall be used for product contact surfaces, parts and gaskets.

(p) *Vacuumizing equipment.* The vacuum chamber, as used for flavor control, shall be made of stainless steel or other equally corrosion resistant metal. The unit shall be constructed to facilitate cleaning and all product contact surfaces shall be accessible for inspection.

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Vacuum chambers located on the pasteurized side of the unit shall be isolated by means of a vacuum breaker and a positive activated check valve on the product inlet side and a vacuum breaker and a positive activated check valve on the discharge side. If direct steam is used, it should also be equipped with a ratio controller to regulate the composition when applicable to the finished product. Only steam which meets the requirements for culinary steam shall be used. The incoming steam supply shall be regulated by an automatic solenoid valve which will cut off the steam supply in the event the flow diversion valve of the pasteurizer is not in the forward flow position. Condensers when used shall be equipped with a water level control and an automatic safety shutoff valve.

PERSONNEL, CLEANLINESS AND HEALTH

§ 58.129 Cleanliness.

All employees shall wash their hands before beginning work and upon returning to work after using toilet facilities, eating, smoking or otherwise soiling their hands. They shall keep their hands clean and follow good hygienic practices while on duty. Expectoration or use of tobacco in any form shall be prohibited in each room and compartment where any milk, dairy products, or supplies are prepared, stored or otherwise handled. Clean white or light-colored washable or disposable outer garments and caps (paper caps, hard hats, or hair nets acceptable) shall be worn to adequately protect the hair and beards when grown by all persons engaged in receiving, testing, processing milk, manufacturing, packaging or handling dairy products.

§ 58.130 Health.

No person afflicted with a communicable disease shall be permitted in any room or compartment where milk and dairy products are prepared, manufactured or otherwise handled. No person who has a discharging or infected wound, sore or lesion on hands, arms or other exposed portion of the body shall work in any dairy processing rooms or in any capacity resulting in contact with milk, or dairy products. Each employee whose work brings him in con-

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tact with the processing or handling of dairy products, containers or equipment should have a medical and physical examination by a registered physician or by the local department of health at the time of employment. An employee returning to work following illness from a communicable disease shall have a certificate from the attending physician to establish proof of complete recovery.

PROTECTION AND TRANSPORT OF RAW MILK AND CREAM

§ 58.131 Equipment and facilities.

(a)(1) *Milk cans.* Cans used in transporting milk from dairy farm to plant shall be of such construction (preferably seamless with umbrella lids) as to be easily cleaned, and shall be inspected, repaired, and replaced as necessary to exclude substantially the use of cans and lids with open seams, cracks, rust, milkstone, or any unsanitary condition. Adequate provisions should be made so that milk in cans will be cooled immediately after milking to 50 °F. or lower unless delivered to the plant within two hours after milking.

(2) *Farm bulk tanks.* Farm bulk tanks shall comply with 3-A Sanitary Farm Cooling and Holding Tanks or 3-A Sanitary Standards for Farm Cooling and Holding Tanks or 3-A Sanitary Standards for Farm Milk Storage Tanks as applicable. They shall be installed in a milk house in accordance with the requirements of the regulatory agency in jurisdiction. The bulk cooling tanks shall be designed and equipped with refrigeration to permit the cooling of the milk to 40 °F. or lower within two hours after milking, and maintain it at 45 °F. or below until picked up.

(b)(1) *Receiving stations.* Receiving stations shall comply with the applicable sections of this subpart covering premises, buildings, facilities, equipment, utensils, personnel, cleanliness and health.

(2) *Transfer stations.* Transfer stations shall comply with the applicable sections of this subpart covering premises, floors, lighting, water supply, hand-washing facilities, disposal of wastes,