

EQUIPMENT AND UTENSILS

§ 58.214 General construction, repair and installation.

All equipment and utensils necessary to the manufacture of dry milk products, including pasteurizer, timing-pump or device, flow diversion valve and recorder controller, shall meet the same general requirements as outlined in § 58.128 of this subpart. In addition, for certain other equipment the following requirements shall be met.

§ 58.215 Pre-heaters.

The pre-heaters shall be of stainless steel or other equally corrosion resistant material, cleanable, accessible for inspection and shall be equipped with suitable automatic temperature controls.

§ 58.216 Hotwells.

The hotwells shall be enclosed or covered and should be equipped with indicating thermometers either in the hotwell or in the hot milk inlet line to the hotwell. If used for holding high heat products, they should also have recorders.

§ 58.217 Evaporators and/or vacuum pans.

Evaporators or vacuum pans or both, with open type condensers shall be equipped with an automatic condenser water level control, barometric leg, or so constructed so as to prevent water from entering the product. New or replacement units shall comply with the 3-A Sanitary Standards for Milk and Milk Products Evaporators and Vacuum Pans. When enclosed type condensers are used, no special controls are needed to prevent water from entering the product. Water collected from the condensing of product (cow water) in this equipment may be utilized for prerinsing and cleaning solution make-up; provided it is equipped with proper controls that will automatically divert water with entrained solids to the waste water system. "Cow water" shall not be used for acidified or final equipment rinse.

§ 58.218 Surge tanks.

If surge tanks are used for hot milk, and temperatures of product including

foam being held in the surge tank during processing, is not maintained at a minimum of 150 °F, then two or more surge tanks shall be installed with cross connections to permit flushing and cleaning during operation. Covers easily removable for cleaning shall be provided and used at all times.

§ 58.219 High pressure pumps and lines.

High pressure lines may be cleaned-in-place and shall be of such construction that dead ends, valves and the high pressure pumps can be disassembled for hand cleaning. The high pressure pump shall comply with the 3-A Sanitary Standard for Homogenizers and Pumps of the Plunger Type.

§ 58.220 Drying systems.

(a) *Spray dryers.* Spray dryers shall be of a continuous discharge type and all product contact surfaces shall be of stainless steel or other equally corrosion resistant material. All joints and seams in the product contact surfaces shall be welded and ground smooth. All dryers shall be constructed so as to facilitate ease in cleaning and inspection. Sight glasses or ports of sufficient size shall be located at strategic positions. Dryers shall be equipped with suitable air intake filters. The filter system shall comply with the applicable requirements of the 3-A Accepted Practices for Milk and Milk Products Spray Drying Systems. The filtering system shall be cleaned or component parts replaced as often as necessary to maintain a clean and adequate air supply. In gas fired dryers, precautions should be taken to assure complete combustion. Air shall be drawn into the dryer from sources free from objectionable odors and smoke, dust or dirt. New systems, replacement systems, or portions of systems replaced shall comply with the requirements of the 3-A Accepted Practices for Milk and Milk Products Spray Drying Systems.

(b) *Roller dryers.* (1) The drums of a roller dryer shall be smooth, readily cleanable and free of pits and rust. The knives shall be maintained in such condition so as not to cause scoring of the drums.

(2) The end boards shall have an impervious surface and be readily cleanable. They shall be provided with a means of adjustment to prevent leakage and accumulation of milk solids. The stack, hood, the drip pan inside of the hood and related shields shall be constructed of stainless steel and be readily cleanable. The lower edge of the hood shall be constructed so as to prevent condensate from entering the product zone. The hood shall be properly located and the stack of adequate capacity to remove the vapors. The stack shall be closed when the dryer is not in operation. The augers shall be stainless steel or properly plated, and readily cleanable. The auger troughs and related shields shall be of stainless steel and be readily cleanable. All air entering the dryer room shall be filtered to eliminate dust and dirt. The filter system shall consist of filtering media or device that will effectively, and in accordance with good commercial practices, prevent the entrance of foreign substances into the drying room. The filtering system shall be cleaned or component parts replaced as often as necessary to maintain a clean and adequate air supply. All dryer adjustments shall be made and the dryer operating normally before food grade product is collected from the dryer.

(c) *Other drying systems.* These systems shall be constructed following the applicable principles of the 3-A Accepted Practices for Milk and Milk Products Spray Drying Systems.

§ 58.221 Collectors and conveyors.

Collectors shall be made of stainless steel or equally noncorrosive material and should be constructed to facilitate cleaning and inspection. Filter sack collectors, if used, shall be in good condition and the system shall be of such construction that all parts are accessible for cleaning and inspection. Conveyors shall be of stainless steel or equally corrosion resistant material and should be constructed to facilitate thorough cleaning and inspection.

§ 58.222 Dry dairy product cooling equipment.

Cooling equipment shall be provided with sufficient capacity to cool the product as specified in § 58.240. A suit-

able dry air supply with an effective filtering system meeting the requirements of § 58.220(a) shall be provided where air cooling and conveying is used.

§ 58.223 Special treatment equipment.

Any special equipment (instantizers, hammer mills, etc.) used to treat dry milk products shall be of sanitary construction and all parts shall be accessible for cleaning and inspection. New or replacement instantizing systems shall comply with the 3-A Accepted Practices for Instantizing Systems for Dry Milk and Dry Milk Products.

§ 58.224 Sifters.

All newly installed sifters used for dry milk and dry milk products shall comply with the 3-A Sanitary Standards for Sifters for Dry Milk and Dry Milk Products. All other sifters shall be constructed of stainless steel or other equally noncorrosive material and shall be of sanitary construction and accessible for cleaning and inspection. The mesh size of sifter screen used for various dry dairy products shall be those recommended in the appendix of the 3-A Standard for sifters.

§ 58.225 Clothing and shoe covers.

Clean clothing and shoe covers shall be provided exclusively for the purpose of cleaning the interior of the dryer when it is necessary to enter the dryer to perform the cleaning operation.

§ 58.226 Portable and stationary bulk bins.

Bulk bins shall be constructed of stainless steel, aluminum or other equally corrosion resistant materials, free from cracks, seams and must have an interior surface that is relatively smooth and easily cleanable. All product contact surfaces shall be easily accessible for cleaning. The capacity of each portable and bulk bin shall be limited to permit proper operating procedures such as sampling and daily removal of all product to preclude commingling of different days production.

§ 58.227 Sampling device.

If automatic sampling devices are used, they shall be constructed in such a manner as to prevent contamination