

Improved System for Lecithinization of Food Powders

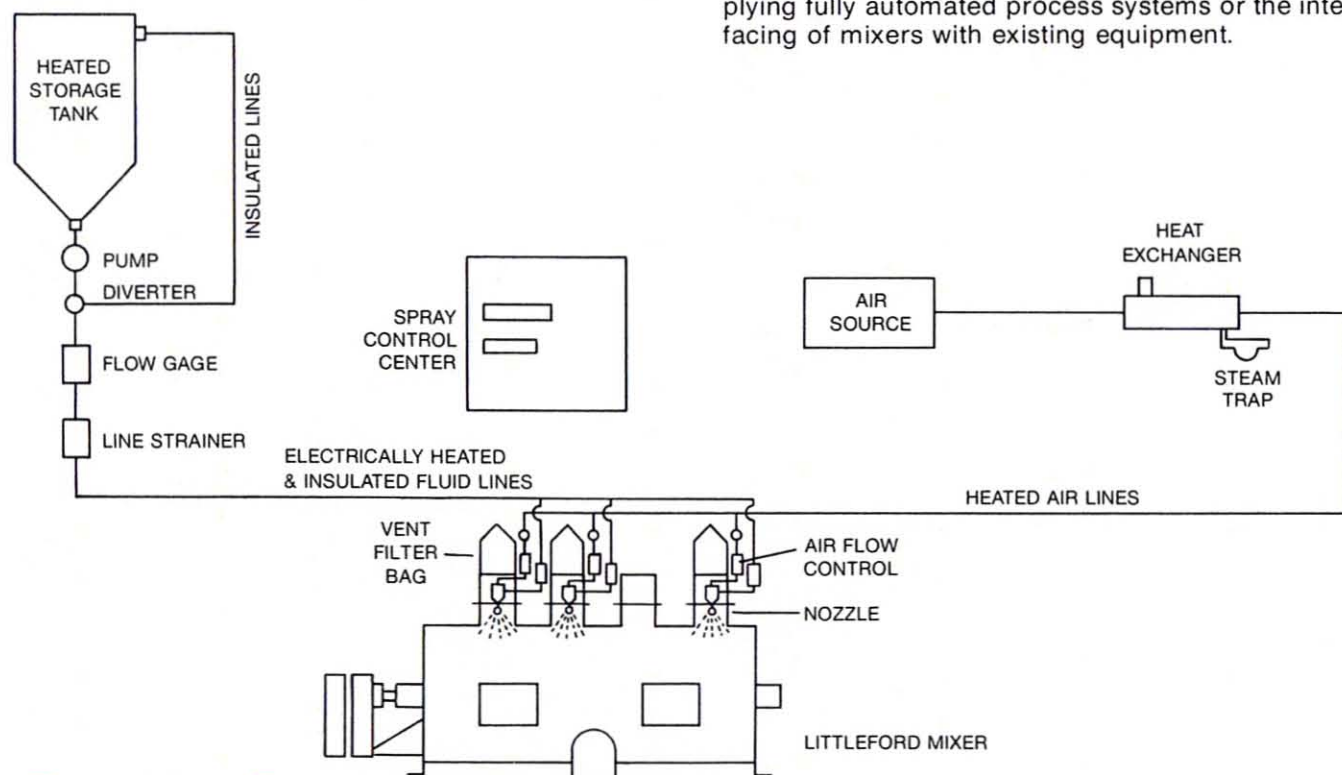
In the formulation of cold milk or water dispersible drink mix powders, i.e. cocoa, protein, milk, etc., it is highly desirable to obtain total wettability of the powders so that they will disperse quickly and completely. For this purpose, normally a wetting agent is used as an emulsifier to reduce the surface tension of the fat containing powder particles and thus force them to wet-out and disperse. The wetting agent most frequently used for this purpose is a viscous liquid called soya-lecithin. A problem arises in the fact that the viscous lecithin is very difficult to uniformly disperse into the powders.

Littleford, through its process technology and mixer design, has developed an improved system for the uniform lecithinization of food powders. The unique part of the Littleford process system is the "heated" air atomization of viscous lecithin liquid. This assures the finest possible atomization of the lecithin for applying to a mechanically fluidized powder bed in the Littleford mixer. The diagram below illustrates the Littleford process.

Major user benefits of the Littleford method of lecithinization include complete uniformity of dispersion, improved product wetting characteristics, increased productivity and a minimization of lecithin usage in the process.

The Littleford mixer used in the process is the FKM Series batch mixer. The unique action developed by this intermediate intensity mixer assures a rapid and complete mix of powders and additives in minimal cycle times. This action is developed by the turning of plow-shaped mixing tools at a speed sufficient to cause the materials of mix to become a pulsating, "mechanically fluidized" bed. The basic plow mix action is supplemented by high speed, high shear, chopping devices that are mounted between adjacent plows and act as a finisher does to deagglomerate powders and disperse the wetting agent.

The Littleford design has been tested in the lab and proven in the field many times. Littleford mixers can be purchased in a variety of sizes to meet most all production requirements. Littleford can assist in supplying fully automated process systems or the interfacing of mixers with existing equipment.



Littleford Day

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