

Cross Engineered Solutions

Emulsion Station for Asphalt Sealant Manufacturing Plant



Summary

Asphalt sealant manufacturing plants require that emulsions be produced by suspending minute globules of bituminous material in water or in an aqueous solution. The emulsion needs to be prepared by adding the asphalt, water and emulsifier in the correct percentages and processing the mixture so that the finished product has a consistent nature to produce quality sealants for finishing, repairing or maintaining paved surfaces.

The emulsion station consists of a drum floor scale, a variable speed pump, and 3 electro-pneumatically controlled solenoid valves, working in conjunction with each other to:

- > Precisely feed prepared emulsifier (by weight, over time) to the other weighed ingredients,
- > Re-circulate (mix) the emulsifier, and to
- > Replenish the main emulsifier drum from a stand-by drum of emulsifier.

The emulsion station is a sub-system of the batch-wizard controls, implemented for asphalt sealant plants.

Benefits

Emulsifier is prepared and automatically dispensed into the other ingredient lines (tar, asphalt etc.) according to user defined mix percentages. End-product consistency is therefore maintained from batch to batch. A stand-by drum of emulsifier is available so the main emulsifier drum can be replenished automatically, without the need to stop down-stream processes to manually change out or re-fill the main emulsifier drum.

Engineering Specifications

- Single drum floor scale capacity 1000lb
- 1x3 phase 1 HP variable speed pump (1/2" pipe)
- 3x pneumatic solenoid controlled 1/2" ball valves