

3 Dryer / cooler standby

Dryer / cooler standby function:

When a change of product is required, it is possible to activate the “Dryer / cooler standby” function. This function in combination with the stop button will stop the product supply and empty the dryer/cooler. The operation mode of all other components of the installation will remain the same.

This way it is possible to make a change in product without needing to stop the whole installation.

Installation to standby sequence with:

- Activate the “Standby” button on SCADA/HMI.
- Activate the “Stop” button on SCADA/HMI.

The dryer stop sequence (to stand-by) will start automatically as follows:

- Message on SCADA/HMI “Dryer to stand-by mode” and “production stops”.
- stops “Product supply” controller TICA1101 & TICA1126.
- stops “Product temperature dryer” controller TICA1113 (when active).
- speed M73, M74, M75, M76 “Belt conveyor’s wet sand” signal slowly down.

IF M73, M74, M75, M76 running on 15% (minimum speed)

After xxx seconds: (*Stop time 1)

- stops “Belt conveyor wet sand bunker” M73, M74, M75, M76.

After xxx seconds: (*Stop time 2)

- stops “Collect belt conveyor wet sand” M71.

After xxx seconds: (*Stop time 3)

- stops “Main belt conveyor wet sand” M72.

After xxx seconds: (*Stop time 4)

- starts “Dryer drive” M01 to high speed* (if TICA1126 goes high during standby sequence burner will stop).

After xxx seconds: (*Stop time 5)

- starts “Dryer drive” M01 to normal speed*
- Operator need to decide to start or stop the installation. (change the menu and push “Start” button again OR deactivate “Stand-by” button to activate the complete stop sequence of the installation).

Signal on SCADA/HMI “Dryer to stand-by mode” and “production stops”.

End of standby sequence.

***setpoint adjustable on SCADA / HMI system**

4 Controllers

Pressure difference controller filter

- Pressure difference controller filter PDICA3200, output to pause time filter cleaning valves E07 (setpoint adjustable via Scada.)
Depending on the pressure difference of the filter, the controller controls the pause time of the filter cleaning. The pulse time is a fixed time (adjustable via Scada).

(Sub) pressure controller dryer

- Pressure top of dryer PICA1210, output controller to exhaust fan M25. (setpoint adjustable on SCADA/HMI system) *1 can run M25 if PICA1210 is broken (M25 Manual in AUTO mode).

Temperature controllers

- One “Exhaust air temperature” controller TICA1126 and one “Supply air temperature” controller TICA1101.
The controllers working together to control the fuel valve V35. These controllers are maximum temperature controller, i.e. the lowest signal is controlling the fuel control valve V35.
(setpoint adjustable on SCADA/HMI system).

Product temperature dryer controller

- One “Product temperature dryer” controller TICA1113.
The output changes the setpoint of the “Exhaust air temperature” controller TICA1126 between the minimum and maximum limits.
(setpoint adjustable on SCADA /HMI system) **2 TICA1113 can be switched off.

Product supply controller

- The output of the controller controls the “product supply system” belt conveyor’s M71, M72 and the bunker belt conveyor’s at ratio speed if selected M73, M74, M75, M76.
When the exhaust air temperature TICA1126 is on setpoint and the supply air temperature TICA1101 is not on setpoint then the product supply goes upwards.
When the supply air temperature TICA1101 is on setpoint, then the dryer is in maximum production and the product supply stops going upwards.
When the exhaust air temperature TICA1126 is too low or the supply air temperature TICA1101 is too high (on or above setpoint) the product supply will go downwards (slowly).
(setpoint adjustable on SCADA /HMI system).

Ratio controller wet sand hoppers

- The ratio controller controls the amount of wet sand out of the selected wet sand hoppers. The controller divides the product supply signal depending on the ratio setpoint between the selected hoppers. Output of the controller are the signals to the belt conveyors M73, M74, M75, M76.

The ratio of each selected bunker is adjustable in the Scada system. The ratio of the highest selected hopper is automatically calculated (is added to a total of maximum 100%). If there is no product detection at one of the selected belt conveyor, the speed of the belt conveyor goes to minimum speed and the product supply signal will be added to the other active belt.

If there is no product detection on a selected belt conveyor for more than one minute, the product supply signal goes equal divided to the other selected hoppers.



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