

TROLLEY TANK CONTROL ~ CLEANER CONTROL DELIVERS SAVINGS

BACKGROUND

The cleaning of carcass trolley hooks in the slaughter plant is a two stage process requiring a good degree of control to achieve two outcomes.

Trolley cleaning is typically done in two baths that are normally heated using steam coils in the floor of the bath.

The first bath uses a caustic solution to clean the stainless steel trolley hooks to remove any residual blood and protein from the carcass that was previously hung.

The second tank contains a layer of lubricating oil on top of a layer of water that is used to lubricate the trolleys and allow them to move freely along guide rails when under loads of hundreds of pounds of carcass weight.

PROBLEM

Trolley cleaning has typically been a back of house process, that is a critical process that can affect or stop the whole plant if not maintained and controlled properly.

Traditionally the bath temperatures are controlled using thermostatic or pneumatic steam control valves. Pneumatic plug valves are maintenance intensive around the sliding gland packed seal and rely on constant high quality air to deliver a reasonable level of control. Bi-metallic thermostatic valves rely on consistent operating conditions to achieve a degree of accuracy.

In the event that the caustic bath is not maintained up to temperature, then the trolley hooks may not clean up appropriately. Over temperature conditions in the bath can cause the caustic to “boil off”, producing an unsafe working environment, wasting caustic and reducing the cleaning effectiveness.

If the oil bath is below the correct set point temperature, the oil can be too viscous and not drain sufficiently off the hooks causing oil to drip onto carcasses, and resulting QA issues will occur.

Oil that is too hot can burn onto the hooks, again causing serious QA issues.



Traditional Thermostatic and Emech Steam control solution

SOLUTION

Using the closed loop temperature control functionality that the EmechG1 actuator provides when it was coupled to a v-port steam control valve delivered significant value in two forms.

From a cost saving perspective, reduced steam consumption observed by achieving a tighter operating control band, combined with reduced caustic and oil usage as it was used at the correct temperature has delivered tangible savings to the bottom line. From an operator's perspective, a higher degree of control produced a safer and cleaner operating environment that meant his attention could be focused on proactively operating the area.

Payback on the installation was achieved in approximately 6 weeks.

Contact Emech directly or your local distribution representative for more information.