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Product Testing of Altech Controls AASC Anti-Sweat Heater Control

An AASC Anti-Sweat Heater Controller was installed on a 5 door Reach-In frozen food case at the Giant Eagle # 40 store in Pittsburgh, PA.

The AASC Anti-Sweat Heater Control, one of Altech's signature products has been designed to prevent condensation on the frames of glass door refrigerated cases in the most effective and energy efficient way. The device monitors the frame temperature and maintains it slightly above the Dew Point, minimizing energy consumption.

After having the Altech's AASC Anti-Sweat Heater Control operating for a period of 126 days, averaging Summer, Fall and Winter weather, the data gathered shows the control has effectively minimized the operations of the door heaters by 70.7%. Furthermore, we will see an additional reduction in energy use of approximately 50% of the direct heater savings due to reduced load on the refrigeration system. In economic terms, it can be projected the Pittsburgh store will be able to realize annual average energy savings in the order of 157,930 KWh. This translates into \$ 11,845 savings per year.¹

The installation of Anti-Sweat Heater Control for the Pittsburgh store will cost \$13,547 for the 35 cases in the store. Projected savings result in a payback on the investment in 1.14 years. The cash flows generated in the useful life of the device, discounted at 12%, will also realize a net present value of \$ 47,659.

Is important to mention that in addition to the cited savings, the presence of the control will increase the life and performance of the heaters. It will also, as a consequence, lengthen the time products can be maintained in the event of a catastrophic refrigeration failure.

1. Per assumptions in attached detailed calculations.

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Performance and Investment Analysis for Anti-Sweat Control

Assumptions:

Hours /Year		8760
Measured Heaters Days of Operation		126
Measured Heaters Days of Operation		3024
Start Date	7/25/2006	
End Date	11/30/2006	
Extrapolated - Heaters % Annual Operation		29.30%
Extrapolated - Heaters/Hours of Operation		2,566.68
Extrapolated - Heaters/Hours Turned Off		6,193.32
Additional % of Savings due to reduced Refrigeration Load		50%
Amps per Door		0.89
Total Store Doors		166
Total Amps per Store		147.74
Total KW per Store		17.00
Estimate Annual Energy Savings/KWh - Turned Off Heaters		157,929.66
Estimate Energy Cost/KWh		\$0.075
Estimate Annual Energy Savings @ Store		\$11,844.72
AASC Kit Price per Case		\$216.07
AASC Kit Installation Cost per Case		<u>\$171.00</u>
Total Kit Installed Cost		\$387.07
Number of Cases per Store		35.00
Total Investment per Store		\$13,547.45
Control Useful Life - Years		10
Net Present Value @ 12%		\$47,658.83
IRR		87%
Payback - Years (Investment vs. Savings)		1.144