



CUSTOMER: Pinneys of Scotland

LOCATION: Annan, Dumfries, United Kingdom

BACKGROUND: Pinneys of Scotland is one of the world's leading processors of Scottish salmon. From humble beginnings as a small smoke house to a state-of-the-art operating plant in Annan, Dumfries, the company has expanded rapidly over the last few years to supply a whole range of quality salmon and seafood products. The rapid expansion has derived from a substantial investment in all areas of the production process including the plant's hot water system. Pinneys uses hot water for their equipment washdown process and desired to replace the existing steam and gasfired water heaters. Pinneys not only wanted a solution for their immediate needs, but also looked to a solution to meet future water requirements as well.

SCOPE OF WORK: The Armstrong Flo-Direct® Complete Thermal Exchange (CTE) gas-fired water heater's simple direct contact water heating principle met Pinneys' requirements. The fully packaged Flo-Direct®, with pumps and a buffer tank, has performed effortlessly since installation. The plant requires washing down of equipment at least once a day and, depending on the production volume, additional washdowns are sometimes required. It is specified at a temperature of 145°F (65°C) and meets the required rate of 1,849 gallons per hour (7m³/h), 24 hours per day.

BENEFITS: The Flo-Direct® meets Pinneys' expectations of temperature and volume, and has made a substantial contribution to energy saving in the plant. Since installation, it is estimated that Pinneys has recognized significant energy savings for heating water for washdown which represents a large portion of the plant's energy bill. The Armstrong Flo-Direct® has gained an enviable reputation for operating at 99.7% efficiency at all demands.

