

Case Study: Poultry Processing EZ-FLO® Style 206 with GUARDIAN® FEP Liner



INDUSTRY

Food - Poultry Processing

CUSTOMER

US Poultry Processing Plant

BACKGROUND

Poultry processing plants across the United States are specifically designed to process broiler chickens and turkeys in a processing line comprised of trained workers and automated equipment with provisions for inspection and testing conducted by the USDA and plant personnel. A large portion of the process is automated and involves long stainless steel tubing and other sophisticated equipment.

CHALLENGES FACED

The plant has hard lined stainless steel tubing located in the mechanical deboned poultry (MDP) area that runs from their Votator® presses to the Waukesha® discharge pumps. The high pressure of the application and the vibration from the press and pump resulted in cracking of stainless steel welds on the tubing carrying animal fat. When the tubing cracked, animal fat was able to exit the line, creating a contamination issue for the plant.

OPERATING CONDITIONS

Size: Shaft - 3.000"ID and 4.000"ID

Temperature: 40°F

Application: MDP area, Votator Presses to Waukesha Pump

Media: Poultry fat

Pressure: Up to 250 PSI

SOLUTION AND BENEFITS

The two primary reasons an engineer will incorporate expansion joints into designed piping systems or will recommend them as a problem solver is to absorb vibration and reduce pipe stress. In this instance, Garlock was able to work with distribution and the end user to provide a Garlock EZ-FLO® Style 206 with a GUARDIAN® FEP liner (FDA compliant to 21CFR177.1550) and a Nitrile cover. The EZ-FLO® was designed to absorb vibration, reduce stress and handle high pressure which is exactly what this application demanded. The self-flushing arch design prevents media from becoming entrapped in the arch, and the Nitrile cover protects the expansion joint from damage by any potential outside contaminants.

For more information, please visit:
<http://www.garlock.com>

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