Fieldale Farms

Installer: Frank Kriews, Tom Buchanan
Type of Job: Roof Foam
Square Footage of Job: 120,000SF
Equipment Used: (2) Graco H-40 Reactors; (1) Graco Extreme 60:1
Number of people needed for the Job: 12
Number of days required by the Job: 42
Foam and coatings used: WDG System 14

Project Description: With over 400,000 chickens being processed daily, Fieldale identified one of their major operating costs corporately to be energy expense. They needed to reduce their energy expense; ultimately reducing the processing cost per chicken, to keep their prices competitive or Fieldale would have to relocate their operations outside of the United States. Multiple problems existed with the existing facility including; numerous leaks with constant maintenance and repairs being performed almost on a daily basis, very poor insulation in the existing roof assemblies consuming significant energy to maintain the extreme interior ambient conditions throughout the facility and there was a massive negative pressure problem within the facility, again, contributing to the energy consumption. The facility is 120,000 square feet with 26 different roof sections varying in age from 34 years to 5 years old. To date, we have only seen a couple of facilities with this extreme amount of roof top equipment and process lines. The roof is very busy with penetrations, process line support stanchions, and mechanical systems that require daily maintenance presenting a major waterproofing concern which provided the SPF system a competitive advantage with the self-flashing ability of the system. This facility provides finished product at one end of the building that is predominately frozen and begins with truckloads of fresh chickens at the other end. This all occurs under 26 roof areas with varying existing roof assemblies. Additionally, the interior space did not correlate to the roof top area separations requiring new area dividers to be installed, which also affected the drainage patterns. The SPF system was able to provide a monolithic blanket of insulation over the entire structure creating an air barrier which allowed the mechanical engineers to properly design control zones, eliminating the negative pressure concern. SPF was also utilized at through wall penetrations and many of the building’s roof-to-walls transitions to seal these areas of leakage. We had to employ numerous means of containment within the occupied space to satisfy the USDA to allow the owner to maintain production throughout all of this activity.

Benefits of using Foam: See project description.