

# Confections Systems Design and Installation

**Problem:** A client needed to relocate confectionary equipment and install additional, new equipment. System and equipment modifications were made to increase flexibility, improve product quality, grow production, reduce downtime and ease the use of the equipment.

**Solution:** Project Technologies & Services (PTS) provided the customer with support via initial building layout, process and electrical design, scope development, contractor specifications, bid evaluations, material procurement, scheduling and project management. This approach allowed the project to proceed without impacting the customer's other snack food production lines and minimized downtime for the relocated and new equipment.

The client consulted PTS during the initial decision-making process to learn everything required to build an addition to their existing main facility in order to relocate and expand their confectionary production. PTS provided several options for the location and dimensions of the new addition including equipment layouts. The client took the agreed upon option to an architectural firm to finalize the design efforts and build the addition.

The client researched pieces of equipment, including the cooling tunnel and the new melting tanks. They sent the equipment specifications to PTS to ensure the equipment met the process requirements. PTS discovered some potential problems with the design of the cooling tunnel and was able to direct the client toward a system that better met their needs.

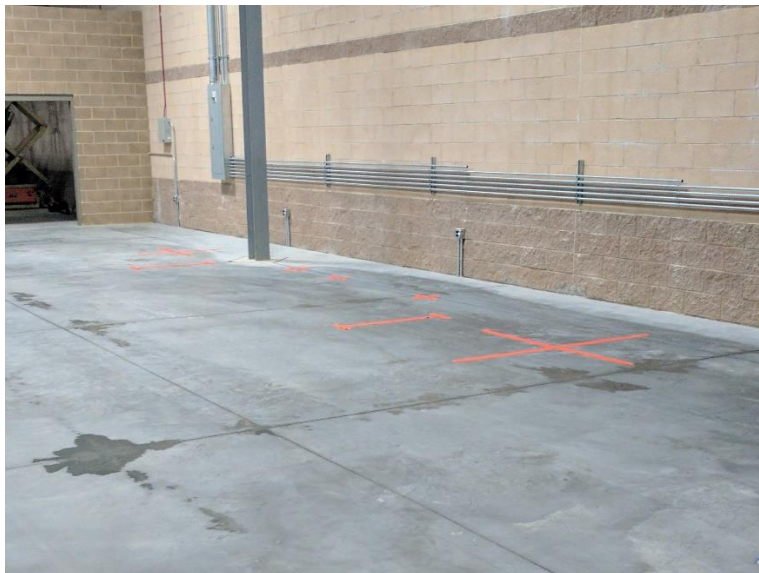


*New cooling tunnel*

PTS created piping and instrumentation diagrams (P&IDs) of the two systems. Both systems were designed to increased flexibility, grow production and minimize downtime between product change overs. PTS met with the client several times to the design was cost effective and met the client's needs.

Using the P&IDs and the architectural drawings, PTS worked with the client to create an equipment layout drawing. PTS kept in mind the client's future plans for the building addition and created the layout to ease any future needs, while minimizing the cost of the initial installation.

The client's staff was not well versed in engineering drawings. In order to increase communication and finalize the equipment layout drawing, PTS drew the equipment layout on the floor prior to one of the meetings which allowed the client to visualize the layout, suggest some changes and feel confident they would get an optimal layout for their needs now and into the future.



***Floor layout***

With the equipment layout finalized, PTS created piping drawings. PTS took these drawings and bid out the equipment installation and piping to trusted contractors and selected electrical, HVAC and pipe insulation contractors.

In addition to the drawings and contractor selection, PTS created equipment and process specifications. These specifications were used to select the HVAC unit for the product cooling air, the pumps, the heat tracing, the valves and the piping material. All equipment was selected to meet the process needs, allow for easy cleaning, meet FDA regulations and meet 3-A Sanitary Standards.

PTS designed and built all the new electric and control panels at PTS with their team of knowledgeable and experienced engineers and electricians. Also, PTS reprogrammed the

control panels of the process equipment and modified the existing electric panels to incorporate all of the new equipment.

PTS remained onsite during the installation and to ensure all contractors completed in a safe and efficient manner. PTS was also available to answer any questions from the contractors and the client during the installation. The installation was a success.



***Processing area during pipe installation***