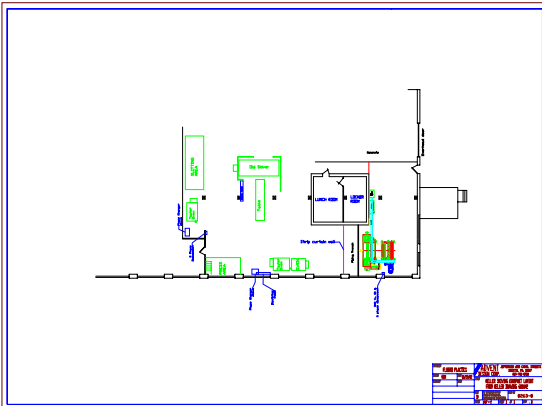


Manufacturing Equipment Layout and Installation

Background

The client had a Teflon skiving machine used 15 mil and larger sheets. The skiving machine shaves a thin film from the surface of a rotating solid 24 in. Teflon cylinder. For films that are thinner than 15 mil the client bought and resold the material. In order to bring this work back in house, Advent Design was asked to assist with the evaluation and procurement of a new skiving machine. The machine consists of two sections. The main 15 ton skiving unit rests on a base 13 ft. x 4 ft. The rewind unit is 7 ft. x 6 ft. and weighs about 1 ton. The two units have to be level and precisely aligned to one another. The machine was to be purchased in May, 2001 for delivery in December, 2001. The available installation area (19.5 ft. x 26 ft) has a wood tongue and groove floor built in the early 1900's. Prior to ordering and taking delivery of the machine, the company needed to make modifications to their facility and requested that Advent Design develop a new layout and develop an estimate for the preparation and installation costs.



Impact

Delivery of the skiving machine took place in January 2002. The machine was successfully installed and tested by the beginning of February. The machine foundation permitted the two sections of the machine to be aligned within the very exact tolerances required for accurate thin film skiving. The layout proved to be very functional and minimized material handling. The installation was completed within the original cost estimates.

Project Description

Advent Design completed the following items that related to this project:

- Evaluated and selected the installation area where the new skiving machine was installed, based on material flow, utility availability, and installation cost. An equipment layout was developed showing the proposed location of all utilities.

- Performed a structural evaluation of the floor area and developed a foundation design and specification for mounting and anchoring the machine. An analysis of the load bearing capabilities of the soil was performed since the existing tongue and groove floor had to be removed and replaced. Advent Design, working with local contractors, developed a cost estimate for installing the foundation. Advent Design engineers meet with the selected foundation contractor to review foundation specifications and drawings and inspected and approved the new foundation when completed by the contractor.

- Worked with machine vendor to determine the air and electrical requirements for the skiving machine. Work with a local contractor to develop a design for the new electrical service for the skiving machine.

- Developed a implementation plan and schedule.

- Participated in the pre-shipment testing of the skiving machine in Germany and discovered potential electrical problems that were corrected prior to shipment.

- Worked with the company installation representative and monitored the rigging and installation of the skiving machine and take up reel.

