Thermal drying

**Project type:** Nylon pellet cooling

**Plant:** Solutia - Greenwood
South Carolina, USA

**Product:** Holo-Flite®

**Project description:** Nylon pellets are extruded under water and then the pellets are dried utilizing heated air. The Holo-Flite® then cools the pellets from a temperature of 230°F to 158°F utilizing a cooling fluid at 48°F. Talc is also blended with the pellets to prevent them from sticking together. The talc-coated pellets are then bagged for shipment. Primary customers are understood to be the carpeting and automotive industries.

**Project in depth:** The engineer, Day & Zimmermann International, Inc. of South Carolina, approached Metso with the idea of a new Holo-Flite® Cooler of the same design, but for a smaller capacity than the one currently operating at Solutia’s facility in Pensacola, FL. Metso had experienced difficulty in conveying the nylon pellets when the Holo-Flite® was initially installed at Pensacola. The screws at Pensacola where subsequently removed from the trough, blasted with walnut shells to smooth their external surface, and reinstalled.

Conveyance, and therefore cooling and blending, was restored until these same screws failed due to internal corrosion six (6) years later. The corrosion of the stempipe was resolved by building replacement Holo-Flite® screws with a core pipe rolled from ferritic / austenitic stainless steel plate.

These revisions to the Pensacola unit, as well as other changes and updates, were discussed in detail over a period of many weeks with the engineer and the customer in preparation of the final RFQ which led to order placement.