pick heaters inc.

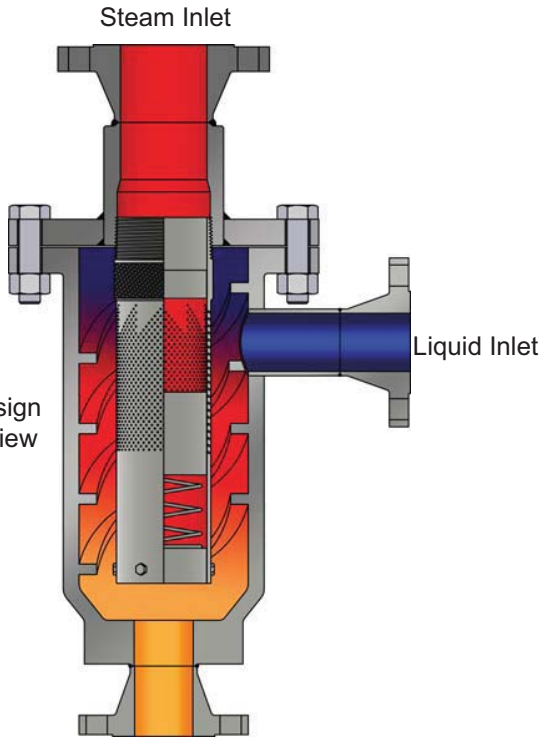
Process Heating Solutions Worldwide

Starch Cooking

Pulp & Paper Industry Case History

Features and Benefits:

- *Low Pressure Drop*
- *Precise Temperature Control*
- *Low Mechanical Shear*
- *Compact Design*
- *Non-Plugging*



Pick BX Design
Cut-Away View

Application:

A converting mill producing a range of specialty coated printing and copier papers, required a steam injection heater for cooking cationic starch slurry, up to 35% solids. The heater serves a dual function. First, water is pre-heated to 140°F and blended with starch powder. Then the starch slurry is pumped back through the heater at a rate of 40 GPM and cooked at 200°F. Depending on the recipe, post dilution is used to obtain final consistency.

Process Conditions:

Slurry and water flow rate:	40 GPM
Inlet temperature:	50°F
Final cook temperature:	200°F
Steam pressure:	65 PSIG
Water pressure:	50 PSIG
Required steam flow:	2,580 lb/hr

Solution:

A **Pick Model 6X25-3BX Heater** was selected for this application. Its generous flow-through design imposes negligible pressure drop on the slurry. It provides thorough cooking at a precisely controlled temperature. The low velocity design minimizes mechanical shear of the starch granules, an important factor for most cationic starches.

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