

PULP & PAPER – PRESS PIT PULPER

PROJECT DESCRIPTION

During the production of a fibrous sheet roll, occasionally a paper break will occur on the paper machine. This event causes a loss of product. Until the sheet is re-started onto the paper machine roll, the sheet is recycled to reduce product loss. This recycling of product occurs by capturing the paper break in a pit, re-pulping or re-slurrying the sheet and then pumping it back into the process so the fiber can be re-used in the production of the fibrous sheet.

MIXPRO® CHALLENGE

Due to the space constraints beneath the paper machine, the Press Pit is typically a smaller sized chamber, which collects the sheet break. In this small chamber, the entire throughput of the paper machine is collected and re-pulped. Retention times are short and the process requirement within the pit is tremendous. The furnish type was a linerboard fiber at 110 kappa and had a sheet basis weight of 42 lbs. The machine speed was 3500 ft/min. All factors considered, this was a highly challenging application for agitator design.

RECOMMENDED SOLUTIONS

After several discussions with the client and close consideration of their application conditions, MIXPRO® recommended the installation of two 250 hp side entry re-pulpers complete with extractor plate assemblies and pumping chambers. In using these units for their installation, the client could maintain the throughput requirements without spilling the sheet outside the pit and creating an unsafe working condition.

The extractor plate chamber installed on the front of the agitator drive was specifically engineered to accommodate the throughput and flow velocities associated with the tonnage requirements. Additionally, the pillow block bearing design increased visibility of the mechanical components allowing easier access for inspection and maintenance.

PROJECT SUCCESS

The client was very impressed by the capabilities of the re-pulper units. The installation streamlined the overall process and also aided in reducing effluent release from the mill by recycling the paper break materials.



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