# Beloit CC Roll Controller Replacement

## Situation

The failure of a Paper Machine 2nd press CC roll pressure controller prompted a quick solution for eliminating the outdated Fischer & Porter 53MC2112 multifunction controllers supplied with the Beloit press section installed in 1988.

## Design Approach

A thorough audit of the existing press loading controls, CC roll hydraulic controls, existing interlocking strategies and multifunction controller algorithms was performed to gain a sound understanding of the systems. The Fischer & Porter multifunction controllers calculated the required CC roll hydraulic pressures based on press loading measurements and operator adjustable bias settings. The controller calculations were compared with original Beloit CC roll pressure curves supplied with the press. The engineering design to integrate the press loading measurements and CC roll controls into the customer's existing Foxboro DCS was completed. Working closely with the operations group, DCS graphics were developed for the operation of the CC roll hydraulic pressure controls and crown bias control.

The DCS control configuration was completed and tested at KMH prior to delivery to ensure all CC roll calculations correlated to the existing multifunction controller calculations.

## Scope of Supply

KMH Engineering supplied a comprehensive detailed design package including all hardware specifications, drawings, cable schedules, as well as the Foxboro DCS control configuration and graphics and G.E. Series 6 PLC programming revisions.

KMH Engineering was responsible for commissioning and start-up support of the systems.

## Summary

The successful implementation of this project occurred during a regularly scheduled 16 hour maintenance shutdown. The 2nd press CC roll controls were also changed during this shutdown and nip impressions were taken prior to start-up to confirm correct nip loading profiles.

## References

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