Vacuum Rolls Eliminate Excess Fluid Pass-Through

Case Study 003

Executive Summary

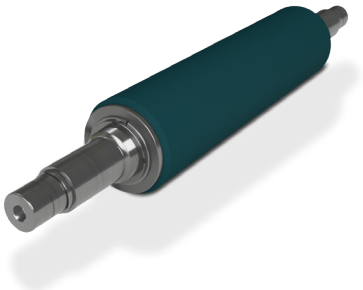
The NCCM® VT vacuum roll (a specific density of the NCCM® NT nonwoven roll) was installed to end excess fluid pass-through issues in a rinse section of a push/pull pickle line.

About NCCM

NCCM Company produces nonwoven mill roll covers for the OEM, primary metals, automotive and industrial markets. The NCCM® NT nonwoven roll is a low-pressure wringer, feeder, and vacuum roll.

Featured Product

NCCM® NT
Value-Add Nonwoven Roll



The low-pressure alternative—excels in wringer, feeder and vacuum applications

Key Features

- ✓ Repairability
- ✓ Fluid Control

NCCM Company Marketing and Sales Team
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Initial Challenge

A customer was experiencing excess fluid pass-through from a rinse section on their push/pull pickle line. The edge wetness issues were the primary focus when they approached NCCM Company for assistance. Excess fluid pass-through is an issue for several reasons. It wastes fluid, can lower the roll's operating friction, and, when rinsing chemical fluids, can damage the rolls after the rinse section.

Desired State

The customer wanted to address and solve the edge wetness issue to improve maintenance costs and the overall operation of the line.

Custom-Engineered Solution

NCCM worked with the company and one of their value-add resellers (VARs) to address the situation. In this case, fluid control and wringing uniformity were increased through better nonwoven sleeve design, improved shaft design, and a specially-engineered NCCM® VT density vacuum roll. The NCCM® VT roll improves fluid control due to its extreme porosity. As the roll presses against the strip, it compresses as the nip. As it rolls off the strip, the decompression causes the roll to absorb excess fluid and leaves a precise film behind.

Result and Customer Value-Add

The NCCM vacuum rolls were an immediate success. The company ordered several more as well as expanded NCCM vacuum rolls to additional locations.

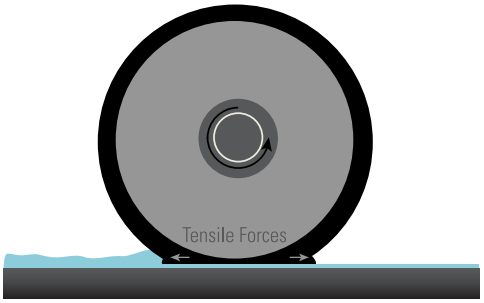
Take Action

Do you have edge wetness issues with any of your rolls in any of your lines? Our custom engineered high-performance nonwoven roll solutions will help you solve this problem. Do not hesitate to visit NCCMCO.com, reach out to sales@nccmco.com, or call +1 (715) 425-5885.

Supporting Charts and Graphs

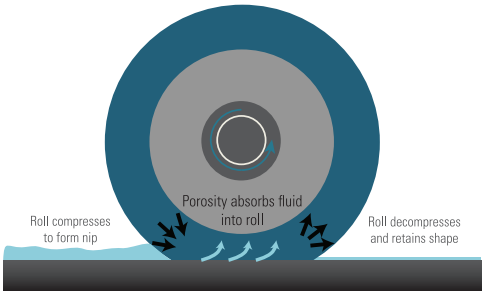
Coefficient of Friction on Wet or Oiled Strips

Rubber Roll



- Rubber foot is fitted to strip
- Liquid has nowhere to go but under the roll
- Rubber roll starts hydroplaning and losing contact with strip, resulting in low friction capability

NCCM Nonwoven Roll



- Compressibility of nonwoven fabric seals roll against the strip
- Porosity of nonwoven absorbs fluid into the roll, allowing roll to maintain contact with strip
- Friction is maintained on wet surface