

# **Executive Summary**

The NCCM® NT vacuum roll (VT density) was installed in a rinse section of a push/pull pickle line, ending an excess fluid pass-through issue due to better nonwoven sleeve design, improved shaft design and the roll's extreme porosity.

### **Featured Product**

NCCM® NT Nonwoven Roll Value-Add Nonwoven Roll



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

## **NCCM Company Summary**

NCCM Company produces nonwoven mill roll covers for the OEM, primary metals, automotive and industrial markets. NCCM Company and its 20+ value-add resellers, service centers and shops provide local service anywhere in the world. The NCCM® NT nonwoven roll is a low-pressure wringer, feeder and vacuum roll.

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# Vacuum Rolls Eliminate Excess Fluid Pass-Through

Case Study 003

## **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 a number of 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.

## **Custom-Engineered Solution**

NCCM worked with the company and one of the 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 (a specific density of the NCCM® NT roll) improves fluid control due to its extreme posority. 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 leave a precise film behind.

#### **Result and Customer Value-Add**

This case is an example of NCCM's interest in helping companies solve problems through holistic solutions. 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

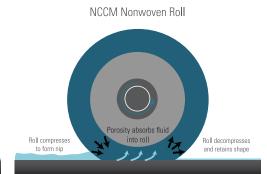
Where could you decrease edge wetness on your line(s)? Do not hesitate to visit NCCMCO.com, reach out to sales@nccmco.com or call +1 (715) 425-5885.

## **Supporting Charts and Graphs**

### **Coefficient of Friction on Wet or Oiled Strips**



- Rubber 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



- 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

Fig. 1 Coefficient of Friction on Wet or Oiled Strips