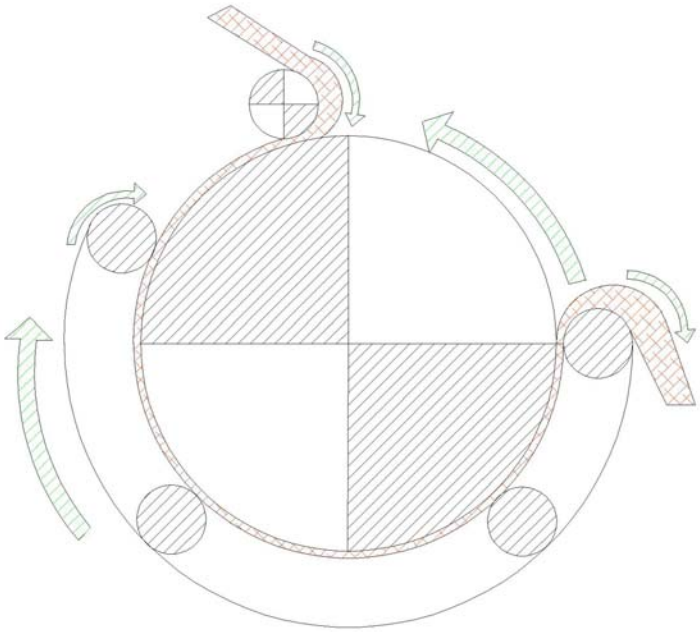
Application: Magnetic Paint Manufacturer - Crystallizer

Data

Environment: Indoor, ambient temperature
Product on belt: Liquid paint 150 ° F (65.6°C) to 200° F (93.3° C)/ Chilled chips of paint

Process description:
Heated liquid metallic paint is dropped onto a 36'' (914.4mm) diameter drum with a conveyor system wrapped around it and a nip role on top. This large water chilled drum has a temperature of 30° F (-1° C). Both the upper rear roll of the conveyor and the nip roll are chilled. The liquid paint is sandwiched by the large drum and the conveyor system. The conveyor system itself does not have a drive drum, but is driven by the liquid paint. By the time it reaches the end of the conveyor, the paint has been crystallized (turned into chips). These chips are discharged at the end of the conveyor, where the belt is troughed. From there they are transferred to the next processing steps.



Belt requirements:
Good release:
The liquid paint and chips are very sticky.

Heat resistance:
When the liquid drops onto the belt it has a temperature of approximately 150° F (65.6°C) to 200° F (93.3° C).

Chemical resistant:
The compound must be resistant to the paint chemicals.

Wear resistant
The process requires scrapers to clean the belt at the end of the system.

Previous Belt Problem:

3-ply White Nitrile with Teflon coating

This belt has a cover of .002" (.0508mm) Teflon film that is somewhat fragile. The Teflon cover is damaged by the scrapers at the end of the conveyor system. When the cover

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becomes scratched, the product does not release well. Because of this, the belts need to be replaced about every two weeks.

Solution:

Chemprene Skived Teflon Pebbletop

The Skived Teflon Pebbletop has a more durable Teflon cover than the nitrile belt. This .005'' (.127mm) thick skived Teflon is denser and has better wear characteristics than the .002" Teflon film, while retaining excellent release properties. The skived Teflon belt lasts approximately four months, eight times longer than the previous belt.

Details:

Minimum pulley diameter	: 4½'' (114.3mm)
Belt length	: 14'3½'' (4.356m)
Belt width	: 25'' (635mm) to 36'' (914.4mm)
Speed	: 34'/min (10.36 m/min)
Splice	: Mechanical lacing

No Support
Troughed at the end
Scraper on the bottom of the last roller

Remark:
In this application there are no special standards required, the belt has no knife edges, no crowning, and no reverse bends.

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