



Case study: increasing life of PTFE belts

Problem

The company was using PTFE belts from copetitor in the thermoforming process of fiberglass, PP and PA nonwoven mats, bonded to each other between two PTFE belts. The maximum operating time of the belt was on average 14 days, when the belt cracked. The average machine downtime associated with belt replacement is 4 hours, where the downtime at a typical automotive plant will cost around 5000 € per hour.



Industry: automotive

Location: Poland Size: more than 500 employees

About company

Leader in the production of nonwoven mats based on fiberglass, PP and PA.

"The solution proposed by EDER met our expectations."

- Krzysztof Machine operator with 20 years of experience



Solution

New design of PTFE belt.

Implementation

The new design of the PTFE belt has extended its working time to over 4 weeks, but then a previously unknown problem appeared.



After solving the problem of PTFE belt rip/tear, there was the problem with sticking the working surface, not occurring earlier because the PTFE belts did not work long enough. The glass fiber, PP and PA bonded to each other, high preassuere and temperature up to 260 ° C during the thermoforming process, have a very destructive effect on the PTFE coating, while penetrating the surface and allowing sticking.

Solution

EDROCK[™] coating

Implementation

The **EDROCK[™]** coating is protecting the surface of the PTFE belt from sticking of glass fibers, PP and PA. We have doubled the operation time of PTFE belts, one set worked even 10 weeks. Thanks to the **EDROCK[™]** coating, the number of costly downtimes has dropped significantly.

Sticking level of standard PTFE belt over a period of time

Sticking level of PTFE belt with EDROCK[™] coating over a period of time

Operation time of PTFE belt with EDROCK™ coating

Operation time of standard PTFE belt



"The EDROCK[™] coating helps keep the PTFE belt clean, previously the PA/PP fibres sticked to the PTFE belt surface and made the thermoforming process impossible."

> - Mariusz Maintenance

Increasing life of a PTFE belt in production by

120%

Eliminating sticking of PTFE belt surface Savings due to reducing manufacturing cost

15 000 €

What's EDROCK™?

EDROCK[™] is the most advanced PTFE belt coating available at Eder. It is highly anti-adhesive due to a narrow selection of fluoropolymers. Highly impermeable and chemicals resistant. **EDROCK[™]** coating enhances the durability of the belt under extreme conditions. The parameters of newly invented coating make it more resistant to staining, which may increase the wear on the PTFE belts. **EDROCK[™]** coating protects the fibres, responsible for mechanical durability, against aggressive media. Continuous work temperature: -150°C to +260°C.



About

We manufacture PTFE coated glass and aramid fabric belts. With over 30 years of experience and expertise among our specialised team of technical advisors and production workers as well as our selection of the finest materials available on the market, professional selection of joints, reinforcements and guiding systems, we supply our products to various branches of industry all over the world.



Our current technology of manufacturing and maintenance combines all of the cutting-edge solutions used worldwide. New machinery and appliances as well as 3 step quality process allow us to deliver the highest quality of product and maintenance, transforming our company from a local business to a global supplier on the PTFE belt market.

Our mission as EDER is to build long-lasting relationships with our clients by delivering top quality products.

www.eder.com.pl

Author: Tomasz Kołaczkowski

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