

Extreme CoatingsTM

2895 46th Avenue North • St. Petersburg, FL 33714
• Toll Free: 888-367-2569 • Phone: 727-528-7998 • Fax: 727-528-7995 •
• www.ExtremeCoating.com •

Case History # 2006-1

Abrasive wear

Extrusion

This extrusion customer produces friction material for use in automatic braking assemblies for consumer products such as washing machines and lawn mowers. This is basic profile extrusion of a proprietary heavily filled mineral/fiber material. The equipment is a Bonnot extruder with a 4" interrupted-flight screw designed to process high load materials.

Standard protection for the feed screw has been complete weld encapsulation of Colmonoy 56, nickel-based hard facing. Typical batch size is about 360 lbs. and after 150 batches (3 to 4 months production) the C56 protection has severe erosion. Flight outside diameter is also reduced and output rate becomes uneconomical and the screw is removed and rebuilt.

A rebuilt screw was coated with XC1000 to a total thickness of .010" (0.25 mm) and installed in early June 2006. A visit in November 2006 provided the following information:

	Batches	Total Output	Wear Condition
Previous C56 Screw	150	54,000 lbs	Severe root erosion, OD reduction
XC 1000 Screw	184	66,240 lbs	No discernable wear, coating intact
Expectation	800	290,000 lbs	

The customer was extremely pleased with the improvement to screw life and process reliability. At six months of operation the coated screw has nearly twice the life of previous screws with no indication of wear. The estimated savings compared to the previous C-56 screws is \$8,000 to \$10,000 annually.