

CASE STUDY – LINASHIELD THERMOPLASTIC POLYURETHANE

EPKO SUNFLOWER OIL PLANT, NORTH WEST –
RSA

AT A GLANCE CHALLENGES

- Lining in the high wear areas wore through within a 12 to 18 month period
- The organic material build-up in certain areas caused additional airflow issues

BENEFITS

- Highest abrasion resistance compared to traditional linings
- Low co-efficient of friction (non-stick liners)
- Elasticity in broad temperature range
- High tear resistance
- No skin irritation
- No plasticizers, so enhanced longevity compared to rubber
- Perfect for welding & bonding
- Excellent low-temp impact strength
- Lasts longer than rubber linings, reducing downtime and contributes to cost savings
- Reduces vibration
- UV resistant

PROBLEM DESCRIPTION

EPKO is a Sunflower oil plant. This section of the plant separates the sunflower husks from the seeds with cyclones and a series of ducting and y-pieces in the ducting lines. Areas of high wear such as the bends, y-pieces and the cyclone outlets wore through in 12 to 18 months and had to be replaced to avoid air ingress which reduces the separation efficiency of the plant.

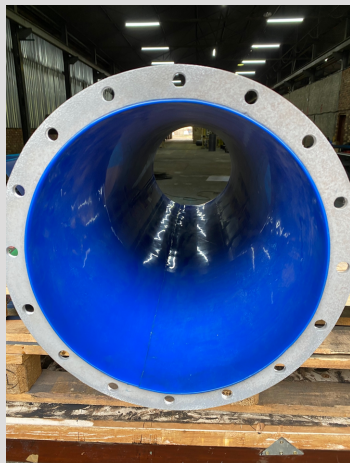
The organic material also built up in certain zones which in turn created airflow problems.

SOLUTION

Linashield was chosen for both its abrasion resistant and non-stick properties. Based on the performance of the 3mm mild steel, it was decided to only apply a 3mm lining. With this type of abrasion, Linashield will last at least 10 times longer than mild steel, thereby providing a cost-effective solution when using a 3mm lining.

TEST RESULT

The first line has been in operation since February 2021. The equipment was inspected after 4 months and revealed no wear to date and there was also no material build-up in areas where they normally experienced these problems. The initial result confirmed that the 10-year life expectancy is indeed realistic.





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AT A GLANCE

PRODUCT:	LinaShield Thermoplastic Polyurethane Insitu Lining
LOCATION:	EPKO Sunflower Oil Plant, North West, RSA
PRODUCT DESCRIPTION:	3mm Linashield
SHORE A HARDNESS:	85°
APPLICATION:	3mm Linashield glued to mild steel for wear protection against the sunflower husks
MAXIMUM PARTICLE SIZE:	5mm
INSTALLATION DATE:	February 2021

TEST RESULT:

The equipment had no lining and lasted 12 to 18 months on 3mm mild steel. The expected life of the lining is 10 years

ADDITIONAL INFORMATION - LINASHIELD


OTHER APPLICATIONS:

Wear linings | Cyclones | Screens | Belts |
Conveyors | Dump truck linings | Wagons | Silos |
Chutes | Feeding channels | Magnetic separators |
Cones | Hoppers | Crushers | Sorters | Skips | Bins
| Slurry Channels....
and MANY more

TYPICAL INDUSTRIES:

- Mining
- Mineral processing plants
- Bulk material handling equipment
- Thermal power stations
- Transportation
- Agriculture (grain storage & handling)
- Food & Feed Processing
- Construction
- Aggregates
- Earth Moving Equipment

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Case Study conducted in partnership with

