



# MOLYKOTE® 3402-C LF Anti-Friction Coating provides corrosion protection and lubrication for wind turbine yaw brake

Lubricant application story: Yaw brakes

**MOLYKOTE® product**  
MOLYKOTE® 3402-C LF  
Anti-Friction Coating

**Market segment**  
Wind energy

**Major market**  
Industrial original  
equipment

## Customer's area of concern

### Customer's description of component

The yaw brake is part of a braking system for a wind turbine. This hydraulic brake is engaged in times of extreme wind conditions, reducing overspeed and increasing safety.

## Operational parameters (LETS)

### Load

110 kNm braking torque

### Environment

Outdoors; potentially offshore

### Temperature

-40 to 80°C

### Speed

Low

### Process description

The customer bonds the brake lining to a steel plate and then applies the anti-friction coating on both sides of the assembly and even on the brake linings (to avoid rust and corrosion on the entire part). The batch reference and additional information is laser-printed on the back, directly on the coating. The result is clean. At a further machining process, the coating on the lining itself is taken away to achieve a higher friction coefficient of  $\mu = 0.4$  of the lining material.

**MOLYKOTE®**

## Customer's critical requirements

### Problem category

Wear/failure

### Problem details

The first goal is to limit the friction between the back of the plate and the two jacks on each side of the caliper because the disc is always under the brake lining's constraints. The second goal is to ensure corrosion protection during the five-year lifetime of the brake lining.

### Root-cause analysis

Metal-to-metal contact creates friction, and environmental conditions contribute to corrosion.

## MOLYKOTE® Smart Lubrication™ solution selected

### Our product/differentiators

Air-curing MOLYKOTE® 3402-C LF Anti-Friction Coating provided a dry and clean coating that delivered an excellent combination of corrosion protection and lubrication as well as strong resistance to pressure and wear.

### Result: Our solution

The product helped the customer meet their five-year lifetime target for the brake lining. Testing was performed to demonstrate the good adhesion.

## Learn more: Contact us

To learn more about the advantages of using MOLYKOTE® 3402-C LF Anti-Friction Coating for yaw brakes – or other tough lubrication challenges – contact your MOLYKOTE® technical representative or visit [molykote.com](http://molykote.com).



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