



# Mineral Coating Technologies

**New technology from  
Russia to reduce  
Wear and Friction**

**2020**

# THE ADVANTAGES OF MINERAL COATING

The enhance of a lifetime of the coated component up to 10

No affection the base material through a special coating

technology Low temperatures of the coating process (less

The coating is

reproducible

No need for pre-production / coating method

)

Metallur  
gy

Shipbuildi  
ng



Power  
engineering



## APPLICATIONS



Pipes and  
fittings



Oil and gas  
industry



Mechanic  
al  
engineeri  
ng

- We tested our wear – resistant coating for piston ring in

## The result of MICOTECH® coating

# BAM institute (Berlin)

**Volume ratio of wear of  
the piston ring [mm<sup>3</sup>/Nm]**

**$F_N = 50$   
N**

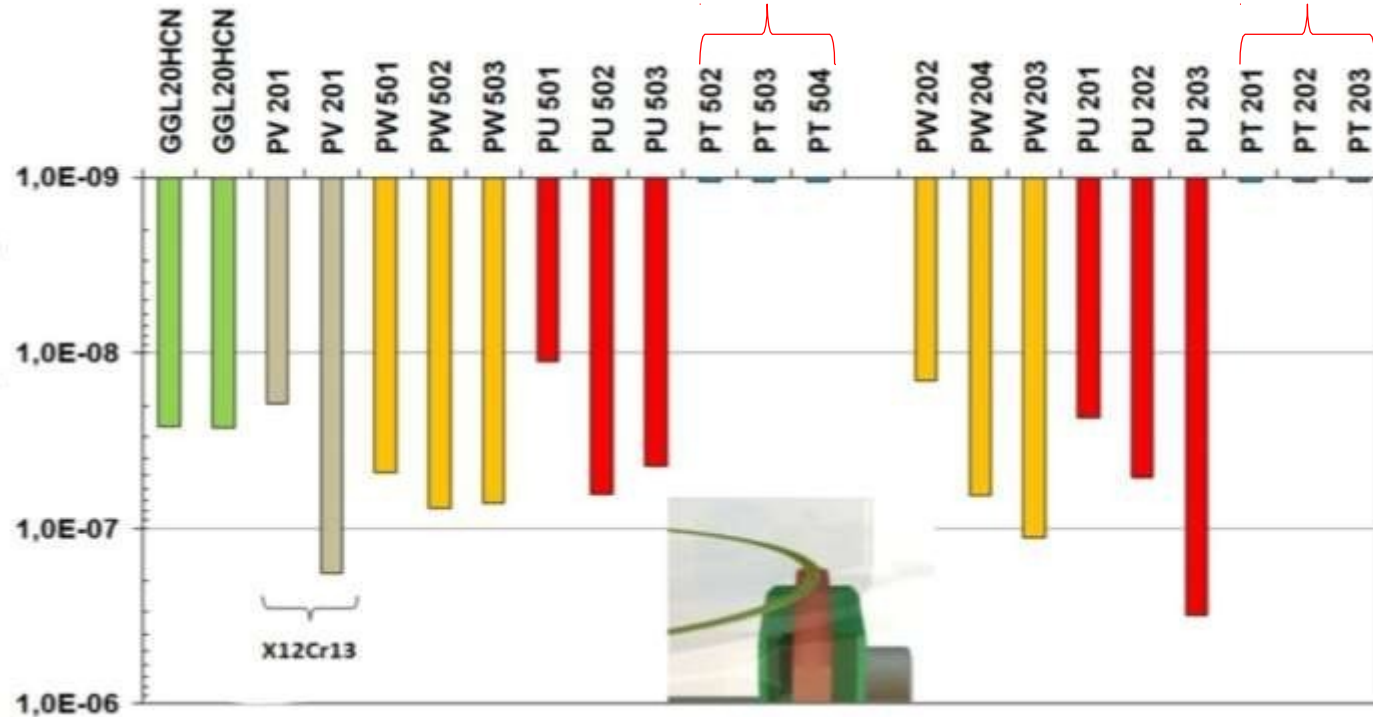
$$v = 0,3$$

m/s	T
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oil=

**170°C    s**

**= 24 km**



Lowest wear  
in  
comparison  
with  
standard  
technologies

# Our

# experience

- While cooperating with **SMS group** (official partner), we put our mineral coatings on the rollers of the roller table.

Positive effect may be seemed even without special equipment



The SMS Group roller  
**without any coating**  
(8 month of using) / **600 000** tons



The SMS Group roller with our  
**mineral coating**  
(42 month of using) / **3 375 000** tons

# Our experience

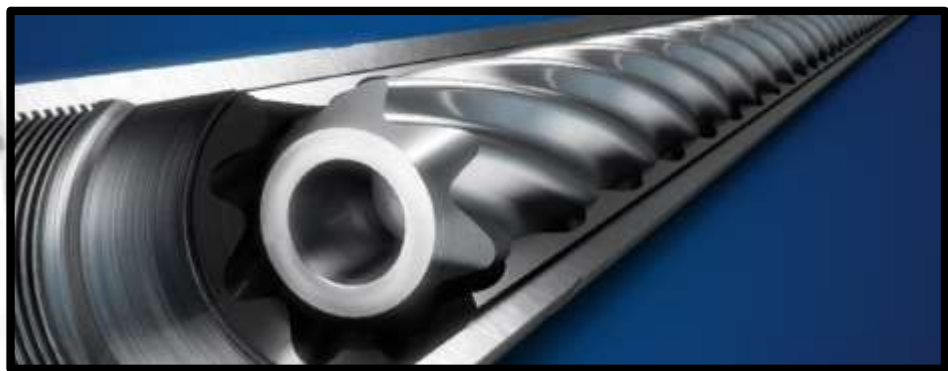
Threading connection "nipple -  
coupling" of geophysical equipment  
Material: Non-Magnetic Steel-  
MAGNADUR



The result of the work: The increase in  
the  
number of twists from 30 to 400  
(13 times)

# Our experience

Shafts  
for  
DDMs



Ball valves and gate  
valves



# Our experience



Mud Pump  
Sleeve JVS-400  
(CANADA)

The result of the mineral  
coating: increase in the  
work resource from **250**  
**to 1250 hours**  
(5 times)



Impellers for oil  
pump  
Currently being tested  
at the  
fields

# Our experience

Blade  
wheel of

turbines



Worm-and-  
worm  
gears



# Our experience

Pinion shafts  
BGV 200 of  
Danieli



Without coatings  
**2** month/ **62 000**  
tons

With MICOTECH  
**12** month/ **385 000**  
tons



Blades  
of  
steam  
turbine  
s



Slidin  
g  
bearin  
gs

# About us



Our main activity is development and application of wear-resistant mineral coatings with antifriction properties for components of friction pairs in the nodes of machines in power engineering, mechanical engineering, shipbuilding, oil and gas industry and metallurgy.

Numerous international exhibitions noted us with awards  
We have our own 2000m<sup>2</sup> production center based in Kaluga city - 160 km away from Moscow

There are only well qualified and experienced engineers and technicians in our team.



The great scientific potential and constant investments in R&D allow us to solve any problem we meet even the most complex.

We have more than 10 years of experience on our market and a wide range of mineral coatings that meet any need of our partners.

# Contact

We are confident that our considerable experience and ready-made solutions will provide an opportunity to save significant resources and gain the strategic competitive advantage!

Be the best with Mico-Tech!

## No friction



## No wear



## No fiction

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