

# LAB REPORT

Unit id  
**STEAM TURBINE**  
 Component  
**Lubricating oil 10T**



Lab number: 1702851

Machine type  
**EG49/8/8**

Manufacturer  
**Siemens/Bergmann Borsig**

Sample from  
**lubricating oil**

Oil brand name  
**Aral Kosmol TF 46**

Oil quantity in system  
**3000 l**

Sample report  
 Scope of analysis: Turbine set 10

No wear metals are detectable in the sample. The cleanliness class of the oil meets the requirements. The foaming behavior is slightly elevated. The air release behavior LAV is slightly elevated. You should monitor the further changes based on the next analysis. I advise you: Send us the next sample at your next maintenance or during the regular inspection to observe the trend behavior.



CAUTION

Dipl.-Ing. (FH) Stefan Mitterer

ANALYSIS RESULTS		Current sample				
Lab number		1702851				
SAMPLE RATING						
Date of examination		12.05.2025				
Date of sample taken		02.05.2025				
Date of last oil change		01.09.2017				
Top-up since change		-				
Operating time since change		59805 h				
Total operating time		351596 h				
Oil changed		no				
<b>WEAR</b>						
Iron	Fe	mg/kg	0			
Chrome	Cr	mg/kg	0			
Tin	Sn	mg/kg	0			
Aluminum	Al	mg/kg	0			
Nickel	Ni	mg/kg	0			
Copper	Cu	mg/kg	0			
Lead	Pb	mg/kg	0			
Molybdenum	Mo	mg/kg	0			
PQ index	-		< 25			
<b>CONTAMINATION</b>						
Silicon	Si	mg/kg	0			
Potassium	K	mg/kg	1			
Sodium	Na	mg/kg	0			
Lithium	Li	mg/kg	0			
Water K. F.		ppm	97			
<b>OIL CONDITION</b>						
Viscosity at 40 °C		mm <sup>2</sup> /s	44.96			
Viscosity at 100 °C		mm <sup>2</sup> /s	6.80			
Viscosity index		-	106			
Oxidation		A/cm	1			
IR index		-	99.76			
Color		Farbzahl	1.5			

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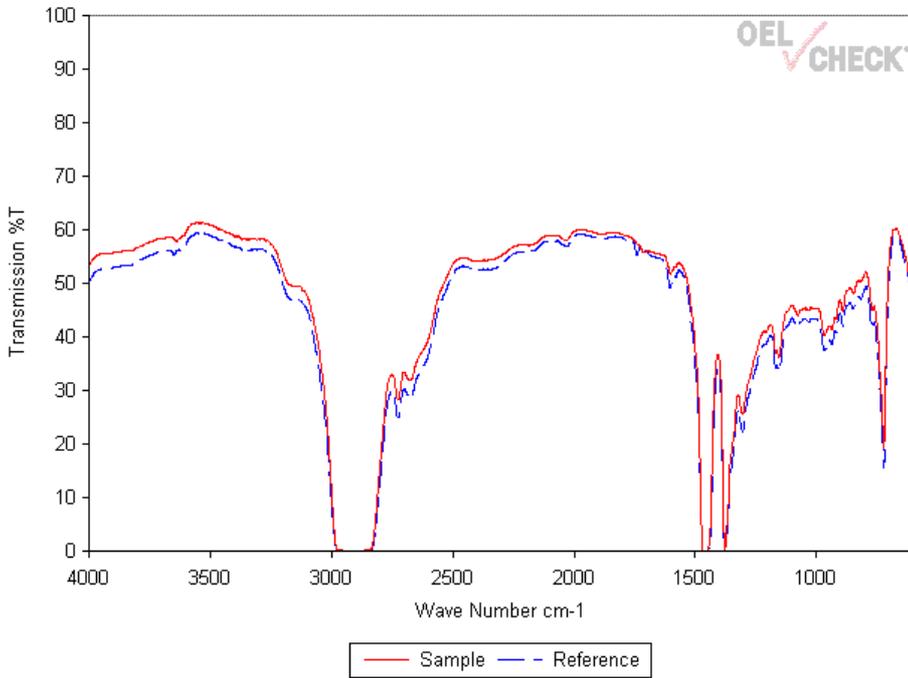
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<b>ADDITIVES</b>						
Calcium	Ca	mg/kg	0			
Magnesium	Mg	mg/kg	0			
Boron	B	mg/kg	0			
Zinc	Zn	mg/kg	0			
Phosphorus	P	mg/kg	12			
Barium	Ba	mg/kg	0			
Sulphur	S	mg/kg	236			
<b>ADDITIONAL TESTS</b>						
AN / NN	mgKOH/g		0.13			
MPC			8.30			
Air-release properties	min		6.3			
Water separation (steam)	s		111			
Foam test seq. I	ml/ml		500/0			
Cleanliness class	ISO 4406		17/15/11			
A: >4µm = ISO >4µm	Anzahl/100ml		121520			
B: >6µm = ISO >6µm	Anzahl/100ml		23180			
C: >14µm = ISO >14µm	Anzahl/100ml		1910			
D: >21µm	Anzahl/100ml		790			
E: >38µm	Anzahl/100ml		130			
F: >70µm	Anzahl/100ml		40			
Cleanliness class	SAE AS 4059		8A			
Steel corrosion	DIN ISO 7120/A		bestanden			
Antioxidant 1 - RULER	%		87.3			
Antioxidant 2 - RULER	%		49.9			

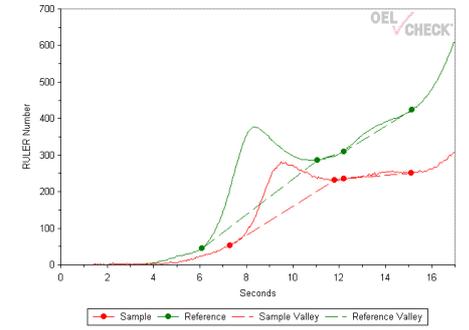
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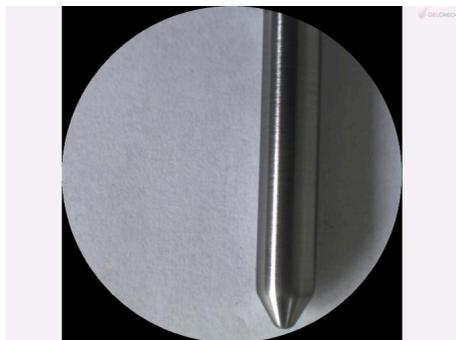
## SAMPLE IMAGES (LABORATORY NUMBER: 1702851)



INFRARED SPECTRUM



RULER DIAGRAM



STEEL CORROSION



BOTTLE AND CAP



**Any questions?**

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