

Unit ID **Steam turbine**  
 Component **Lubricating oil 10T**  
 Current sample number **1702851**

+49 8034-9047-210

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OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Example report  
 Analysis scope: Turbine Oil Kit 10

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**

### Diagnosis for the current laboratory values

No wear metals present in the sample. The oil cleanliness is within the expected limits. The foaming tendency has increased slightly. The air release property has increased slightly. Please observe further changes with the next sample. I recommend that you send the next sample at the next service interval or at your regular inspection for trend analysis.

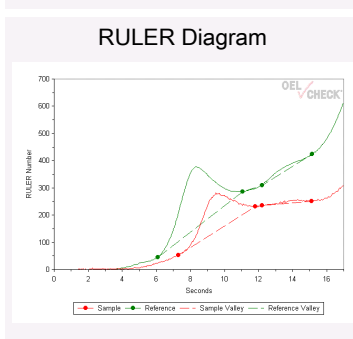
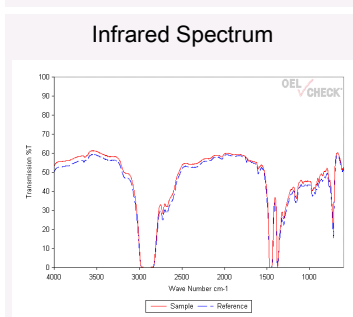
Dipl.-Ing. (FH) Stefan Mitterer

### Sample Rating



### Caution

ANALYSIS RESULTS			Current sample	Previous samples	
<b>LAB NUMBER</b>			<b>1702851</b>		
<b>SAMPLE RATING</b>					
Date tested			<b>11.05.2020</b>		
Date of sample taken			<b>02.05.2020</b>		
Date of last oil change			<b>01.09.2012</b>		
Top-up since change			-		
Operating time since change	h		<b>59805</b>		
Total operating time	h		<b>351596</b>		
Oil changed			<b>no</b>		
<b>WEAR</b>					
Iron	Fe	mg/kg	<b>0</b>		
Chrome	Cr	mg/kg	<b>0</b>		
Tin	Sn	mg/kg	<b>0</b>		
Aluminium	Al	mg/kg	<b>0</b>		
Nickel	Ni	mg/kg	<b>0</b>		
Copper	Cu	mg/kg	<b>0</b>		
Lead	Pb	mg/kg	<b>0</b>		
Molybdenum	Mo	mg/kg	<b>0</b>		
PQ index	-		<b>&lt; 25</b>		
<b>CONTAMINATION</b>					
Silicon	Si	mg/kg	<b>0</b>		
Potassium	K	mg/kg	<b>1</b>		
Sodium	Na	mg/kg	<b>0</b>		
Lithium	Li	mg/kg	<b>0</b>		
Water K. F.	ppm		<b>97</b>		
<b>OIL CONDITION</b>					
Viscosity at 40°C	mm²/s		<b>44.96</b>		
Viscosity at 100°C	mm²/s		<b>6.80</b>		
Viscosity index	-		<b>106</b>		
Oxidation	A/cm		<b>1</b>		
IR index	-		<b>99.76</b>		
Color	Color index		<b>1.5</b>		
<b>ADDITIVES</b>					
Calcium	Ca	mg/kg	<b>0</b>		
Magnesium	Mg	mg/kg	<b>0</b>		
Boron	B	mg/kg	<b>0</b>		
Zinc	Zn	mg/kg	<b>0</b>		
Phosphorus	P	mg/kg	<b>12</b>		
Barium	Ba	mg/kg	<b>0</b>		
Sulphur	S	mg/kg	<b>236</b>		




# LAB REPORT

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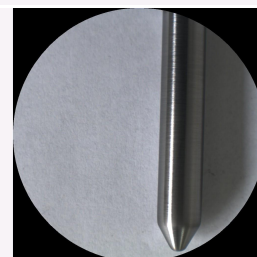


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ADDITIONAL TESTS				
AN / NN	mgKOH/g	0.13		
MPC		8.30		
Air release	min	6.3		
Water separation (steam)	s	111		
Foam test seq. I	ml/ml	500/0		
Cleanliness class	ISO 4406	17/15/11		
A: >4µm = ISO >4µm	Particles/100ml	121520		
B: >6µm = ISO >6µm	Particles/100ml	23180		
C: >14µm = ISO >14µm	Particles/100ml	1910		
D: >21µm	Particles/100ml	790		
E: >38µm	Particles/100ml	130		
F: >70µm	Particles/100ml	40		
Cleanliness class	SAE AS 4059	8A		
Steel corrosion	DIN ISO 7120/A	0		
RULER Additive 1	%	87.3		
RULER Additive 2	%	49.9		

## Steel corrosion



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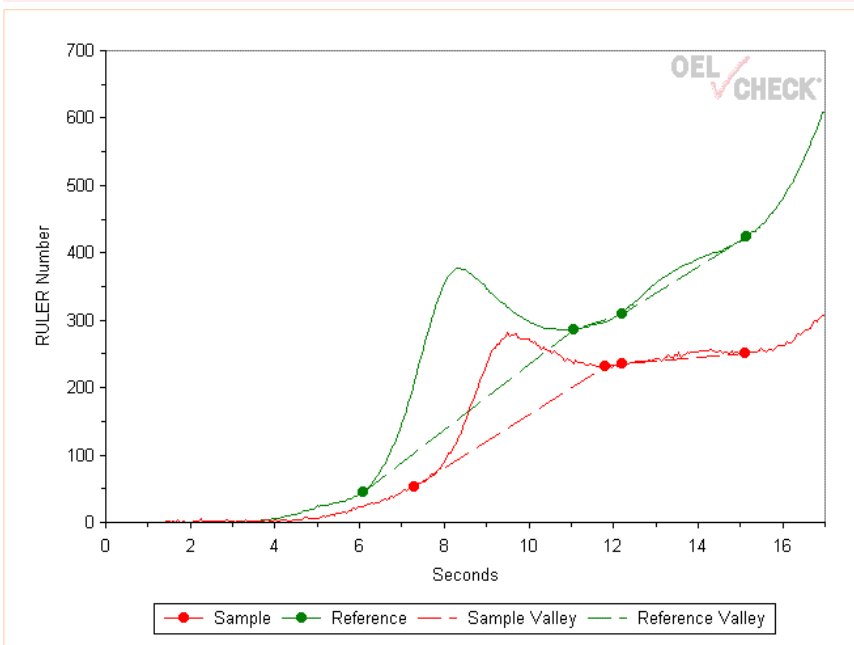
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### Diagnosis of RULER test

Compared to the reference sample, only a slight degradation of antioxidants is visible. There is still enough aging protection in the oil.

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### Antioxidant/residual content

RULER Additive 1	%	87,3
RULER Additive 2	%	49,9

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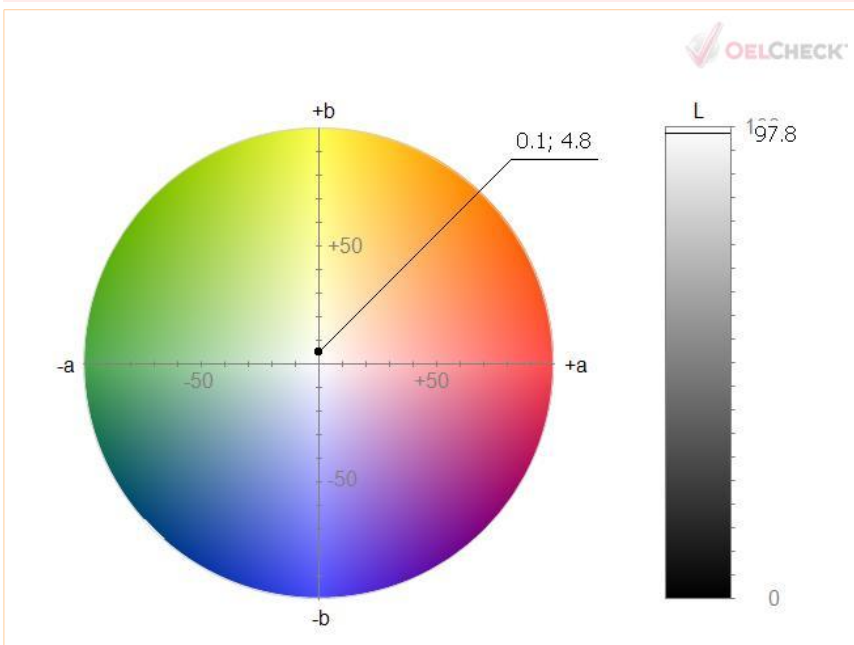
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### Diagnosis of the MPC test

The MPC value is within a normal range. There is no risk for the formation of varnish.

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MPC test	
MPC	8,30
Luminance L	97,80
Redness index a	0,10
Yellowness index b	5,80

