

LAB REPORT

Unit ID **Steam turbine**
Component **Lubricating oil 8T**
Lab number **1700913**



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OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Example report
Analysis scope: Turbine Oil Kit 8

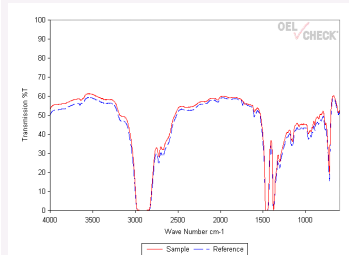
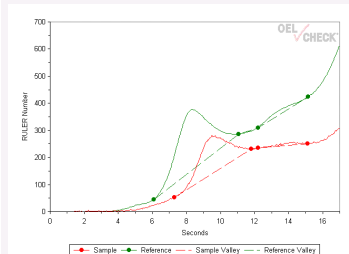
Machine type: **EG49/8/8**
Manufacturer: **Siemens/Bergmann Borsig**
Sample from: **Lubricating oil**
Oil brand name: **Aral Kosmol TF 46**
Oil quantity in system: **3000 l**

Diagnosis for the current laboratory values

No wear metals present in the sample. An improvement of the oil cleanliness in comparison to the previous sample can be noticed. The foaming tendency has increased slightly. But the trendline of this value shows a slight decrease. The air release property has increased slightly. But the trendline of this value is stable. 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. Rüdiger Krethe**Sample Rating****Caution**

ANALYSIS RESULTS			Current sample	Previous samples	
LAB NUMBER			1700913	1700914	
SAMPLE RATING					
Date tested			22.04.2025	25.03.2024	
Date of sample taken			02.04.2025	11.03.2024	
Date of last oil change			01.09.2017	01.09.2017	
Top-up since change	l		1170	890	
Operating time since change	h		58805	50427	
Total operating time	h		350596	342218	
Oil changed			no	no	
WEAR					
Iron	Fe	mg/kg	0	1	
Chrome	Cr	mg/kg	0	0	
Tin	Sn	mg/kg	0	0	
Aluminum	Al	mg/kg	0	0	
Nickel	Ni	mg/kg	0	0	
Copper	Cu	mg/kg	0	0	
Lead	Pb	mg/kg	0	0	
Molybdenum	Mo	mg/kg	0	0	
PQ index	-		< 25	< 25	
CONTAMINATION					
Silicon	Si	mg/kg	0	0	
Potassium	K	mg/kg	1	0	
Sodium	Na	mg/kg	0	0	
Lithium	Li	mg/kg	0	0	
Water K. F.	ppm		117	105	
OIL CONDITION					
Viscosity at 40°C	mm²/s		44.86	44.90	
Viscosity at 100°C	mm²/s		6.80	6.82	
Viscosity index	-		106	106	
Oxidation	A/cm		1	1	
IR index	-		99.76	99.90	
Color	Color index		1.5	1.0	
ADDITIVES					
Calcium	Ca	mg/kg	0	0	
Magnesium	Mg	mg/kg	0	0	
Boron	B	mg/kg	0	0	
Zinc	Zn	mg/kg	0	3	
Phosphorus	P	mg/kg	2	2	
Barium	Ba	mg/kg	0	0	
Sulphur	S	mg/kg	236	253	

Bottle and cap**Infrared Spectrum****RULER Diagram**

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ADDITIONAL TESTS				
AN / NN	mgKOH/g	0.11	< 0.10	
Air-release properties	min	6.6	6.9	
Water separation (steam)	s	104	111	
Foam test seq. I	ml/ml	490/0	530/10	
Foam test seq. II	ml/ml	-	-	
Foam test seq. III	ml/ml	-	-	
Cleanliness class	ISO 4406	17/15/11	21/18/13	
Antioxidant 1 - RULER	%	32.6	28.2	



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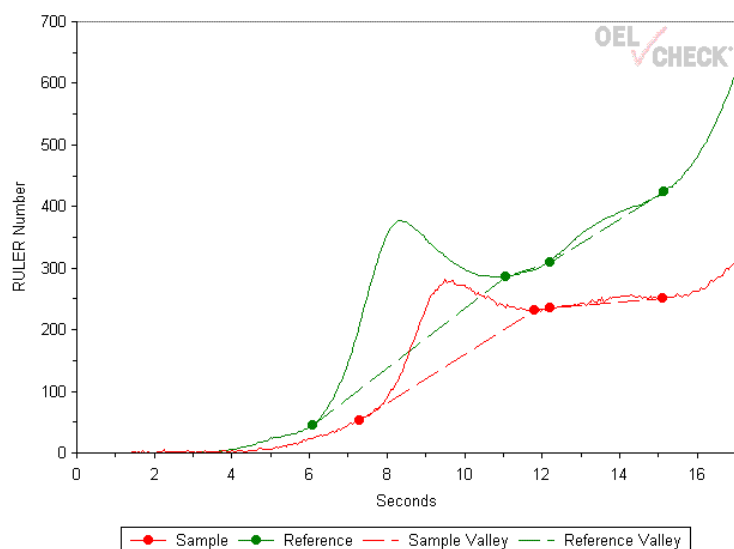
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Evaluation of the oxidation inhibitors

The RULER graph clearly indicates the presence of additives containing phenolic antioxidants. The content of phenolic antioxidants has decreased slightly. Please observe further changes with the next sample.

Dipl.-Ing. Rüdiger Krethe



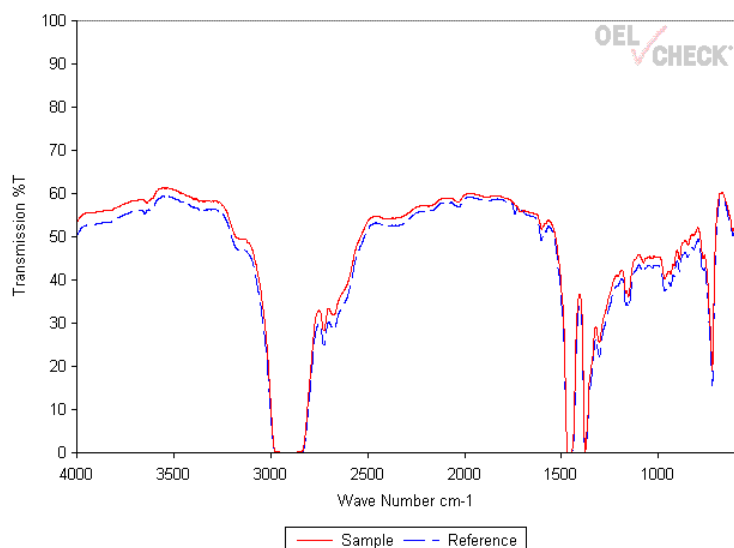
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Antioxidant/RULER

Antioxidant 1 - RULER % 32,6



Antioxidant/FT-IR

