

Unit ID **Steam turbine**
 Component **Control oil**
 Current sample number **1704488**



OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Machine type: **DKZ 42 E520**
 Manufacturer: **ABB**
 Oil brand name: **Shell Turbo T 46**
 Oil quantity in system: **500 l**

Example report
 Analysis scope: Turbine Oil Kit 4

Diagnosis for the current laboratory values

There is no significant change in comparison to the previous sample. All analyzed values are within the permissible tolerance levels. We cannot find abnormal wear or harmful contamination in the oil. Further use of oil without any corrective action can be recommended. I recommend that you send the next sample at the next service interval or at your regular inspection for trend analysis.

Dipl.-Ing. Andy Böhme (CLS)

Sample Rating



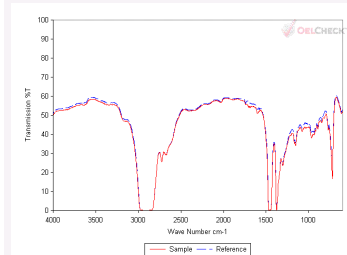
normal

ANALYSIS RESULTS			Current sample	5 previous samples not shown		
LAB NUMBER			1704488	1700937	1704489	1704490
SAMPLE RATING			✓	✓	✓	ⓘ
Date tested			09.05.2023	27.04.2023	13.02.2023	02.11.2022
Date of sample taken			02.05.2023	30.03.2023	08.02.2023	27.10.2022
Date of last oil change			18.04.2014	12.03.2013	18.04.2014	18.04.2014
Top-up since change	l		0	3400	0	-
Operating time since change	d		3301	106134	3217	3113
Total operating time	a		32	229296	32	32
Oil changed			no	no	no	no
WEAR						
Iron	Fe	mg/kg	0	1	0	1
Chrom	Cr	mg/kg	0	0	0	0
Tin	Sn	mg/kg	0	0	1	0
Aluminum	Al	mg/kg	0	0	0	0
Nickel	Ni	mg/kg	0	0	0	0
Copper	Cu	mg/kg	1	0	1	2
Lead	Pb	mg/kg	0	1	1	0
Molybdenum	Mo	mg/kg	0	0	0	0
Manganese	Mn	mg/kg	0	-	0	0
PQ index	-		< 25	< 25	< 25	< 25
CONTAMINATION						
Silicon	Si	mg/kg	0	0	0	0
Potassium	K	mg/kg	0	0	0	0
Sodium	Na	mg/kg	0	14	0	0
Lithium	Li	mg/kg	0	-	0	0
Water K. F.	ppm		< 30	228	< 30	< 30
OIL CONDITION						
Viscosity at 40°C	mm²/s		46.06	44.58	46.37	46.01
Viscosity at 100°C	mm²/s		6.84	5.34	6.90	6.86
Viscosity index	-		103	11	104	104
Oxidation	A/cm		1	-	1	2
IR index	-		99.79	98.89	99.80	99.67
Color	Color index		5.0	5.5	4.5	5.0
ADDITIVES						
Calcium	Ca	mg/kg	0	0	0	0
Magnesium	Mg	mg/kg	0	0	0	0
Boron	B	mg/kg	0	0	0	0
Zinc	Zn	mg/kg	0	0	0	1
Phosphorus	P	mg/kg	1	> 30000	0	0
Barium	Ba	mg/kg	0	0	0	0
Sulphur	S	mg/kg	111	< 10	24	< 10

Bottle and cap



Infrared Spectrum



LAB REPORT



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page 2 of 2

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ADDITIONAL TESTS					
AN / NN	mgKOH/g	< 0.10	0.11	< 0.10	< 0.10
Cleanliness class	ISO 4406	16/14/11	20/17/14	15/13/10	23/21/17
A: >4µm = ISO >4µm	Particles/100ml	46390	588741	20072	4819367
B: >6µm = ISO >6µm	Particles/100ml	12484	104451	6693	1232314
C: >14µm = ISO >14µm	Particles/100ml	1108	8244	694	86723
D: >21µm	Particles/100ml	344	-	231	22530
E: >38µm	Particles/100ml	49	-	65	1933
F: >70µm	Particles/100ml	0	-	14	179
Cleanliness class	SAE AS 4059	6A	-	6E	> 12A
Phenolic antioxidant FT-IR	%	67.3	-	68.7	69.5

