

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

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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.

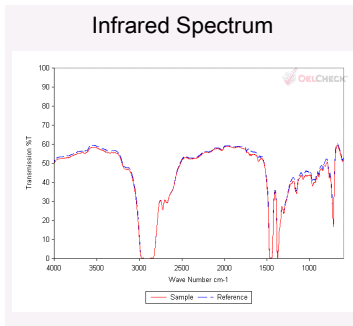
Dipl.-Ing. Andy Böhme (CLS)

### Sample Rating



normal

ANALYSIS RESULTS			Current sample	5 previous samples not shown			
LAB NUMBER			1704488	1700937	1704489	1704490	
SAMPLE RATING			✓	✓	✓	i	
Date tested			07.05.2020	27.04.2020	11.02.2020	31.10.2019	
Date of sample taken			02.05.2020	30.03.2020	08.02.2020	27.10.2019	
Date of last oil change			18.04.2011	12.03.2010	18.04.2011	18.04.2011	
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	
Chrome	Cr	mg/kg	0	0	0	0	
Tin	Sn	mg/kg	0	0	1	0	
Aluminium	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	
Phenolic Inhibitor	%		67	-	69	70	
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	



# LAB REPORT

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ADDITIONAL TESTS					
AN / NN	mgKOH/g	0.06	0.11	0.06	0.06
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