

LAB REPORT

Unit id **Steam turbine**
Component **Lubricating oil 10T**
Lab number **1702851**



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OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Example report
Analysis scope: Turbine Oil Kit 10

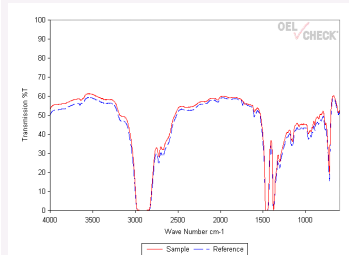
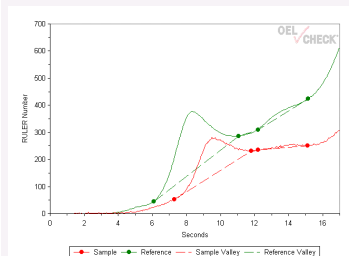
Machine type: **EG49/8/8**
Manufacturer: **Siemens/Bergmann Borsig**
Sample from: **Lubricating oil**
Oil brand name: **Aral Kosmol TF 46**
Oil quantity in system: **3000 l**

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 | |
|-----------------------------|-------------|-------|----------------|------------------|--|
| LAB NUMBER | | | 1702851 | | |
| SAMPLE RATING | | | | | |
| Date tested | | | 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 | | | h 59805 | | |
| Total operating time | | | h 351596 | | |
| Oil changed | | | no | | |
| WEAR | | | | | |
| 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 | | |
| CONTAMINATION | | | | | |
| 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 | | |
| OIL CONDITION | | | | | |
| Viscosity at 40°C | mm²/s | | 44.96 | | |
| Viscosity at 100°C | mm²/s | | 6.80 | | |
| Viscosity index | - | | 106 | | |
| Oxidation | A/cm | | 1 | | |
| IR index | - | | 99.76 | | |
| Color | Color index | | 1.5 | | |
| ADDITIVES | | | | | |
| 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 | | |

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

LAB REPORT

Unit id

Steam turbine

Component

Lubricating oil 10T

Lab number

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+49 8034-9047-210

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Example report
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Machine type:EG49/8/8

Manufacturer:Siemens/Bergmann Borsig

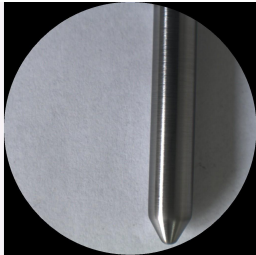
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| ADDITIONAL TESTS | | | | |
| AN / NN | mgKOH/g | 0.13 | | |
| MPC | | 8.30 | | |
| Air-release properties | min | 6.3 | | |
| Water separation (steam) | s | 111 | | |
| Foam test seq. I | ml/ml | 500/0 | | |
| Cleanliness class | ISO 4406 | 17/15/11 | | |
| A: >4µm = ISO >4µm | 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 | pass | | |
| Antioxidant 1 - RULER | % | 87.3 | | |
| Antioxidant 2 - RULER | % | 49.9 | | |

Steel corrosion



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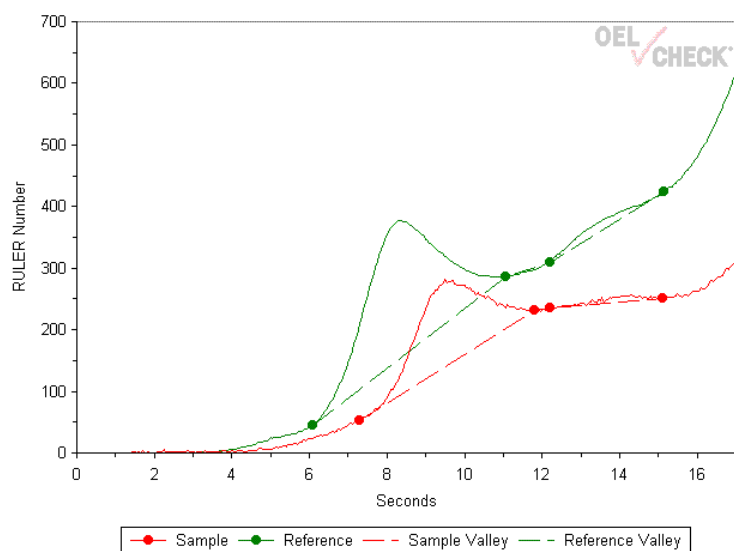
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Example report
Analysis scope: Turbine Oil Kit 10

Evaluation of the oxidation inhibitors

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

Dipl.-Ing. (FH) Stefan Mitterer



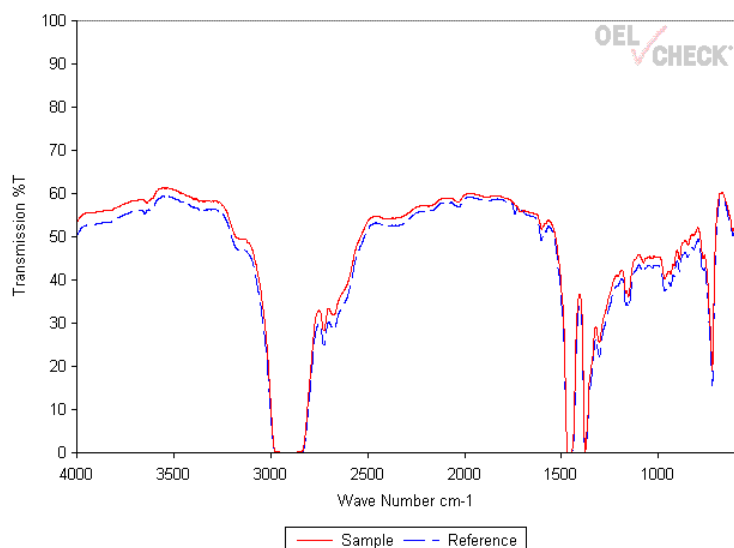
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Antioxidant/RULER

| | | |
|-----------------------|---|------|
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Antioxidant/FT-IR



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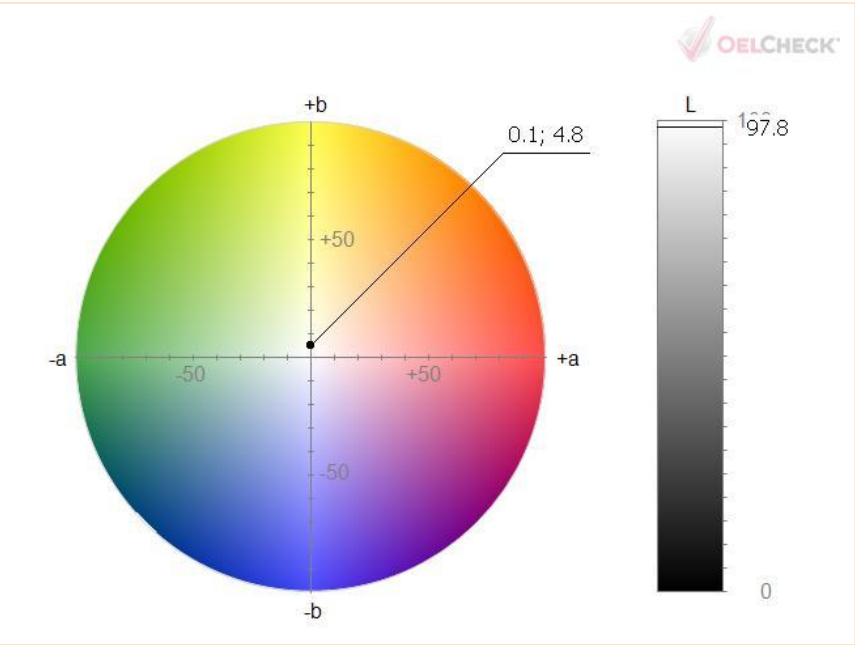
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Diagnosis of the MPC test
The MPC value is within a normal range. There is no risk for the formation of varnish.
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| MPC test | |
|--------------------|-------|
| MPC | 8,30 |
| Luminance L | 97,80 |
| Redness index a | 0,10 |
| Yellowness index b | 5,80 |

