



Kosmol 46

Premium turbine oil

Description

Kosmol 46 turbine oil is based on specially selected mineral base oil and additives to obtain a very high degree of oxidation stability. It contains additives to protect metal surfaces against corrosion and to suppress foaming, whilst retaining good air release properties. The product has been formulated to be compatible with the components used in turbines and associated equipment, and contains an inhibitor to prevent catalytic acceleration of autooxidation of lubricants hydrocarbons by traces of metals. The product does not contain organo-metallic additives, i.e. the formulation is zinc-free, and ashless.

Application

The Kosmol 46 oil can be used for the lubrication and cooling of bearings and gear boxes of steam, gas and water turbines and associated equipment, such as turbine governor systems, sealing oil systems, turbo-couplings as well as for the lubrication of turbo compressors.

The grade is formulated to meet the demanding requirements of major turbine manufacturers and this is supported by extensive service experience. Kosmol 46 grade fulfill the requirements of the following standards:

- * DIN 51515 part 1 "Lubricants and governor fluids for steam turbines, type L-TD"
- * ISO 8068 "Lubricating Oils for Turbines, categories L-TSA and L-TGA"

Kosmol 46 oil is approved against national and international specifications, such as:

- * Siemens AG - KWU Group; TLV 9013 04 (steam, and gas turbine turbosets)
- * ABB Asea Brown-Boveri AG: HTGD 90 117 D
- * MAN Energie GmbH: N 696

Advantages

- Long useful oil life.
- Wide operating temperature range.
- Good air release properties.
- Good protection against corrosion, even in the presence of condensed water.
- Good water separation.
- Compatibility with standard seal materials and non-ferrous metals.

Typical Characteristics

| | Test Method | Units | Kosmol 46 |
|--|-----------------|--------------------|------------------------|
| Colour | ISO2049 | - | <1.0 |
| Density at 15 °C | ISO3675 | kg/m ³ | 871 |
| Kinematic viscosity @ 0 °C @ 40 °C @ 100 °C | ISO3105 | mm ² /s | 560 46 6.8 |
| Viscosity Index | ISO2909 | - | 102 |
| Flash point (COC) | ISO2592 | °C | 230 |
| Pour point | ASTM D97 | °C | -12 |
| Neutralisation Value | ASTM D664 | mgKOH/g | 0.10 |
| TOST life/ Acidity 1,000 h | ISO4263 | mgKOH/g | <0.5 |
| Corrosion -rust protection "A" Corrosion -rust protection "B" | ISO7210 | - | pass pass |
| Copper corrosion, 3h/100°C | ISO2160 | - | 1 |
| Air release at 50 °C | ASTM D3427 | min | <3 |
| Demulsification | DIN51589/1 | s | <100 |
| Ash | DIN EN7 | %wt | <0.01 |
| FZG | IP334 | Load-stage failure | 7 |
| Foam Tendency/Stability Sequence I: 25 °C Sequence II: 95 °C | ASTM D892 | ml | <100/0 <50/0 |
| Particles | Membrane filter | %wt | below detection limits |
| Water | DIN ISO3733 | %wt | below detection limits |

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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Castrol Industrial, Technology Centre , Whitchurch Hill , Pangbourne , Reading , RG8 7QR , United Kingdom

<http://msdspds.castrol.com>