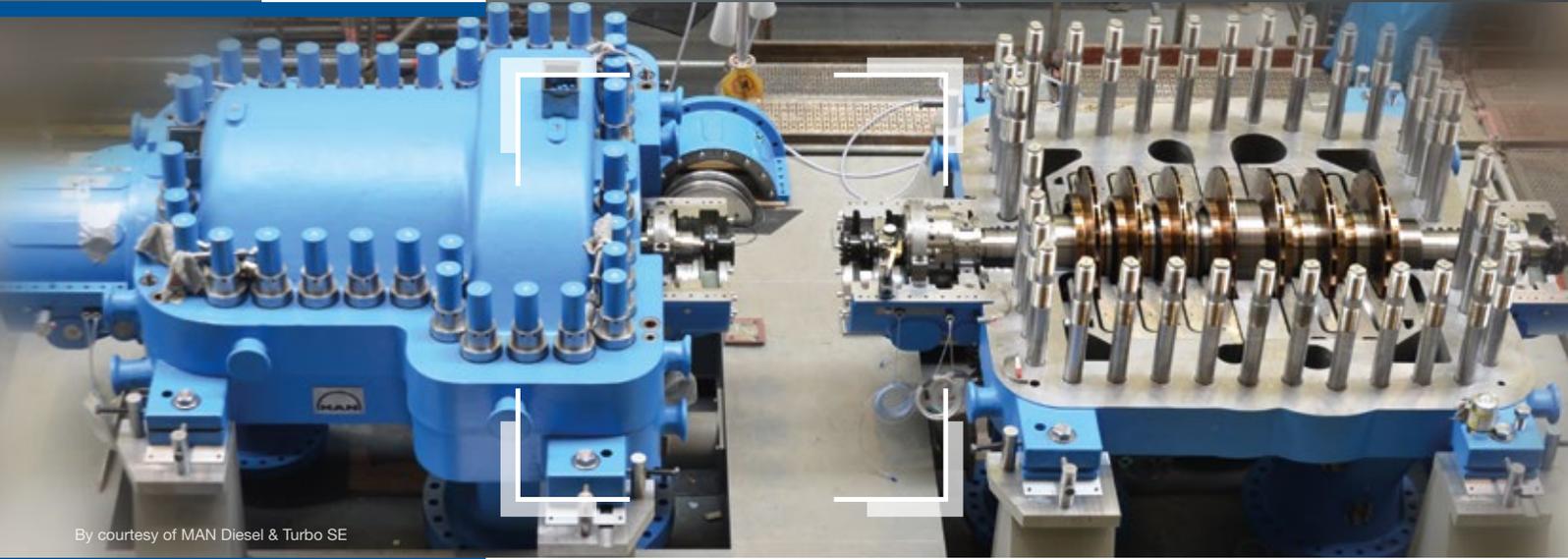


ORITES TN

Oil for lubricating and seal-up of ammonia synthesis turbo compressors

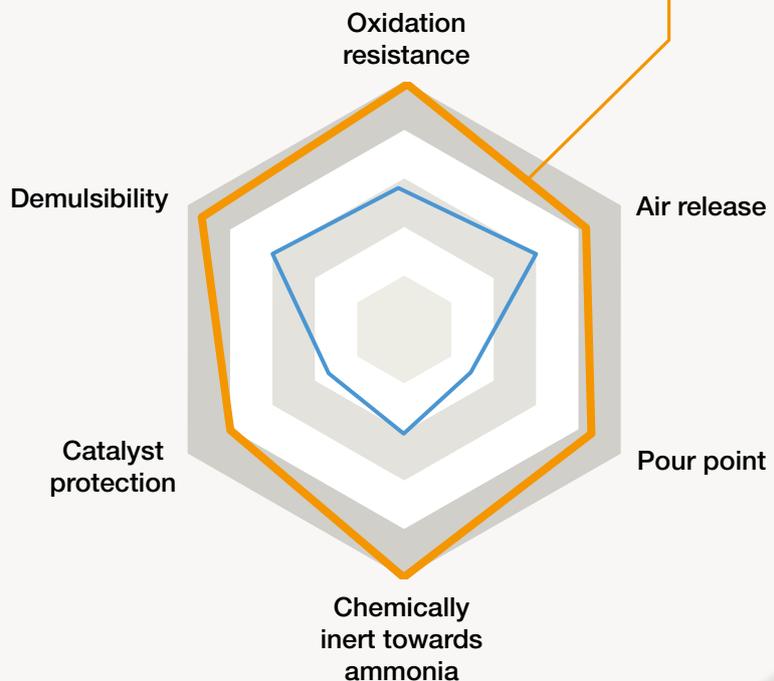


By courtesy of MAN Diesel & Turbo SE

ORITES TN is a blend of highly refined base oils and specific additives, formulated for ammonia synthesis turbocompressors in nitrogen fertilizer plants. It is also suitable for turbine applications.

OPTIMAL PERFORMANCE

Increased equipment reliability



◆ ORITES TN
◆ Standard turbine oil

+ CUSTOMER BENEFITS

- > Maintenance costs savings
- > Long oil life
- > Excellent protection of mechanical parts
- > Maximum catalyst protection



TOTAL



EXCELLENT PROTECTION OF MECHANICAL PARTS

> Deposit formation test in presence of NH_3



Standard turbine oil



ORITES TN

3x
less particulate
formation

ORITES TN is specifically formulated with hydrocracked based oil and high performance additives chemically inert towards ammonia thus ensuring a low deposit formation.

✓ APPROVAL

- MAN TURBO

✓ REFERENCES

- DRESSER-RAND
- THERMODYN
- SIEMENS

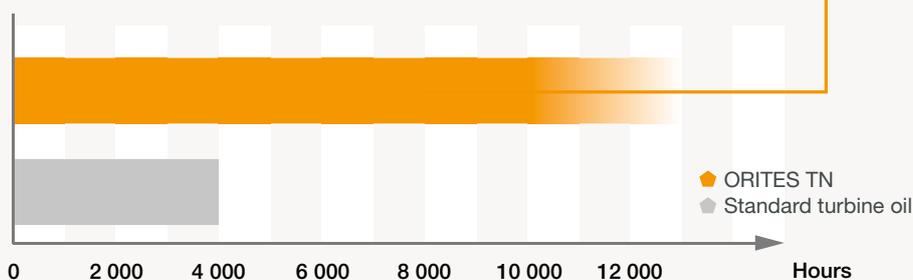
“ORITES TN 32 ensures at the same time lubrication of compressors and turbine bearings, and lubrication of compressors wet seals. TOTAL ORITES TN 32 behaves very well in contact of ammonia, a load of 1 000L has a lifetime up to 5 years. I invite TOTAL to recommend this oil to other manufacturers of ammonia, who will be like us, satisfied with a product answering very well our constraints.”

Mechanical and maintenance team leader of a fertiliser company



INCREASED OIL LIFE

> Oxidation test: TOST (ISO 4263)



Longer
oil life

> Oxidation test in presence of NH_3



Standard turbine oil

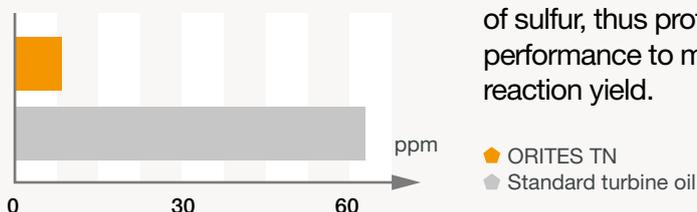


ORITES TN

ORITES TN shows an excellent oxidation resistance even in presence of ammonia, thus ensuring an extended oil drain interval.

MAXIMUM CATALYST PROTECTION

> Sulfur content



ORITES TN is based on highly refined oils with a very low amount of sulfur, thus protecting catalyst performance to maintain the reaction yield.