

Product Data Sheet

Mobil DTE 790 Series Premium Steam Turbine Circulating Oils

Product Description

Mobil DTE 790 Series oils are premium quality lubricants intended for use in critical steam turbine systems where superior oxidation stability is required and where oil colour stability can be a critical factor in assessing oil life. They are formulated from very high quality, hydrotreated base oils and a zinc-free additive system which provide exceptional chemical stability, cleanliness and outstanding protection against oxidation, rust and corrosion. Increased protection against wear is provided, ensuring that a tenacious lubricating film is maintained, even during turbine start-up and shutdown. Demulsibility characteristics are excellent, giving rapid separation of water. The oils have low foaming tendency.

Mobil DTE 798 meets or exceeds the requirements of:

Alstom Power HTGD 90117
Alstom Power Sweden MAT 812102
GEC Alstom NBA P 50001
Siemens Power Generation TLV 9013 04
EdF HN 20S30
DIN 51515-1 L-TD 46

Benefits

Mobil DTE 790 Series oils offer the following benefits:

- Long oil charge life as a result of high chemical and thermal stability giving freedom from deposits and oil degradation
- Extended life of turbine bearings
- Long-term protection against rust and corrosion
- Exceptional "keep clean" protection for system components
- Reduced maintenance costs due to protection against wear
- Excellent colour stability providing an indication of the lubricant's useful life
- Improved operating efficiency due to excellent water release capability and resistance to emulsification and sludge formation
- Marked resistance to foaming and very good air release properties avoid pump cavitation, and prevent noisy and erratic operation
- Reduced unscheduled downtime through a well-balanced combination of quality and performance properties

Application

Mobil DTE 790 Series oils are recommended for the circulation systems of direct connected steam turbines and ring-oiled bearings of direct connected and geared turbines. They are also recommended for oil-lubricated components of turbine control valve mechanisms and hydraulic servo systems.

Note: final filtration, before use, may be required to meet cleanliness specifications of some builders.

Health and Safety

Based on available toxicological information, it has been determined that these products pose no significant health risk when used and handled properly.

Details on handling, as well as health and safety information, can be found in the Material Safety Data Bulletin which can be obtained through Mobil Oil Company Ltd., by telephoning 01372 22 2000.

Typical physical characteristics are given in the table. These are intended as a guide to industry and are not necessarily manufacturing or marketing specifications.

Typical Characteristics

Mobil DTE

| | | 798 | 799 |
|----------------------------------|--------------------|-------|-------|
| | Test Method | | |
| ISO Viscosity Grade | - | 46 | 68 |
| Viscosity, cSt at 40°C | ASTM D445 | 45 | 63 |
| Viscosity, cSt at 100°C | ASTM D445 | 6.7 | 8.3 |
| Viscosity Index | ASTM D2270 | 101 | 107 |
| Flash Point, COC, °C | ASTM D92 | 238 | 246 |
| Pour Point, °C | ASTM D97 | -12 | -12 |
| Demulsibility at 54°C, mins | ASTM D1401 | 15 | 25 |
| TOST, hrs to 2 NN | ASTM D943 | 5500 | 4500 |
| Rust Protection, Distilled Water | ASTM D665 | Pass | Pass |
| Synthetic Sea Water | | Pass | Pass |
| Copper Corrosion, 3 hrs at 121°C | ASTM D130 | 1A | 1A |
| Foam, Sequence 1 | ASTM D892 | 100/0 | 100/0 |

Due to continual product research and development, the information contained herein is subject to change without notice.

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