



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Doble Engineering Company

123 Felton St.

Marlborough, MA 01757

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 05 December 2022
Certificate Number: AT-2637



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Doble Engineering Company

123 Felton St.
Marlborough, MA 01757

Melissa Carmine - Zajac 617-393-2937
mzajac@doble.com www.doble.com

TESTING

Valid to: **December 5, 2022**

Certificate Number: **AT-2637**

Chemical

| Specific Tests and/or Properties Measured | Specification, Standard, Method, or Test Technique | Items, Materials or Product Tested | Key Equipment or Technology |
|---|--|------------------------------------|--|
| Dissolved Gas Analysis | ASTM D3612, Method C IEC 60567 | Dielectric Fluid | Gas Chromatography |
| Moisture | ASTM D1533 IEC 60814 | Dielectric Fluid | Karl Fischer Automatic Titration |
| Neutralization Number | ASTM D974 | Dielectric Fluid | Titration |
| Furanic Compounds | ASTM D5837 IEC 61198 | Dielectric Fluid | High Performance Liquid Chromatography |
| Inhibitors Content | ASTM D2668 IEC 60666B | Dielectric Fluid | Infrared Spectroscopy |
| Corrosive Sulfur | ASTM D1275 | Dielectric Fluid | Copper/Silver Strip Polishing/Tarnishing |
| Corrosive Sulfur | Doble CCD | Dielectric Fluid | Copper/Silver Rod Polishing/Tarnishing |
| Corrosive Sulfur | IEC 62535 | Dielectric Fluid | Copper Rod Polishing/Tarnishing |
| Corrosive Sulfur | DIN 51353 | Dielectric Fluid | Silver Strip Polishing/Tarnishing |

Mechanical

| Specific Tests and/or Properties Measured | Specification, Standard, Method, or Test Technique | Items, Materials or Product Tested | Key Equipment or Technology |
|---|--|------------------------------------|--------------------------------------|
| Dielectric Breakdown | ASTM D1816 IEC 60156 | Dielectric Fluid | Oil Breakdown Voltage Tester |
| Dielectric Breakdown | ASTM D877 | Dielectric Fluid | Oil Breakdown Voltage Tester |
| Power Factor | ASTM D924 IEC 60247 | Dielectric Fluid | Oil Tester |
| Interfacial Tension | ASTM D971 | Dielectric Fluid | Automatic / Manual Force Tensiometer |
| Specific Gravity | ASTM D4052 | Dielectric Fluid | Automatic Densitometer |
| Color of petroleum products | ASTM D1500 | Dielectric Fluid | Visual Color Comparator Instrument |
| Visual examination | ASTM D1524 | Dielectric Fluid | Visual |

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-2637.



R. Douglas Leonard Jr., VP, PILR SBU

