OilLab 670 Cleveland

LINETRONIC TECHNOLOGIES
Linetronic Technologies SA
Via Onorio Longhi 2
CH-6864 Arzo,Mendrisio, Switzerland
tel. +41 91 6300703, fax +41 91 6300719
www.lin-tech.ch – info@lin-tech.ch

CE

ASTM D92
DIN 51376
EN 22592 (obs.)
IP 36
ISO 2592

Subject

Flash and Fire Point on petroleum products, gas oils, fuel oils, lubricants.
Suitable for flash and fire point detection on different substances and waste materials, having a flash point over 79°C.

Measuring Cleveland Principle

The sample is warmed up according the methods. When the sample reaches the selected test temperature, the flame is passed automatically above the sample. When the flash point is reached, the detection is done by an ionisation detector.
For fire point detection, the sample continues to be heated until permanent flame is detected by the second PT100 probe, then the auto extinguisher will be placed on the top of the test cup.

Measuring Cleveland Devices

- Analyser equipped with automatic flame exposure device
- Measurement of the Flash Point detected by an ionisation detector
- Analyser equipped with 2 electrical ignitors and a pilot flame
- Measurement of the Fire Point detected by PT100 detector

Measuring Temperature Probe

- Platinum resistance PT100 class A

Measuring Parameters

- Temperatures: in °C
- Measuring range: +79°C … +400°C
- Resolution: 0.06 °C
- Accuracy: ± 0.1 °C
- Repeatability / Reproducibility: as per standards methods or better

Software Features

- All analytical parameters recorded
- Customizable analysis parameters and methods
- Customizable results report
- Printable graphs and results

The software includes:

Analysis Menu
- Standard method as per ASTM / IP / ISO / EN / DIN… norms of reference
- Unknow sample
- Audible alarm and displayed messages at the end of the analysis and in case of errors and/or malfunction

Diagnostic Menu
- Direct access to all analog, digital, inputs and outputs
- Selectable value displaying: °C / Volt

Calibration Menu
- Automatic calibration of each temperature probe
- Last calibration date referred to each single probe displayed and relative data printable
- Display of calibration diagram
- Insertion of offset values
- Standard and advanced calibration modes

Data Utilities
- Fields for introduction of operator and product name
- Archive viewer for files recall
- All analysis stored in Excel® compatible format
- LIMS compatible

Integrated Touch Screen Panel PC

- TFT/LCD 8"
- Resolution 1024 × 768, 16.2 M colours
- 2 USB ports for connection to an external printer and/or external PC
- Storage capacity for more than 60'000 analysis

Test Cup

- The cup is made of chromium plated brass provided with high temperature resistant handle
- Internal diameter: 50.8 mm
- External diameter: 54 mm
- Internal depht: 55.8 mm
- Filling mark at 21.8 mm from upper side

Heating

- Electrical heater
- Equipped with over temperature cut-out

Electrical Supply

- 220V ± 15% / 50 to 60 Hz
- 115V ± 15% / 60 Hz
- Power cable with schuko plug

Ambient Temperature

- Max 35°C
- H.R. 80%

Dimensions

- width 48 cm
- depth 37 cm
- height 61 cm

Weight

- 32 Kg

Test Cup

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The Flash Point detection system, which is composed by a ring sensor for the ionization's determination, constitutes the essential component granting high repeatability and excellent results. Furthermore, a sensor detects the presence of the flame for fire point determination.
The device are mounted on a mechanical arm with automatic positioning during analysis.

The test flame pilot is equipped with a flame size regulator as well as a position and direction device for a fine adjustment.

Gas ignitor / flame applicator made in stainless steel with orifice 0.8 mm diameter, automed duplicator of the sweep movement permit the precise positioning at 1.8 mm above cup rim and 152 mm radius from cup center.

The test cup closing system is totally automatic and grant the maximal security as well as the two electrical ignitors which grant the continuous presence of the test flame.

Accessories

- LAB-670-12-03: tools kit for bitumen made up of electric drive, support for the PTFE blade flexible transmission with joint and switch.

Spare Parts

- LAB-670/05-13: heater (heating plate)
- LAB-670/05-26: PT100 for fire point detection
- LAB-670/06-21: gas valve
- LAB-670/07-01: electrical ignitor - pilot arm
- LAB-670/07-02: gas ignitor
- LAB-670/07-03: micro switch
- LAB-670/07-04: handle
- LAB-670/07-05: electrical lateral ignitors pack of 2 (old model)
- LAB-670/08-12: PT100 for flash point detection
- LAB-670/08-13: detection / ionisation cable
- LAB-670/09-04: gas reducer
- LAB-670/09-05: calibrated chromium plated brass crucible
- LAB-670/10-04: PCB fuses, box of 10
- LAB-670/10-05: main electronic board
- LAB-670/11-01: silicon tubing, 1 meter
- LAB-670/12-01: voltage transformer for ignitor

Calibration Tools

- OilLab 80: calibration decade box – PT100 simulator
- OilLab 81: set of connectors and cables for cold range

The head can also be equipped with a paddle used to move the surface and perform tests on bitumen: LAB-670-12-03.

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