

Viscosity Measurement at Actual and Reference Temperature (50°C) with Flushing system

TURNKEY SOLUTIONS

There are many variables to take into account when fitting a blending system and our highly skilled engineers will adapt our system to fit your exact requirements.

TECHNICAL SUPPORT

We are with you all the way. Before, during and after the installation to secure a flawless integration and operation.

ZERO DOWNTIME

As a central part of a bunker delivery system; mechanical stability, toughness and durability is an important aspect of the manufacturing and design philosophy.

For more information on these or other of our products or services please visit us on the Web at:

www.cbi.dk



In-Line Bunker Monitoring

The constantly increasing demands for control of quality parameters like viscosity and temperature can be fulfilled through use of an In-line CBI Bunker Monitor, which reduces indirect loss, due to compensation in blending to avoid customer claims, to an absolute minimum.

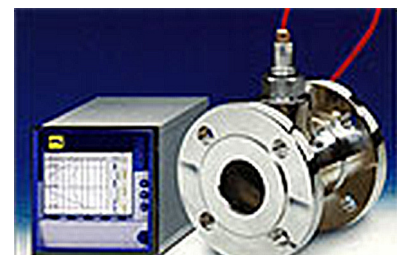
The CBI Bunker Monitor ensures an optimal and consistent quality throughout the entire blending process, along with a batch report at the end of the blending process.

The reference Viscosity at 50°C is required to make a real-time control of the fuel blending process to the exact customer specification. The reference Viscosity is shown on an LCD display where the Operator can control the actual viscosity at reference temperature (50°C) and adjust the ratio if required.

If the CBI Bunker Monitor is used together with the automated blending system, the

reference Viscosity at 50°C is used as an important input parameter for the advanced proprietary control algorithms, to guarantee a perfect blend.

There are several customize able information options available from the Bunker Monitor, including automatic adjustment of ratio in the blending process and density control.



OPTIONS

Basic Bunker Monitor

The basic system consist of a high accuracy Viscosity sensor for product blending with a Mechanical Fuel Blender to be within +/- 1% to the specification.

Pump for Sensor Cleaning

The system can be extended with a powerful pump securing sensor flow and cleaning.

Automatic System

A PLC Unit with a key control panel, a transmitter for registration of blended volume and a Switchboard for registration, control and reporting.

SERVICES AVAILABLE

Consulting Services
Technical Support
Installation and Setup
Maintenance
Warranty

CBI Bunker Monitor OPTIONS

Option 1 - CBI Basic Bunker Monitor

The basic Bunker Monitor measures the viscosity of a product blended with a Mechanical Fuel Blender with an accuracy of +/- 1% to the specification.

The basic system consist of a high accuracy Viscosity sensor, which measures the actual viscosity and temperature using reference viscosity at 50°C is calculated.

The basic Bunker Monitor comprises

- Viscosity at measured temperature
- Calculate Viscosity at 50°C
- Electronic Screen Recorder
- Software for Printout on PC

Control Switchboard

The Control Switchboard has an LCD screen showing readings and registration of viscosity at measured temperature, reference viscosity at 50°C, out of range alarms, speed control and start/stop of pump.

Option 2 - Pump for Sensor Cleaning

The system can be extended with a powerful pump, securing sensor flow and cleaning from batch to batch. It is built as a complete system in stainless steel piping on a wall mounted plate.

The pump ensures a steady flow and pressure through the sensor, because the sensor is not fitted in the main bunker line.

Option 3 - Automation System

The Automation system includes

- PLC Unit with an electronic key control panel
- Pulse-transmitter for registration of blended volume to be built in to flow meter
- Switchboard for registration, control and reporting

Batch Reporting

The following data are included in the report printed out after each batch

- Date and time
- Batch Number
- Customer Number
- Batch Size
- Average viscosity
- Average temperature
- Density (optional)
- Average density (optional)

Automatic Operation

In automatic mode, the operator can key in the Customer number, Batch Size and Viscosity Set-Point.

The inlet valves can be fitted with actuators for automatic opening and closing.

With this option it is possible to key in a pre-stop value for fuel and diesel oil, in order to compensate for valve-closing-time, and start closing the valves before the set-Point is reached.

Viscosity Set- Point

The Viscosity Set-Point is used to trim the blending device for correct viscosity of the delivered product.

The Set-Point for viscosity, volume and the actual values for viscosity and volume are displayed during the automatic operation.



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