

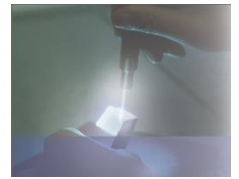
OilGuard Ex M

USP & Product features » customer benefits

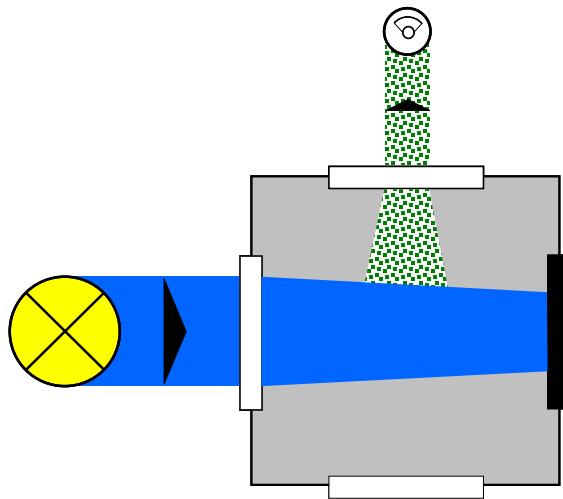


More than 45 years experience





Fluorescence measuring



- » No solvents required
- » Measures dissolved and dispersed oil
- » Immediate response to changing process conditions (response time < 1 sec.)
- » Low impact of solids and salt on the measurement
- » Correlated to the IMO standard MEPC.107(49)

OilGuard Ex M



 **U. S. Department of Homeland Security**
United States Coast Guard
Certificate of Approval

Coast Guard Approval Number: 162.050/9047/1 Expires: 23 October 2017

OIL POLLUTION PREVENTION EQUIPMENT
The following device has been tested in accordance
IMO Resolution MEPC.107(49)

SIGRIST-PHOTOMETER AG
Hofwilstrasse 1
CH-6878 Ennetburgen
Switzerland

OILGUARD EX M; 15 ppm Bilge Alarm

This is to certify that the equipment listed has been examined and tested in accordance with the requirements of the specifications contained in annex 13 to the guidelines and specifications contained in IMO resolution MEPC.107(49).

Equipment manufactured by Sigrist-Photometer AG to specification no. 10241E dated January 2, 2006. The unit is designed for use in Hazardous Locations.

A copy of this certificate should be carried aboard a vessel fitted with this equipment at all times.

IMO Certificates of Type Approval do not expire and are valid for equipment manufactured at any time during the period of validity of this certificate.

Test data and results attached in the appendix.

This certificate documents compliance with 46 CFR 162.050.

*** END ***

THIS IS TO CERTIFY THAT the above named manufacturer has submitted to the undersigned satisfactory evidence that the item specified herein complies with the applicable laws and regulations as outlined on the reverse side of this Certificate, and approval is hereby given. This approval shall be in effect until the expiration date herein unless sooner canceled or suspended by proper authority.

 GIVEN UNDER MY HAND THIS 23rd DAY OF
OCTOBER 2012, AT WASHINGTON D.C.

S. J. KELLY
Chief, Engineering Division
U.S. Coast Guard Marine Safety Center

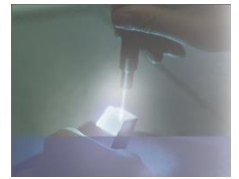
DEPT. OF HOMELAND SECURITY, USCG, CGHQ-10039
(REV. 3-03)

OilGuard Ex M for maritime applications
according IMO Standard

- » Calibration according IMO
 - › Directive MEPC.107(49)

IMO = International Maritime Organization

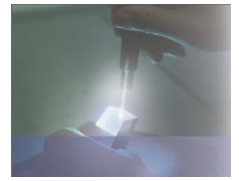
OilGuard Ex M



Ex Protection

- » Ex protection class Ex IIG px II T4; certified by:
 - › ATEX
- » Ex protection system Ex p (purge air)
 - › Elevated security, instrument switches off automatically, if the housing becomes leaky
 - › Housing can be opened by key, no time consuming screws to unbolt
 - › Very economical, no purge air consumption after initial purging
- » Housing ① separated from the measuring cell ②
 - › The instrument can remain switched on during maintenance
 - › Shortens the maintenance time



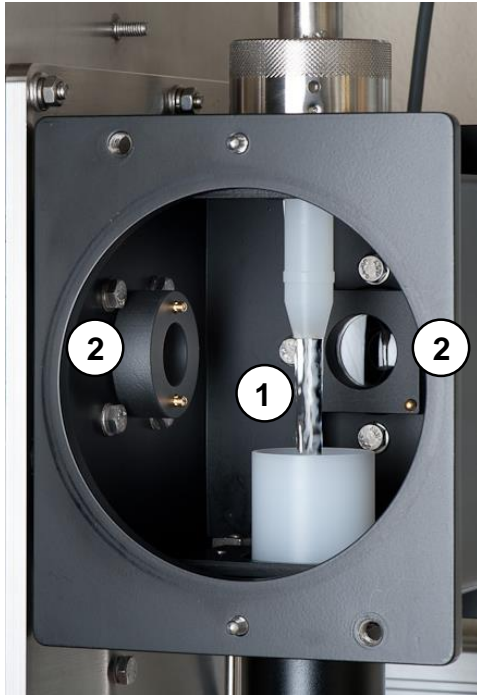


Free fall measuring cell PVDF

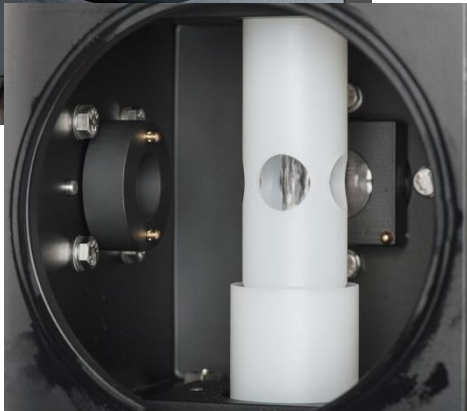
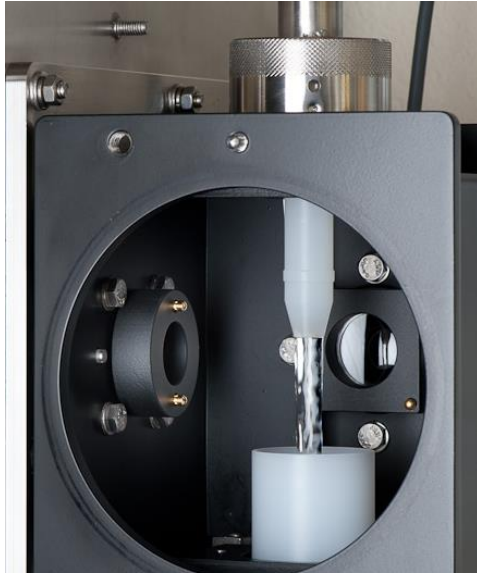
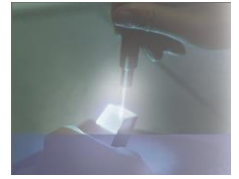
True contact less measuring principle:

- » ① Free fall sample stream passes through the instrument without touching the optics:
 - › No contamination of the optics
 - › the measured values are not falsified and there is no drift
 - › Existing dissolved metals e.g. barium sulfide do not contaminate nor blind the optics
 - › Vastly extended maintenance interval
 - › Purge air for high sample temperatures -> requires 6l/min air
 - › No ultrasonic cleaning needed

- » ② Protection glasses in front of the measuring optics:
 - › Protection of the measuring optics against contamination
 - › Simplified cleaning without any tooling



OilGuard Ex M

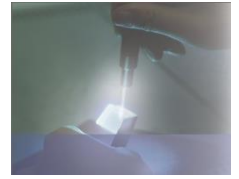


Free fall measuring cell PVDF

True contact less measuring principle:

- » Protection tube over the free falling sample
 - › protect the lenses against spray

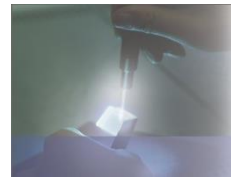
OilGuard Ex M



Free fall measuring cell PVDF

- » Inlet tube out of PVDF (3):
 - › No scaling / no contamination





Mounting racks

- › Simplify the mounting of the instrument

» Wall mounting rack

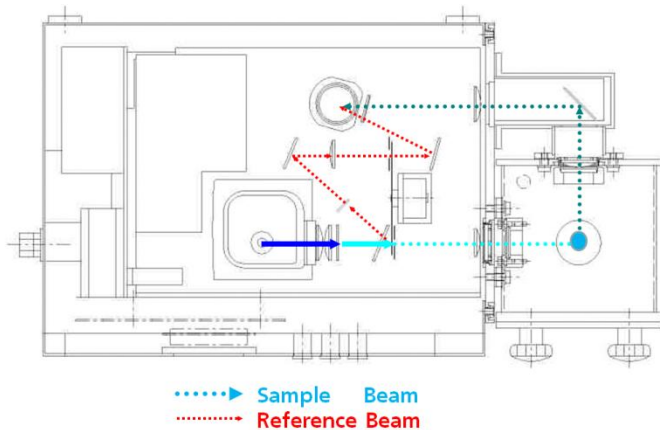
- › Reduces the installation time



» Standalone rack

- › Reduces the installation time

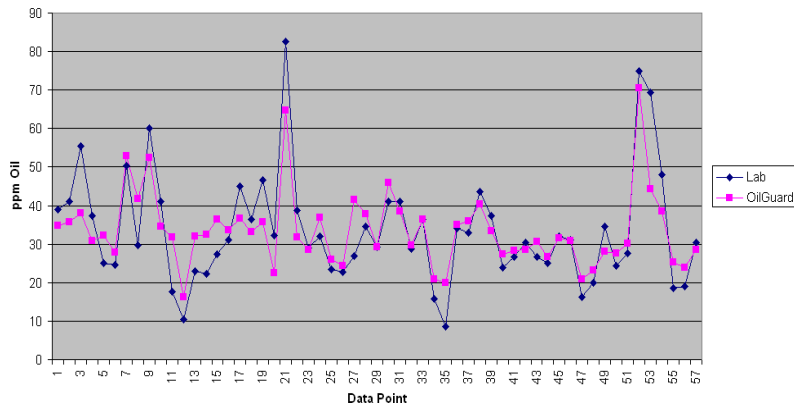
OilGuard Ex M

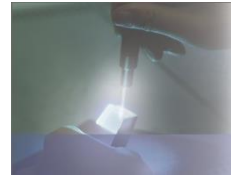


Reliable measurement

- » The instrument uses a sophisticated dual-beam optical set up with optimized wavelength configuration:
 - › Warrants highest precision and stability of the measurement
- » Fluctuations and light source aging are automatically compensated:
 - › Extends the lifetime of the light source
 - › Enhances the die availability of the instrument
- » Zero drift less < 1% per year causes:
 - › Seldom recalibration
 - › Less maintenance

OilGuard vs. Lab Results, correlated





Integrated controller and data logger

A functional design - intuitive operation:

- » A password protects against unauthorized access
- » Comprehensive communication options



- » An external data logger records all events, if the limit of 15 ppm is exceeded or undershot