



# OIL CONTENT MONITOR

## TYPE OCM-022

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MARINE ELECTRIC SYSTEMS, INC., is proud to introduce its' *Type OCM-022, Oil Content Monitor*. The OCM-022 is a user-friendly, factory pre-calibrated, oil-in-water content analyzer, which incorporates features not found in any other system.

### APPLICATION:

Environmental control of machinery and equipment necessitates the analyzing of oil content in water. At smaller levels of concentration, emulsified oil is frequently overlooked in waste water and cooling streams. The OCM-022 has the capability to measure emulsified oil in water, to concentrations as low as 1 PPM and upwards to 50,000 PPM. The system can be used for determination of total petroleum hydrocarbons, oil and grease or total quantities of any emulsified substances in water.

### THEORY OF OPERATION:

For shipboard application and operating as an on-line by pass type sampling analyzer/controller, the OCM-022 is typically installed after the ship's oil pollution abatement system. With the use of a homogenizer, the water containing trace levels of oil is then emulsified into small particles. The particles are then measured using both visible and NIR, light scatter and absorption techniques.

OIL IN WATER CONTROL  
&  
ALARM SYSTEMS

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### THEORY OF OPERATION: *continued*

The light source signal is captured by multiple detectors, analyzed, transformed and processed into electrical signals. The signals are then digitally linearized and displayed. Simultaneously, the signals are used for controlling, via the remote isolated 4-20mA output and/or recording of permanent hard data, via the 0-10VDC remote output.

### KEY FEATURES:

- Designed for use in extremely difficult and contaminated waste streams.
- Continuous on-line analyzing of process in real time.
- Proprietary contactless, non-fouling optical system.
- Wide measurement range allows measurements between 1ppm and 50,000 ppm.
- Built-in data capture capability
- 4/20mA valve control capability for stream start and stop recycling events.
- Two user adjustable alarm set points for controlling pre-set acceptable levels across the entire range of the instrument.

### SPECIFICATIONS:

Operating Principle:	Scatter and Absorption
Optical Operating Frequencies:	400 – 2500 nm
Reference Frequency:	Per Contract
Power Requirements:	115/220VAC – 50/60Hz – 50W(max)
Housing:	NEMA 4, NEMA 7
Light Source:	Semi-Conductor Laser LED (per contract)
Operating Conditions:	Roll = 30°, Pitch = 45°
Control Signal Output:	4-20mADC (iso)
Recorder Signal Output:	0-10VDC
System Units:	0-2000PPM (typ) per contract
Alarms:	2 Adjustable S.P.w/5A relays (follows S.P.)
Operating Temperature:	0-64° C (32 – 147° F)
Seals:	Per Contract Requirements
System Filters:	User Replaceable
Display:	3-1/2 Digit LED
Humidity:	0-97% RH
System Range:	Per Contract Requirements
Manuals:	Included
Calibration:	Factory set or per contract requirements.

**NOTE:** Typically, factory will pre-calibrate and pre-program analyzer based on customer supplied samples.



33 B Route 17S  
East Rutherford, NJ 07073  
phone: (201) 531-8600  
fax: (201) 531-8606