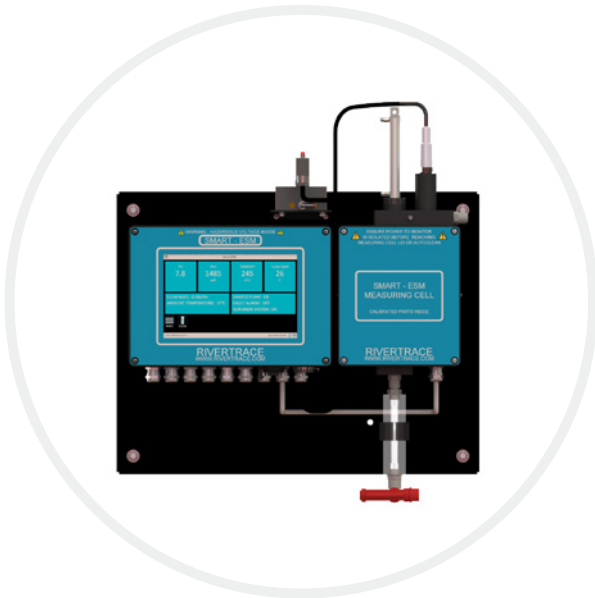


RIVERTRACE

SMART ESM - Wash Water Monitor for Ship Exhaust Gas Cleaning Systems



APPLICATIONS

- Ensures compliance of wash water discharge from ship EGCS is within regulatory limits
- Fully compliant with IMO MEPC 259(68)
- Systems suitable for both new ship and retrofit installations
- Compatible with Open Loop, Closed Loop and Hybrid systems
- Suitable for inlet and outlet monitoring

FEATURES

- PAH Measurement is compensated for turbidity
- Continuous real-time monitoring of wash water discharge including PAH, turbidity, Temperature and pH
- On screen historical data graphs showing Instant/ Hourly/Daily/Weekly figures
- Automatic cleaning of optical path
- Plug and play maintenance design
- Easy calibration check kits or component replacement

With the IMO's 2020 global sulphur cap fast approaching, a popular solution to ensure compliance is to install an exhaust gas cleaning system (EGCS).

For this, wet scrubber systems use wash water to remove the pollutants from the exhaust gas. Therefore the wash water being discharged must be monitored at all times to ensure it is within the limits set by the regulating body. There are IMO regulations for water quality parameters including Polycyclic Aromatic Hydrocarbons (PAHs), pH and turbidity prior to discharge into the ocean.

Rivertrace is an ISO 9001 Quality-Assured Company and market leader in Oil in Water Quality Monitoring, with over 30 years' experience and your partner to ensure that the wash water discharged from your exhaust gas cleaning systems is compliant with the global regulations on discharge.

Our SMART ESM monitor developed by Rivertrace, is suitable for both the inlet and outlet of a wet exhaust gas cleaning system, measuring and recording PAH, Turbidity, Temperature and pH, on open-loop, closed-loop and hybrid scrubber systems.

The SMART ESM is fully compliant with MEPC 259(68) and provides reliable information to ensure compliance with the worldwide SOx limits.

Optional Components

- Pressure Regulator
- Heat Exchanger
- Motor / Pump



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SPECIFICATION

	PaH	pH	Turbidity
RANGE	0µg/L to 4500µg/L	0 to 14	0 - 500
ACCURACY	5% of measurement reading	0.1 pH	0.1NTU up to 100 NTU, 1NTU thereafter.
NUMBER OF SAMPLE POINTS	one common sample line		
MEASURING PRINCIPLE	UV Fluorescence	pH Electrode	
CABINET DIMENSIONS (EXTREME WIDTHS)(WXHXD)	1090 x 971 x 369 mm		
CABINET WEIGHT	93 Kg		
SUPPLY VOLTAGE	115 or 230 VAC 50/60 Hz		
OUTPUTS	1x 4-20mA for each parameter (PaH, Turbidity, Temperature and pH) 1 x Volt free fault relay for each parameter (PaH, Turbidity, Temperature and pH) Individual common fault alarm relays and 1x general fault alarm relay		
STORAGE	Internal SD Card Downloadable to External USB		
IP RATING	IP66		
WETTED PARTS MATERIAL	All PVC-U and Brass Pump		
STANDARD SUPPLY	SMART ESM Monitor Flow Meter and Switch Debubbler Strainer Air Regulator Three-way 'T' valve Cabinet		
APPROVALS	DNV type approval (pending)		
SAMPLE INLET CONNECTION	Flange blanking ½" PN16/8 RFB 316/L		
SAMPLE OUTLET CONNECTIONS	Flange blanking ½" PN16/8 RFB 316/L		
AIR CONNECTION	10mm pipe		
CLEAN WATER INLET CONNECTION	Flange blanking ½" PN16/8 RFB 316/L		
SAMPLE / CLEAN WATER TEMPERATURE RANGE	0°C to *40°C *Higher available with a heat exchanger		
SAMPLE / CLEAN WATER PRESSURE RANGE	1 to *4 Bar *Higher available with a pressure regulator		
REQUIRED AIR SUPPLY PRESSURE RANGE	4 - 6 BAR		
COMPRESSED AIR NORMAL / AVERAGE CONSUMPTION	450mL / Hr		
SAMPLE / CLEAN WATER FLOW RATE RANGE	0.4 to 4 LPM		
AMBIENT TEMPERATURE RANGE	0°C to *50°C *Higher optional with a vortex cabinet cooler		

Specifications and system descriptions accurate at time of printing. These are subject to change.