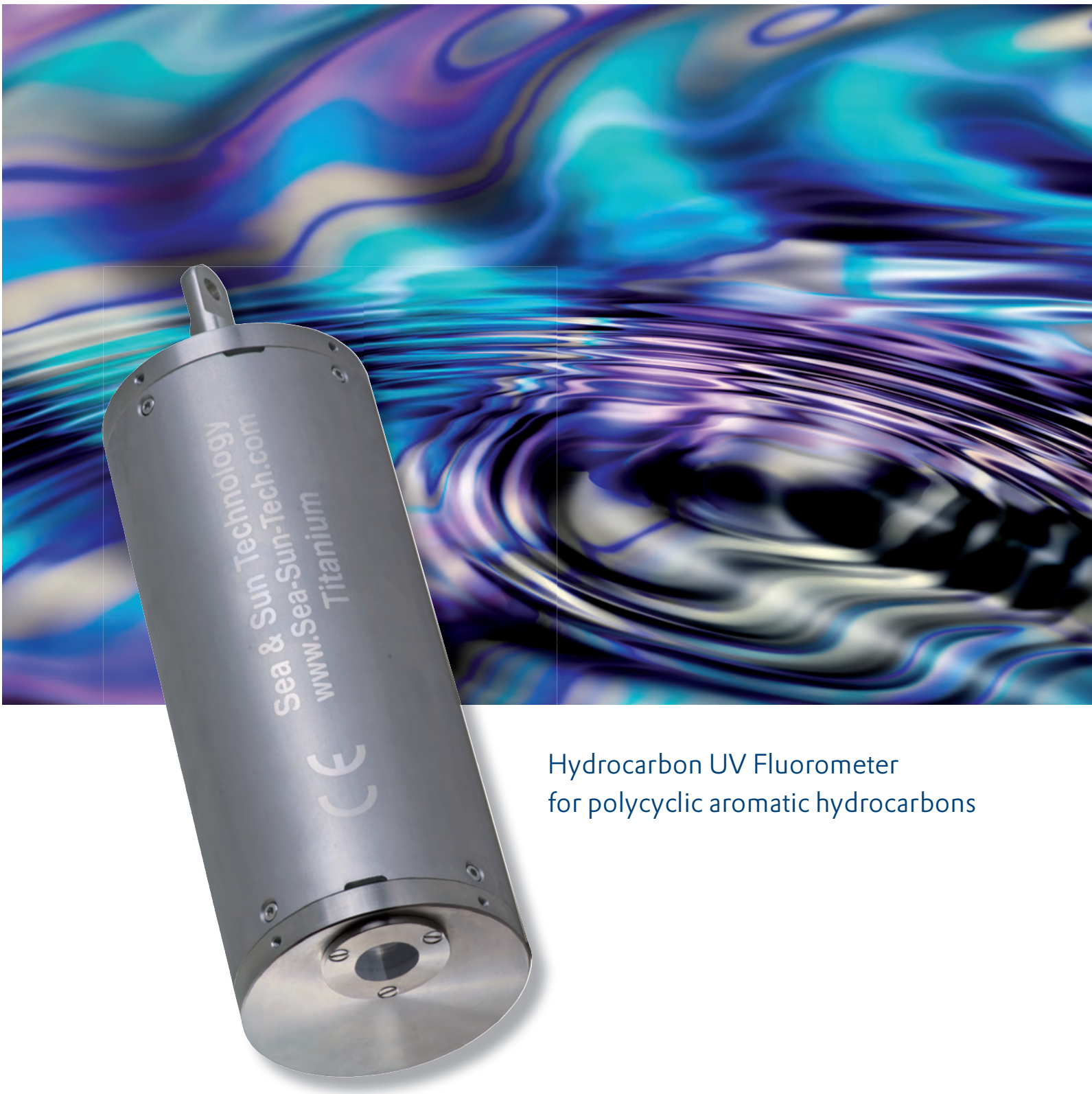
OIL DETECTOR

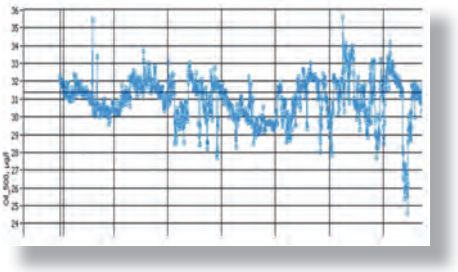
Hydrocarbon UV Fluorometer

Sea & Sun Marine Tech



Hydrocarbon UV Fluorometer
for polycyclic aromatic hydrocarbons

OIL DETECTOR



Application example:
Time series oil detection
in Brasil, 2008

- **resolution 0.01 µg/l**
  Range I 0–50, 0–500 µg/l naphtalene
  Range II 0–500, 0–5000 µg/l naphtalene
- **analog output 0–10 Volt/ 4–20 mA**
- **depth range up to 500 m, optional up to 2000 m**
- **titanium housing**
- **automatic compensation of dropping flash intensity**
- **flash lamp control**
- **daylight suppression**
- **low weight 2.7 kg**

Optional:
- **serial output: RS232**
- **data acquisition software package**

Fluorometric methods are widely used in environmental monitoring, analytical chemistry, limnological and oceanographic biology. Online fluorometers allow continuous measurements and nondestructive sampling in combination with high specificity and low detection limits. In order to meet most requirements, the instrument is light and compact designed and capable to work on the water surface as well as up to 500m (2000m) water depth. It can be powered by 12V or 24V batteries and is suited for portable operation in remote regions as well as for permanent stationary monitoring.
In combination with a portable field unit (PC) the user is able to operate a small and handy mains independent system for monitoring aromatic pollutants.

Typical applications include:
- crude oil detection, leakage control at offshore oil pipelines with remote operated vehicles (ROV)
- monitoring of organic fluorescent agents (humic acids, amino acids, BTXE and polycyclic aromatic hydrocarbons)
- supervision and online control of fresh water in waterworks and boreholes
- monitoring of waste water in industrial and municipal sewage works
- fuel detection in natural waters and sewage plants
- monitoring of waste water vanes in the region of outlets, spreading and mixing processes in rivers, lakes and estuaries

Emitter	
Light source:	Xenon flash lamp
Repetition rate:	15 / sec
Flash duration:	approx. 1 sec
Flash energy:	7 mWsec
Discharge capacitor:	C = 100 nF
Discharge voltage:	380 Volt
CWL, BW:	254 nm, 25 nm
Lamp lifetime:	at 254 nm 50 % intensity drop 109 flashes
	(3 years of continuous operation)

Electronics	
Supply voltage:	9–36 Volt
Current consumption:	180 mA (12V), 100 mA (24V), 70 mA (36V)
Signal output:	0–10 Volt DC and 4–20 mA
Serial output (optional):	RS232
Response time:	500 msec
U out 1 / I out 1:	high range fluorescence
U out 2 / I out 2:	low range fluorescence

Detectable polyaromatic hydrocarbons (PAH):	
fluorene, acenaphthene, naphthalene,	
phenanthrene, chrysene	

Detector 1	
Detector: fluorescence	
CWL: UV photodiode	
BW:	360 nm
PAH:	50 nm

Detector 2	
Detector: flash intensity	
CWL: UV photodiode	
BW:	254 nm
PAH:	25 nm

Dimensions	
Ø (housing)	88 mm
Length (housing	220 mm
Length (overall)	280 mm

03/2013 • All specifications subject to change without notice • Photos: www.fotolia.com; own archive

Distributor:

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