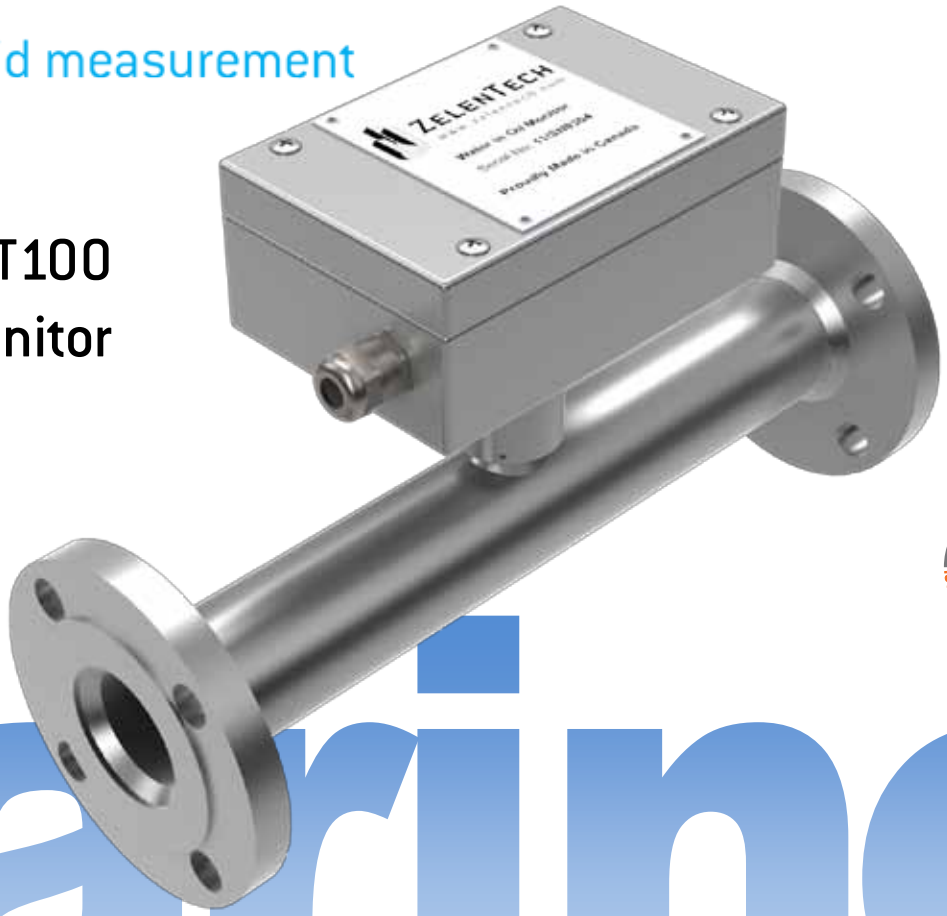
ZELENTECH

advanced fluid measurement

ZT100
Water In Oil Monitor



SYSTEM CERTIFICATION ISO 9001 SGS

Marine

Why measure water?

Water is by far the most common contaminant. Water contamination over a prolonged period of time will lead to equipment failure from the following problems:

- Sludge formation
- Possible oil line plugging
- Degradation of lubricant additives.
- High wear due to rust and corrosion
- Increased wear on bearings due to impaired lubrication film or pitting due to free water.
- Emulsification making separation less effective
- Changes in oil characteristic due to bacterial growth in water/oil interfaces.

Warning Limits For Water (%) (Source Chevron)

Equipment	Attention	Urgent
Medium-speed Diesel Engines	0.3	0.5
Slow-speed Engine System Oil	0.3	0.5
Turbo Chargers	0.05	5.0
Turbo Generators	0.05	5.0
Steam Turbines	0.05	5.0
Gear Boxes	0.05	5.0
Hydraulic Systems	0.05	5.0
Air Compressors	0.05	5.0
Refrigeration	0.05	5.0
Compressors	0.05	5.0
Stern Tubes	0.3	5.0

FROM NAVAL SHIPS TO TANKERS
AND EVERYTHING
IN BETWEEN

Lubrication Oil System:

Detect Excessive Water Contamination

Water in the lubrication system can lead to corrosive wear of the overlayer and lead to mechanical damage to crosshead bearings. The costs to fix such damages are high: parts, material and labour are one part of the equation the other is the crippling effect of marine vessel down time.

Know your water limit—the higher the water content the faster the wear rate.

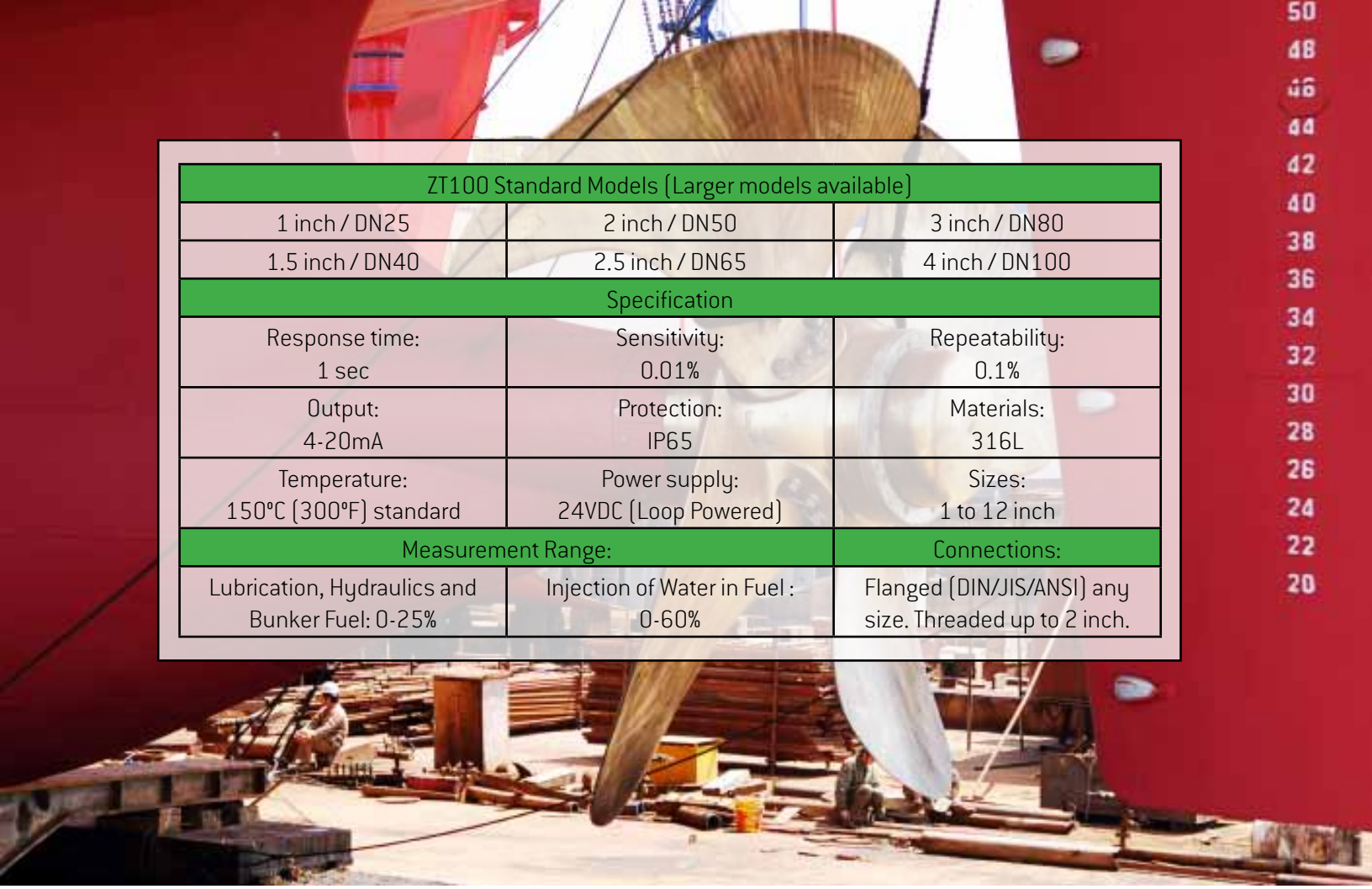
Water In Fuel Injection (WIFE):

ZelenTech provides special models dedicated to monitor and control Water Injection for Fuel. Adding water to reduce NOX and optimize engine effectivity is moving from trial projects into full scale operation and legislation is expected to force implementation in many parts of the world.

Main Engine Lubrication

Water in Fuel Injection

Stern Tubes



ZT100 Standard Models (Larger models available)		
1 inch / DN25	2 inch / DN50	3 inch / DN80
1.5 inch / DN40	2.5 inch / DN65	4 inch / DN100
Specification		
Response time: 1 sec	Sensitivity: 0.01%	Repeatability: 0.1%
Output: 4-20mA	Protection: IP65	Materials: 316L
Temperature: 150°C (300°F) standard	Power supply: 24VDC (Loop Powered)	Sizes: 1 to 12 inch
Measurement Range:		**Connections:**
Lubrication, Hydraulics and Bunker Fuel: 0-25%	Injection of Water in Fuel : 0-60%	Flanged (DIN/JIS/ANSI) any size. Threaded up to 2 inch.

Why ZelenTech?

The ZelenTech ZT100 Water in Oil Monitor is designed with the Marine industry in mind. It can be supplied with any type of screwed or flanged connection, it can be used in new ships as well as retrofitted in existing ships. The electronics is housed in an IP65 enclosure and able to withstand harsh environments. The probe is made of 316L Stainless steel and will stand the test of Salt Water for a long time. The ZT100 is able to measure far above saturation levels enabling you to see what is going on even at high water content.

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