



4. Water Monitoring Unit

The water monitoring system is installed in the inlet seawater line and in the drain water (outlet) line.

4.1. PAH Sensor

Fluorescence is a sensitive method to determine Polycyclic Aromatic Hydrocarbon compounds in water. Fluorescence in general is a phenomenon, whereby a portion of the absorbed wavelength is re-emitted by the targeted compound at higher wavelength. When the water is excited at specific wavelength, certain compounds, including hydrocarbons, will absorb energy and will re-emit this light. The wavelength range which is re-emitted is a unique characteristic of the single compound. By measuring the fluorescence intensity at these wavelengths, they can be determined.

| PAH Sensor | |
|-----------------------|---|
| Sensor ID | PAH025, PAH073 |
| Manufacturer | SIGRIST-PHOTOMETER AG |
| Type designation | ScrubberGuard |
| Measurement principle | Fluorescence measurement |
| Measurement range | 0~1000ug/L |
| Wavelength | Excitation: 280 nm (EN 62471 Risk Group 3 – High Risk) Detection: 300 – 400 nm |
| Radiation class | LED device of Risk Group 3 according to EN 62471 |
| Resolution | 0.1 ppb (µg/l) with phenanthrene calibration |
| Reproducibility | ± 2 % from measuring range |
| Repeatability | ± 0.5 % from measuring range |
| Housing | Plastic (ABS) |
| Automatic adjustment | Yes |