

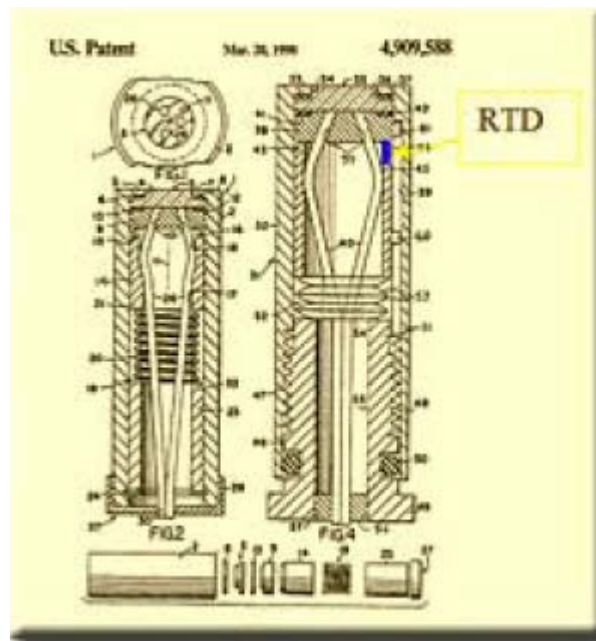
## MiniView Turbidity Sensor

- Filter Breakthrough
- Onset of Crystallization
- Percent Solids
- Compact
- Proven Technology
- C1, D1 Process Ready

MiniView was designed as a low cost means to measure turbidity in harsh environments where explosion-proof enclosures are required. It uses a compact electronics package contained in a Class 1, Division 1, Groups B-D housing connected to an insertion probe with up to 24 feet of optical fiber. The optical sensor can be placed at some distance away from the measurement location.

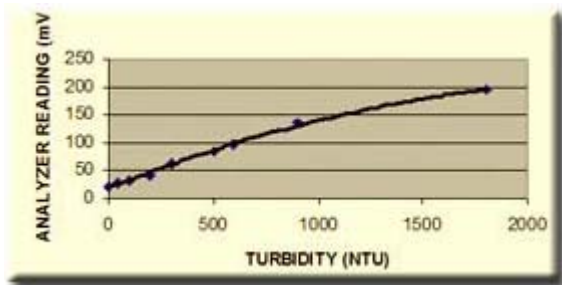
The insertion probe is manufactured by Guided Wave under a license agreement from Dow Chemical Company under U.S. patent 4,909,588.

The probe works on the principle of backscattered light from several angled fibers pointing into the process liquid (fibers 1, 2 and 3 in the picture above). Guided Wave added a fourth fiber in the center which illuminates the sample stream and the other fibers pick up any backscattered light from particles.

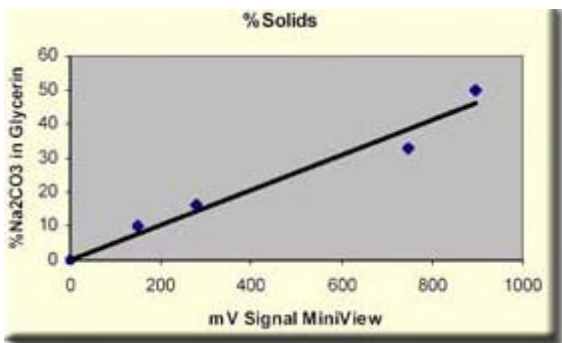


## MiniView Turbidity Sensor

MiniView is a low cost filter breakthrough sensor, but can also be used quantitatively. This shows the correlation between MiniView's mV output and NTU turbidity using AAMCO Clear NTU turbidity standards (Advanced Polymer Systems, Redwood City, CA) over a wide turbidity Range.



Using backscattered light, MiniView can also measure solids loading in slurries which would not be possible with transmitted light.



### MiniView Features

- Class 1, Division 1 enclosure
- 24VDC power
- Two 4-20 mA analog outputs; one for turbidity and one for temperature or particle size
- ½" dia. fiber optic insertion probes
- Thermowell or straight-barrel probe designs
- 316L SS or Hastelloy C-276
- LCD display
- Multiple gain settings (field settable)
- Sample temperature option
- Signal related to particle size
- Long-lasting red LED light source
- Clean-in-place
- Different fibers can be selected to change the depth of optical penetration into the liquid

### Backscatter Probe Features

- Licensed from the Dow Chemical Company under U.S. Patent 4,909,588
- Manufactured by Guided Wave
- Sapphire Windows
- Kalrez o-rings
- Multiple Fibers (including built-in spare fiber)
- Spring Washer
- Compression seal for up to 150
- Remote backscatter probe with 12' of fiber cable or integrated Thermowell configuration
- Hastelloy C-276 or 316L

## MiniView Turbidity Sensor

### Specifications

Environment	Class 1, Division 2, Groups B-D (with sealed fittings). C1D1 B-D or Eex d IIB (with optional sealed fittings) ISB required for RTD in classified areas
Dimensions	9.2 x 5.6 x 5.2" (23.3 x 14.3 x 13.3 cm) 1.5 x 1.75" (3.8 x 4.4 cm) mounting holes
Temperature Range	10-50 C (non-condensing)
Power Supply	22-26 VDC, 0.2A typical (Supplied with external 110-240VAC, 50-60 Hz power supply and connections for initial laboratory testing)
Outputs	4-20mA analog output for turbidity and temperature (isolated and self-powered; other outputs available) LCD display for answer display
Connectors	SMA connectors for fiber optics
Detector	Silicon
Light Source	630 nm high brightness LED, 100,000 hours lifetime
Precision	+/- 1 mV