

# Sentech Profile Meter

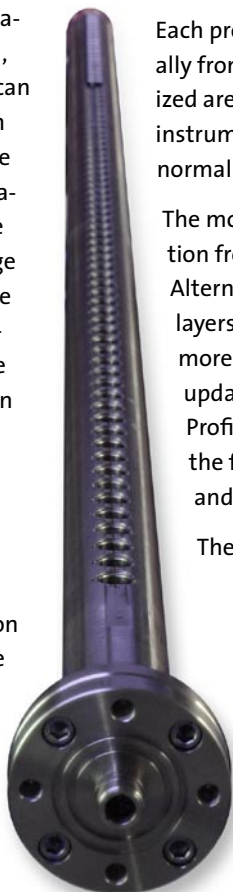


## Optimal control of interface layers

Information about liquid layers in a vessel or tank can be valuable to operators.

For instance, in well stream separators the control of water level, emulsion layer, foam layer etc. can be essential for how production is optimized. The Sentech Profile Meter gives continuous information about how these layers are positioned and how they change through the whole profile of the tank. Accordingly, use of chemicals and change in layers can be initialized more proactively than in unmonitored applications to optimize production.

Profile measurement uses a number of probes mounted with a linear distribution on a measurement rod. Each probe on the measurement rod reads the water content in the complete range from zero to one hundred percent water in oil. The probes will also detect foam emulsions in the tank. The Sentech Profiler Meter has now been installed in a large number of applications and is considered a well proven instrument.



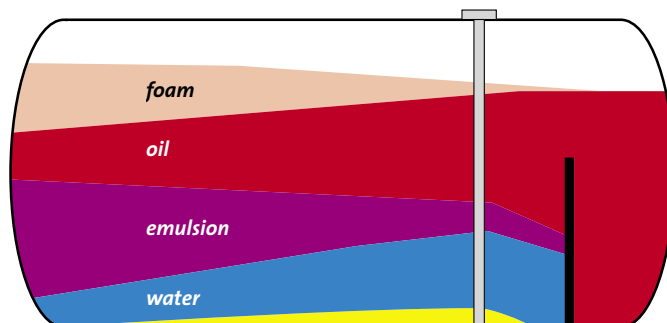
works independently from other probes, making a measurement rod a rugged measurement tool.

Each probe can be “addressed” individually from a controller outside the pressurized area and if a probe should fail, the instrument will still be running at close to normal by interpolation in the software.

The monitoring system can read information from around 100 probes per second. Alternatively, one or several identified layers in a separation tank can be read more frequently to achieve a faster update. This enables Sentech’s SeCap™ Profile Measurement System to “see” the forming of waves inside the tank and to report this in real time.

The Measurement Rod is manufac-

tured of high-grade steel, normally 22Cr Duplex (SAF2205). It can be manufactured to other specifications. Electronic circuit cards are mounted inside the rod in its entire length and are linked to each separate probe. The components in a Measurement Rod are all mechanical or solid state, without any moving parts. All pressure barriers are secured with double barriers. High-pressure penetrators secure communication cables to/from the Measurement Rod. Power consumption is very low, as are voltage levels used. The equipment is certified for use in explosive environment zone 0 (EEX ia IIB T4), i.e. it has ATEX-approval.



## Product Specifications

<b>Technology</b>	SeCap™	<b>Power Supply</b>	230 V, 10 W
<b>Flange Type</b>	ANSI, API or hub flanges	<b>Interface</b>	RS 232/485 Modbus Hart 4 - 20 mA CAN bus (other protocols available on request)
<b>Flange Size</b>	4 - 10" (bigger sizes available on request)	<b>Accuracy</b>	0.1 % – 1 %
<b>Dimensions</b>	Diameter according to flange/pipe spec (full bore) Length 100 - 200 mm	<b>Sensitivity</b>	0.1 % – 1 %
<b>Pressure Range</b>	1 – 450 bar	<b>Materials</b>	SS 316/316C std (other materials available) Full traceability to certificates.
<b>Temperature Range</b>	-40 – +125 ° C		
<b>Hazardous Area Classification</b>	Ex zone 0 EEX ia IIB T4 ATEX		

## Technical description

The heart of a Profile Meter System is a measurement rod with several individual measurement probes mounted on the rod. The distance between the probes is typically 10-40 mm depending on client needs. Each probe is electrically insulated from the surrounding substance as well as from the other probes. The electronic circuitry for each individual probe is integrated. This ensures a long life for a Profile Measurement System since each probe



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