

MICRO-SLUDGE™ ANALYZER



DATA SHEET

Online Analyzer Micro-Sludge™.

Solids measurement in wastewater treatment and environmental technology

Maintenance-free, no moving parts.



Solids content



Microwave technology



no moving parts



maintenance free

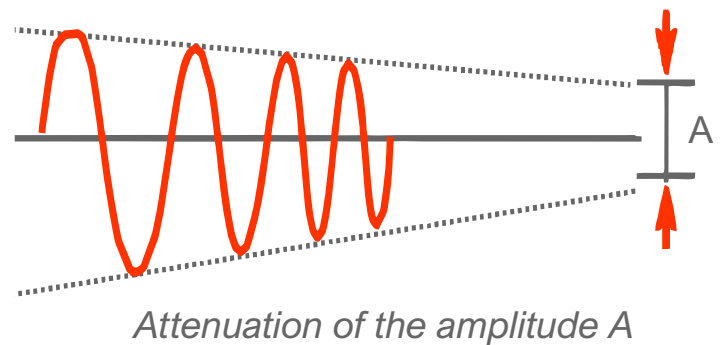
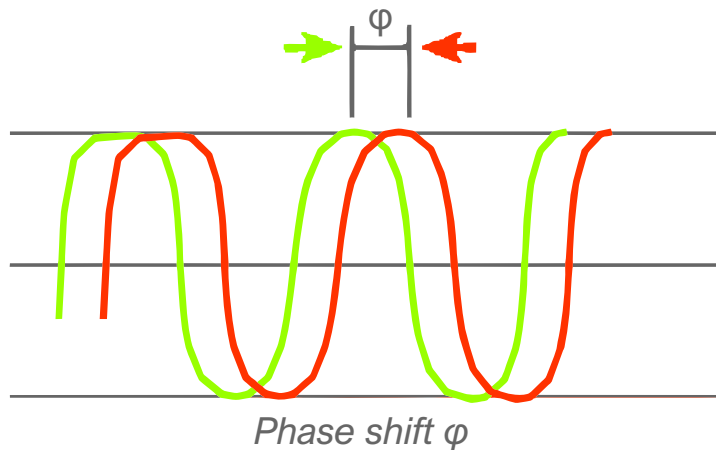


Solids Measurement in Wastewater Treatment and Environmental Technology

Micro-Sludge™ is an intelligent microwave measuring device for measuring the solids content of sewage sludge etc. in closed pipes or tanks. In real time - simple, accurate and reliable. Micro-Sludge™ optimizes processes, reduces polymer consumption and optimizes the operation of incinerators and decanter centrifuges.

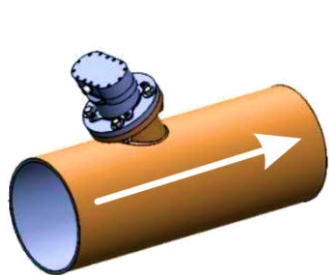
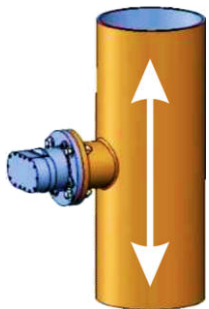
Measuring Principle

The principle is to send microwaves through the product to be characterized and measure their influence in relation to a reference signal. The measured phase shift and attenuation of the amplitude are proportional to the solids content.



The intensity of the signal emitted is harmless to humans and to the product being analyzed.

Assembly Examples:



Advantages:

- reliable, precise and continuous online measurement
- high long-term stability
- penetrating measurement
- easy installation
- easy handling
- self-sufficient measurement
- works with all sludges and liquids containing solids

Application Examples in Wastewater Treatment:

PROCESS	SENSOR POSITION	SOLIDS CONTENT	PURPOSE OF THE MEASUREMENT	ADVANTAGES
Thickening	Primary treatment	0 ... 10 %	Measurement-dependent control of the sludge pumps	Energy savings, higher pump performance
	Secondary treatment	1 ... 10 %		
Conditioning	Polymer, Mineral	10 ... 20 %	Control of polymer and lime dosage, etc.	Reduced raw material consumption
Stabilization	Fermenter, digestion tower	10 ... 20 %	Process optimization	Optimized sludge digestion, energy savings
Mechanical dehydration	Band filter	12 ... 25 %	Dehydration quality control	Reduced sludge pumping, quality of sludge and supernatant water
	Decanter centrifuge	20 ... 30 %		
	Filter press	25 ... 40 %		
Conditioning	Post-liming	15 ... 30 %	Control of polymer and lime dosage	Reduced raw material consumption, compliance with regulations, better agricultural value creation
Thermal dehydration	Dryer inlet before pelletizing	20 ... 30 %	Process optimization	Energy savings, prevents dryer clogging
	Gasification inlet, pyrolysis inlet	60 ... 95 %		Energy savings
Incineration	Incineration plant inlet	20 ... 40 %	Optimized combustion	Energy savings during preheating

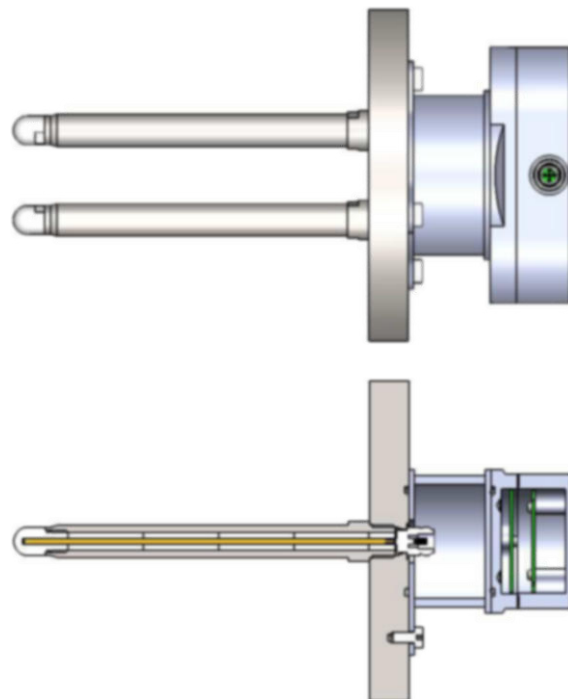


MICRO-SLUDGE™ ANALYZER



Technical Specifications:

Housing:	Stainless steel/aluminium
Connection flange:	DN65 PN6 (for pipes up to DN150) DN65 PN10/16 (for tanks and pipes > DN150)
Antennas (pipe up to DN150):	94 x 75 mm
Antennas (tank, pipe > DN150):	160 x 255 mm
Measured variable:	Solids content
Measuring range:	0 ... 70 %
Supply voltage:	110/220 V AC
Current consumption:	45 W
Ambient temperature:	-20 ... +60 °C
Product temperature:	0 ... +130 °C
Protection:	IP66
Binary inputs:	2 x 0 ... 24 V DC, optoisolated (product, filtering)
Analog inputs:	1 x 0/4 ... 20 mA (optional temperature measurement)
Analog outputs:	2 x 0/4 ... 20 mA
Interfaces:	1 x USB-A, 2 x Ethernet RJ45, 1 x RS485 (Modbus/RTU)
Sensor cable:	5 m (standard)
Supplied software:	MAcontrol SE
Languages:	English, French



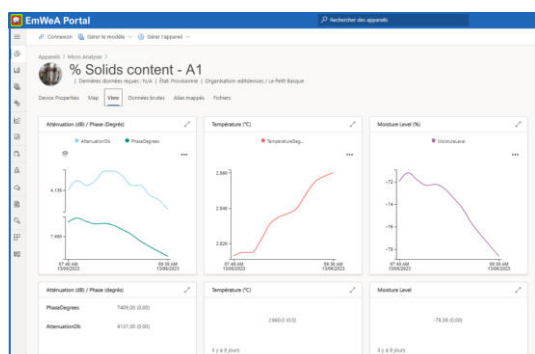
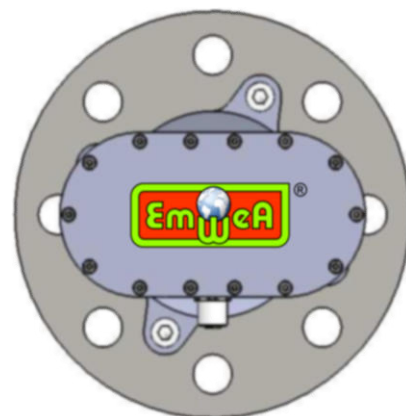
Accessories:



Control unit with HMI for on-site operation



4G kit for internet connection



EmWeA Portal
(IoT cloud platform)



EmWeA Prozessmesstechnik e.K.
Am Hagen 3
99735 Werther
Germany



Telefon: +49 36335 3800-0

info@emwea.de
www.emwea.de

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