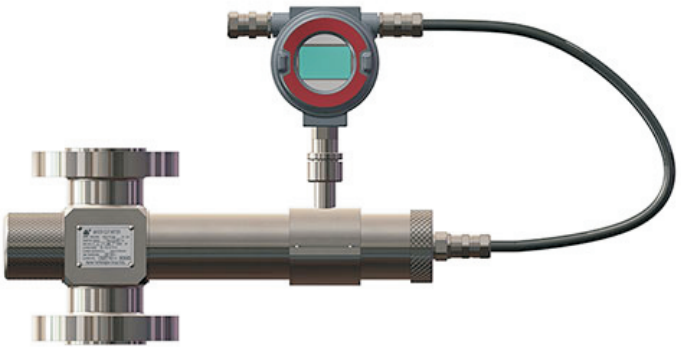
海 默®
HAIMO

Light Multiphase Water Cut Meter

Introduction

Haimo developed an exempt source based Light Multiphase Water Cut Meter that not only solves the challenges of inability to measure oil production water cut in the presence of gas by the traditional non-radioactive technologies, but also relieves customer's burden from compliance processes of radioactive source management when using the traditional non-exempt radioactive sources.

Haimo Light Water Cut Meter is a Dual-Energy Gamma Meter equipped with a gamma source of extremely low activity, classified as exempted category by IAEA. Light Water Cut Meter determines the Water-Liquid Ratio (WLR) of three-phase (gas, water and oil) flow with Gas Volume Fraction (GVF) up to 90%, from which the water cut. The meter is independent of state of flow, phase miscibility such as emulsion, heavy oil and phase transition.



Features

- Accurate WLR measurements of three phase flow up to 90% GVF
- Independent of emulsion effect, phase transition or viscosity
- Inline meter, non intrusive
- Remote operation and data acquisition
- No moving parts, low maintenance
- Small foot print and light weight
- Simple installation and safe operation
- Zero to low pressure loss
- Low power consumption
- Exempted source, less to no routine radioactive source management process

海 默®
HAIMO

Parameters

Items	Parameters	
Size	1~4 inch(measuring fluid range: 0~2200m^3/d)	
Dn50 Meter Dimension	0.55m (L) 0.16(W) 0.38(H)	
Material	316/316L/SS (Alloy)	
Electrical Certification	Ex dIIB T4/T6	
Ingress Protection	IP 65/66	
Power Consumption	Less than 2.5 W	
GVF Range	0~90%	
WLR Range	0~100%	
Measurement Accuracy(Abs)	1% at 0~10% GVF	
	2% at 10~70% GVF	
	5% at 70~90% GVF	
OperatingTemperature	-50~100℃	
Operating Pressure	300#~1500# (5 ~ 25MPa)	
Gamma Sensor	Exempted Source	133Ba
	External Leakage Dose Level	Meet the Relevant Specifications
	Output	4~20m Acurrent Signal/Modbus RS485

Application Case

Location: China Onshore Oilfield (heavy oil application)

This is a heavy oil production with the assistance of light oil injection technology. The light multiphase water cut meter from Haimo was installed for inline measurement of Water Cut for more than 6 months, and compared periodically with laboratory measurements of manual samples from the wellhead. These comparisons show that the difference between measurements from the light water cut meter and that from the laboratory is within ± 2.5%.

029-88814516 http://www.haimotech.com marketing@haimo.com.cn
No.593, Zhang Sutan, Chengguan District, Lanzhou, Gansu Province, P.R.China