

TKWL-130系列磁致伸缩液位计

TKWL-130 Series Magnetostrictive Level Gauge

产品概述

Product Overview

TKWL-130系列磁致伸缩液位计用于石油、化工原料储存、工业流程、生化、医药、食品饮料、罐区管理和加油站地下库存等各种液罐的液位工业计量和控制，大坝水位，水库水位监测与污水处理等场所。

The TKWL-130 series magnetostrictive level gauge is used for liquid level industrial measurement and control in various liquid tanks, including petroleum and chemical raw material storage, industrial processes, biochemicals, pharmaceuticals, food and beverages, tank farm management, and underground storage at gas stations. It is also suitable for monitoring dam water levels, reservoir water levels, and wastewater treatment facilities.

产品原理

Product Principle

液位计工作时，液位计的电路部分将在波导丝上激励出脉冲电流，该电流沿波导丝传播时会在波导丝的周围产生脉冲电流磁场。在液位计测杆外配有一浮子，此浮子可以沿测杆随液位的变化而上下移动。在浮子内部有一组永久磁环。当脉冲电流磁场与浮子产生的磁环磁场相遇时，浮子周围的磁场发生改变从而使得由磁致伸缩材料做成的波导丝在浮子所在的位置产生一个扭转波脉冲，这个脉冲以固定的速度沿波导丝传回并由检出机构检出。通过测量脉冲电流与扭转波的时间差可以精确地确定浮子所在的位置。

When the liquid level gauge is in operation, the circuit section of the gauge generates a pulsed current on the waveguide wire. This current creates a pulsed magnetic field around the waveguide wire as it propagates along it. A float is attached to the outside of the gauge probe, which can move up and down along the probe with the change in liquid level. Inside the float, there is a set of permanent magnets. When the pulsed magnetic field encounters the magnetic field generated by the magnets in the float, the magnetic field around the float changes, causing a torsional pulse to occur in the waveguide wire made of magnetostrictive material at the position of the float. This pulse travels back along the waveguide wire at a fixed speed and is detected by the detection mechanism. By measuring the time difference between the pulsed current and the torsional wave, the position of the float can be accurately determined.

产品特点

Product Features

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| 1、高精度、高稳定性、高可靠性； | 1.High accuracy, stability, and reliability. |
| 2、使用寿命长； | 2. Long service life. |
| 3、多种信号输出方式选择； | 3. Multiple signal output options. |
| 4、具有反向极性保护功能； | 4. Reverse polarity protection function. |
| 5、防雷击、防射频干扰； | 5. Protection against lightning strikes and RF interference. |
| 6、结构精巧、环境适应性强； | 6. Compact structure with strong environmental adaptability. |
| 7、不需要定期重标和维护； | 7. No need for regular recalibration and maintenance. |
| 8、可监测带压或不带压液罐的液位； | 8. Capable of monitoring the liquid level in pressurized or non-pressurized tanks. |
| 9、防爆、防腐（可选）。 | 9. Explosion-proof and corrosion-resistant (Optional add-on). |

产品信息

Product Information

 TKWL-130	测量范围：0-6000mm，特殊可定制 测量精度：±1mm 介质密度：≥0.3g/cm³ 工作温度：-40~160℃ 工作压力：-0.1~4MPa 介质黏度：≤0.4Pa.S 材质：304、316L、Ti、304+PTFE、316L+PTFE等 连接方式：螺纹/法兰 防爆等级：ExdbIICT6 Gb	Measurement Range: 0-6000mm (Special customization available) Measurement Accuracy: ±1mm Media Density: ≥0.3g/cm³ Operating Temperature: -40 to 160℃ Operating Pressure: -0.1~4MPa Media Viscosity: ≤0.4Pa.S Materials: 304, 316L, Ti, 304+PTFE, 316L+PTFE, etc. Connection Methods: Threaded, Flange Explosion Protection Rating: ExdbIICT6 Gb
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选型指南

Selection Handbook

TKWL-130					
显示类型 Display Type 带显示 With 不带显示 Without	B X				
接液材质 Wetted Material 304 316L Ti 304+PTFE 316L+PTFE 其他材质 Other material	1 2 3 4 5 0				
电气接口 Electrical Interface M20*1.5 1/2NPT 特殊定制 Customized	M N X				

输出信号 Output Signal 4-20mA 4-20mA+HART	1 2	
防爆形式 Explosion Protection Type 普通型 Ordinary Type 防爆型 Explosion-proof Type		P D