

A. 客户信息 | CUSTOMER PROFILE

公司名称 Company _____
 联系人 Contact _____
 电话/传真 TEL/FAX _____
 手机 MP _____

☐ 新客户 New client
☐ 技术 Technical ☐ 业务 Business ☐ 采购 Sourcing
 网址 URL _____
 邮箱 Email _____

B. 安全认证 | SAFETY

B1. 防爆认证 Ex-certification: ☐ IEC Ex ☐ CSA ☐ ATEX
 B2. 其他安全认证 Others: ☐ SIL ☐ CQST ☐ N/A ☐ _____

C. 法规 | REGULATION

☐ 卫生型认证 Hygienic
☐ 饮用水认证 Drinking water
☐ 船级认证 Marine

D. 罐体容器信息 | TANK PROFILE

D1. 罐体类型 Type: ☐ 储罐 Process tank ☐ 反应釜 Reactor
 D2. 罐材质 Material: _____
 D4. 罐尺寸 Dimensions:
 罐高度 Tank height: _____ mm
 罐直径 Tank diameter: Φ _____ mm
 D6. 罐顶 Tank roof: ☐ 拱顶式 ☐ 平顶式 ☐ 敞口式 ☐ 锥顶式
 D7. 罐底 Tank bottom: ☐ 锥底 ☐ 平底 ☐ 斜坡底 ☐ 弧形底

D3. 压力 Process pressure
 _____ - _____ MPa

D5. 罐顶安装接管(重要 IMPORTANT!)
 接管高度 Standpipe height: _____ mm
 接管直径 Standpipe diameter: Φ _____ mm
 D8. 罐体结构图纸 Drawing of tank structure:
☐ 是 Y ☐ 否 N

E. 测量介质 | MEDIUM PROFILE

E1. 介质名称 Medium: ☐ 液体 Liquids ☐ 固体 Solids ☐ 混合 Mix ☐ 膏类 Paste
 E2. 介电常数 DK: ☐ A(1.4-1.9) ☐ B(1.9-4) ☐ C(4-10) ☐ D(>10)
 E5. 挂料 Adherence: ☐ 是 Y ☐ 否 N
 E6. 搅拌 Agitator: ☐ 是 Y ☐ 否 N

E3. 颗粒大小 Grain size: ☐ <4mm ☐ <20mm ☐ >20mm
 E4. 堆料 Stockpiles: ☐ 是 Y ☐ 否 N
 E7. 腐蚀性 Corrosion: ☐ 是 Y ☐ 否 N
 E8. 介质温度 Process temperature: _____ - _____ °C

F. 安装 | INSTALLATION

☐ 螺纹 Thread ☐ 法兰 Flange ☐ 卫生型 Hygienic
 F1. 安装法兰 Flange: DN _____ PN _____

F2. 安装: Install Location ☐ 顶部安装 Top ☐ 旁通管安装 Bypass ☐ 导波管安装 Standpipe (☐ 线缆、☐ 棒、☐ 同轴)
 F3. 现场显示 Display: ☐ 是 Y ☐ 否 N

G. 电气 | ELECTRIC

G1. 电源 Power supply: ☐ 24VDC, 2-wire ☐ 24VDC, 4-wire ☐ 220VAC, 4-wire ☐ 12VDC, 4-wire(Modbus ONLY)
 G2. 信号输出 Signal output: ☐ 4-20mA ☐ HART ☐ Modbus ☐ Profibus PA ☐ Profibus DP ☐ FF ☐ Ethernet-APL

☐ Wi-Fi ☐ Bluetooth ☐ Relay ☐ Voltage
☐ _____

H. 其他要求 | OTHER REQUIREMENTS

I. 选型推荐 | RECOMMENDATION

- ☐ 常规 Normal
- ☐ 特殊定制 Custom Design
- ☐ 制作图纸 Drawings
- ☐ 安装调试 Installation
- ☐ 方案书 Proposal

J. 备案 | MEMO

K. 词汇表 | GLOSSARY

1. 通信 Communication

指测量设备的不同信号输出方式。以下列举了可供选择的八种不同信号输出方式，分别是：

Communication refers to the various possible forms of output from the measuring equipment. Eight different forms of output are listed below, these are:

[1] 4...20 mA:

将模拟量信号转换成电流信号。

this is an analogue signal converted into a current signal.

[2] 4...20 HART:

叠加调制 HART 协议的模拟电流信号（可寻址远程传感器高速通道）。

this is an analogue current signal with modulated HART Protocol (Highway Addressable Remote Transmitter).

[3] Modbus:

全球第一个真正用于工业现场的总线协议，此协议支持传统的 RS-232、RS-422、RS-485 和以太网设备。许多工业设备，包括 PLC，DCS，智能仪表等都在使用 Modbus 协议作为他们之间的通信标准。

The world's first truly industrial Fieldbus protocol, which supports traditional RS-232, RS-422, RS-485, and Ethernet devices.

Many industrial equipment, including PLC, DCS, intelligent instruments, etc. are using the Modbus protocol as the communication standard between them.

[4] PROFIBUS PA:

本质安全型现场总线 PROFIBUS（DIN 19 245，第 4 部分）。

this is an intrinsically safe variant of the Fieldbus Profibus (DIN 19 245, Part 4).

[5] FOUNDATION Fieldbus:

基于 ISO OSI 模型的开放式系统。等同于 ISA 和 IEC 中的 SP50。

this is an open system, based on the OSI model of the ISO. It corresponds to the normal project SP50 of the ISA and the IEC.

[6] Profibus DP:

PROFIBUS 的延伸产物（DP 代表分散式外围设备），应用于快速产品设计过程中。

this is a further development of the Profibus (DP stands for decentral periphery) and is used in applications in the fast processes of product engineering.

[7] 三线制:

三线制连接方式（分开连接电源线和信号线）。

this is a three-wire connection (supply unit and signal are separate).

[8] PFM:

脉冲频率调制输出信号（PFM）。

this is the output signal in pulse frequency modulation (PFM).

[9] 脉冲:

脉冲输出信号。

output signal as a pulse.

2. 过程温度 Process temperature

过程温度是指影响测量设备的工作温度。

Process temperature refers to the temperature in operation which influences the measuring equipment.

测量单位： °C、°F

Unit of measurement: °C, °F

注意：在某些工况下，过程压力和过程温度相互影响。您输入的温度值和压力值是所选应用的最小和最大允许值。

IMPORTANT: Process pressure and process temperature are in certain cases mutually dependent attributes. The temperature and pressure values you enter are the minimum and maximum possible values for your chosen application.

但是，某些产品不能同时在最大压力和最高温度条件下工作。

However, when using certain products, it is not possible for these products to function at their maximum pressure and temperature levels at the same time.

请向我们的技术工程师了解更多的过程压力和过程温度的应用信息。

Please refer to our technical engineer for more information about the relationship between process pressure and process temperature.

3. 过程压力 Process pressure

也被称之为工作压力，它会影响测量设备的读数值。过程压力和过程温度关系的详细信息参见所选产品的减温曲线。

Also called working pressure. Please see the derating curve for your chosen product for more information about the relationship between process pressure and process temperature. ssure or operational pressure, refers to the pressure which affects the reading on the measuring equipment.

注意：在某些情况下过程压力和过程温度相互关联。您输入的温度值和压力值是所选应用的最小和最大允许值。

IMPORTANT: Process pressure and process temperature are in certain cases mutually dependent attributes. The temperature and pressure values you enter are the minimum and maximum possible values for your chosen application.

但是，某些产品不能同时在最大压力和最高温度条件下工作。

However, when using certain products, it is not possible for these products to function at their maximum pressure and temperature levels at the same time.

4. 过程连接 Process connection

过程连接是指连接测量设备的可能，考虑设备自身集成。允许使用三种过程连接，分别是：

Process connection refers to the connection possibilities of the measuring equipment, concerning their integration into the equipment itself. There are four possible process connections, these are:

[1] 螺纹 Thread:

各种类型的螺旋管道，例如柱螺纹、锥螺纹、公制螺纹或英制螺纹（即英尺）。

a spiral pipe profile in various forms, e.g. cylindrical, conical, metric or imperial (i.e. in inches) measurement.

[2] 法兰 Flange:

在表面压力作用下的盘状密封连接，带或不带附加密封。

a disc-shaped, sealed connection caused by surface pressure, with or without additional sealing.

[3] 卫生型:

无创伤的连接方式。因此，无黏附，连接能够简便地消毒。

a connection method which does not involve undercuts or dead storage space. Therefore, no build-up is created and connections can be easily disinfected and sterilized.

5. 介质分组 DK Media group Radar

Products are listed in four medium groups, e.g. non-conductive liquids, acids, etc. (A, B, C, D) below, according to their different dielectric constants (abbreviated as DK):

[1] A: DK 1.4-1.

非导电性液体，如液化气体，氨水(NH₃)被视为 A 类介质

Examples: Non-conductive liquids, e.g. liquified gas. Treat ammonia (NH₃) as a product of class A, i.e. always use a stilling well with FMR230.

[2] B: DK 1.9-4

非导电性液体，如苯、油、甲苯等

Examples: Non-conductive liquids, e.g. benzene, oil, toluene, etc.

[3] C: DK 4-10

浓酸、有机溶剂、酯、醇、丙酮等

Examples: Concentrated acids, organic solvents, esters, aniline, alcohol, acetone, etc.

[4] D: DK >10

导电性液体、例如水溶液、稀酸和稀碱

Examples: Conductive liquids, e.g. aqueous solutions, dilute acids and alkalis

6. 特殊工况 Special conditions

[1] 传感器上出现严重粘附 Heavy build-up at the sensor

严重传感器黏附是指介质的电气隔离或非隔离部件，临时或永久积聚在传感器上。

Strong build-up at the sensor refers to the electrically isolated or non-isolated parts of the medium which temporarily or persistently accumulate at the sensor.

[2] 生成严重粉尘 Strong dust generation

生成严重粉尘是指测量固体散料解释时产生大量粉尘。

Strong dust generation refers to the production of a considerable amount of dust when measuring certain bulk solid media.

[3] 气动进料过程中测量 Measurement during pneumatic filling

在气动进料过程中测量是指在介质进入罐体的过程中测量。

Measurement during pneumatic filling refers to measurements being taken as the medium is entering the tank.

[4] 强磨损性介质 Very abrasive media

磨损性介质是指会导致测量仪表和其他安装装置表面严重腐蚀的介质。常见的强研磨性介质为坚硬且锋利的固料，例如氧化铝或石英。

Very abrasive media refers to media which have a strong erosive effect on the surfaces of the measuring equipment and other installations. Examples of very abrasive media include hard and sharp-edged solids, such as aluminium oxide or quartz.

[5] 泡沫 Foam

泡沫可能吸收超声波信号。介质表面的泡沫也会反射信号。因此，需要进行测试测量；也可以使用静压测量。

Foam may absorb ultrasonic signals. Foam on the surface of the medium may also reflect the signal. Therefore, test measurements are necessary or alternatively, hydrostatic measurement should be used.

7. 溢出保护 Overfill prevention WHG

WHG 溢出保护是指水资源保护法（德国水务局缩写），包含德国行业法规第 19 章。§19h 是指会污染水的流体的溢出保护。立即中断加料过程和发出报警，避免罐体溢出。

Overspill prevention WHG refers to the Water Resources Act (German abbreviation for Wasserhaushaltsgesetz), contained in paragraph §19h of German constitutional law. §19h refers to overspill protection for tanks with fluids hazardous to water.

Overfilling of tanks is avoided by a prompt interruption in the filling process and by the sounding of an alarm.

料仓 Silo/bunkers

狭窄高大的料仓和容器 Slim, narrow silos, vessels

堆料 Stockpiles

机械传输系统 Mechanical conveyor systems

碾压机 Crusher

卧罐 Horizontal cylindrical storage tank

立罐 Vertical storage tank

缓冲罐 Buffer tank

接收罐 Recipient tank

带搅拌的过程罐 Process tank with agitator

导波管 Stilling well

旁通管 Bypass

泵站 Pump shaft

明渠测量 Channel measurement

污水厂 Sewage plant

在导波管中进行高精度测量 High precision measurement in stilling well

在自有空间中进行高精度测量 High precision measurement in free space

水池 Basin