



SATRON-全球浓度测量、管理的先驱品牌

# Optical consistency transmitter — 光学浓度变送器



# SATRON公司简介:



## Satron Instruments Inc. Today:

- **Located in Finland (Tampere)**
- **Since 1921**
- **Valmet Automation – Field Instruments Business**
- **Process experience over 50 years**
- **Distributors over 25 countries**

**Satron** 公司是芬兰的一家自动化仪表生

产厂家，位于**Tampere**（坦佩雷）

**1921**年成立以来，先后为维美德自动化等多家客户配套现场仪表，**80**年以上工艺经验，经销商遍及全球**25**个国家和地区。



## SATRON服务领域:

- 制浆造纸
- 牛奶行业
- 环保回收
- 秸秆制品
- 石油化工
- 淀粉行业



# Satron VCT (Optical consistency transmitter)

- Measuring principle 测量原理
  - Light back scattering (NIR LED) LED光反射
- Specification
  - 0...12%Cs 浓度范围
  - Process pressure rating PN25 压力等级
  - Process temperature 0...140 °C 过程温度
  - Ambient temperature -30...60 °C 环境温度
  - Wetted parts material AISI 316L (standard) 接液部分材质
  - Enclosure IP 67 (sensor) IP 66 (display unit) 防护等级





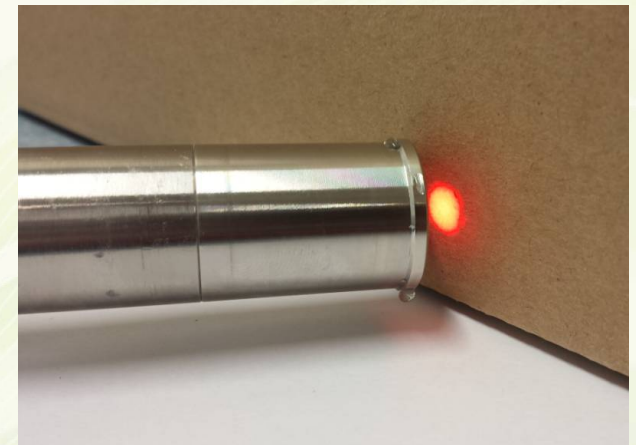
# Satron VCT (Optical consistency transmitter)

- Delivery content 供货范围
  - Sensor with remote display unit, 15m cable  
传感器、变送显示单元、15米电缆
  - Process coupling 过程连接器
  - Accessories 其它配件



# Satron VCT (Optical consistency transmitter)

- Unique measuring probe design 独特的测量探针设计
  - high end electro-optical components 高品质的光电元件
  - Sapphire process lens, 7mm, 7mm蓝宝石加工透镜
  - High signal-to-noise ratio 高信噪比
  - withstands ash fluctuations 不受灰份的波动影响
  - virtually independent of process variables 过程变量
    - process pressure, air 压力, 空气
    - flow rate, color, brightness 流量, 颜色, 亮度等
    - conductivity 电导率



# Satron VCT (Optical consistency transmitter)

- Applicability
    - Mechanical/Chemical pulping
    - Paper machine
      - Broke (Total Cs%)
    - Recycled processes (Total Cs%)
    - 1-Point calibration
  - Maintenance-free
  - No moving parts
  - Modular/ Re-buildable
- 适用工况：
    - 机械/化学浆
    - 抄纸机 损纸浆
    - 过程回收浆
  - 单点标定，方便操作
  - 无过程连接件
  - 无机械运动部件
  - 模块化产品



## Sensor probe location

### 传感器安装位置

The probe should be installed in turbulent flow condition

Turbulence is important to keep the probe clean from build-ups

The best place is after process pump, Sensor orientation

Rotated 45 degrees from pump axis-line

Tilted to point 15 degrees towards flow

应在湍流条件下安装探头

湍流对保持探头清洁的重要性

最好的地方是工艺泵后

传感器定向从泵轴线旋转45度

向流 倾斜15度

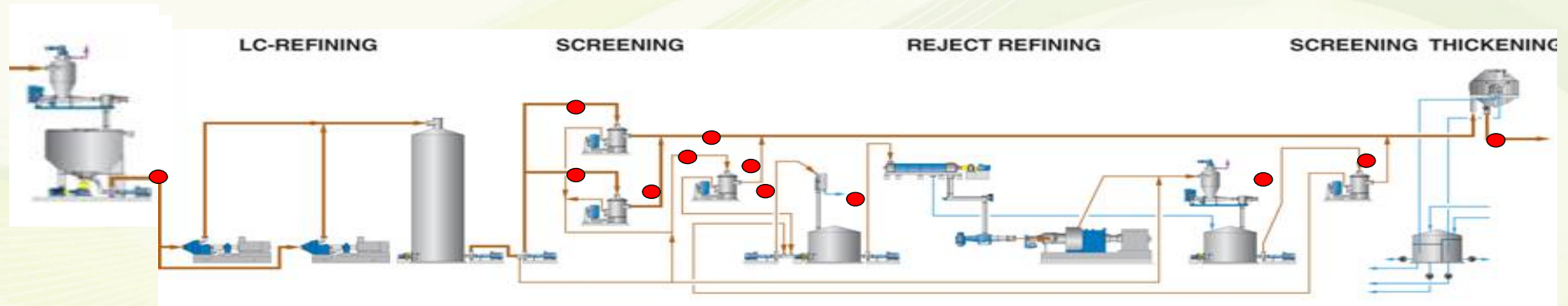




# VCT Applications

- Pulp and paper mill applications
- Consistency measurement range 0 – 12 %Cs
- Mechanical pulping TMP, GW and CTMP
- Latency removal, screening, low consistency refining
- Chemical pulping
- Screening, washing, refining, drying machine applications

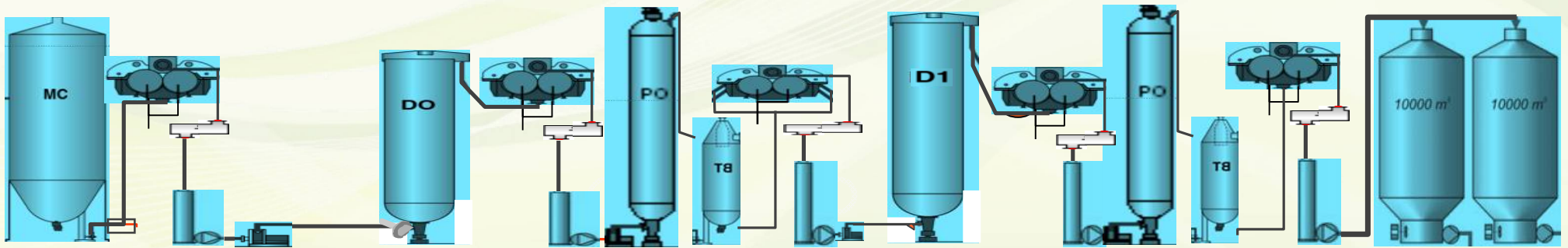
- 制浆造纸厂的应用
- 一致性测量范围0~12% CS
- 机械制浆TMP、GW和CTMP
- 延迟去除，筛选，低浓磨浆
- 化学制浆
- 筛分、洗涤、精炼、烘干机的应用



# VCT Applications-2

- 制浆造纸厂的应用-2
- 适用于浆池、浆塔、水力碎浆机、叩前池、叩后池、配料池、抄前池、
- 白水纤维回收、
- 网部、压榨、施胶机、压光机、卷取机和完成工段的损纸回收浆池等

另外需要注意的是，VCT 光学浓度计 测量的浓度是总浓度（包含ASH），结合公式总浓度\*流量=绝干量，在抄前池上浆泵这个位置使用VCT浓度计，能够更好与QCS系统配合，从而更好的控制纵向定量。



# Satron Sampling Valves

## 取样阀

**Suitable for all pulp and paper mill application**

Low and high consistency

Screened and unscreened pulp

Wetted part materials

### **Mounting types**

Flange (DIN, ANSI)

Thread 1½” NPT (Save)

适用于所有制浆造纸厂的应用

宽泛的浓度范围

筛分和未筛分纸浆

湿部化学品等

安装类型

法兰连接(DIN,ANSI)

螺纹连接 1/2NPT





# 谢谢观赏

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