

LOW LEVEL TRITIUM IN AIR MONITOR REAL TIME CONTINUOUS

低浓度氚实时连续监测器

Model ~ Tritium-AIR

FEATURES: 特点

- LOW LEVEL TRITIUM
低浓度氚
- REAL TIME – AUTOMATIC
实时-自动
- EXCELLENT LONG TERM STABILITY
卓越长期稳定性
- CONTINUOUS MONITORING
连续监测
- DATA ARCHIVE FOR UP TO FIVE YEARS
数据存储达5年
- DATA RETRIEVAL
数据检索
- ALARMS – AUDIO / VISUAL User Settable
报警-声/光并用户设定
- USB PORTS
USB接口
- NOT INFLUENCED BY OTHER NUCLIDES
不受其它核素影响
- EASY CALIBRATION
容易校准
- NEW STATISTICAL SIGNIFICANCE DISPLAY
新统计学意义显示
- RUGGED
结实
- TABLE TOP OR
Optional: CART, or RACK MOUNTED
安装方式: 台面或选择轮车, 架装
- IP 42



Nex-Tritium Electronics



Two Pairs of Matched
Photo Multiplier
Tubes

一组对称的光电倍增管



**TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY**

7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) 818-883-6103 (Fax)

tagold@nwc.net

WWW.TECH-ASSOCIATES.COM

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APPLICATION: 应用

Airborne Tritium is a hazard wherever Tritium occurs:

产生有害物气溶胶氚的地方

- Nuclear Power Plants 核电站
- Fusion Research 裂变研究所
- Pharmaceutical Labs 医药实验室
- Weapons Maintenance 武器维护
- Nuclear Navy Ships & Shipyards 海军核潜艇及船厂

DESCRIPTION: 说明

This system consists of an efficient condenser that pulls Tritiated water vapor from the air and a light tight detector assembly which is interfaced with the sample via male 1/8" pipe fittings with the readout and processor assembly via two BNC connectors.

系统配有高效冷凝器将氚化水从空气中提取出来，一对密光探头组件通过1/8"管件对接样品，通过两个BNC连接件与读数器和微处理器组件连接。

The sample is passed through a filter and thence to the detector assembly, where it is viewed by two pairs of matched photo multiplier tubes.

样品通过过滤器然后到达探头组件，由一组匹配的光电倍增管观测。

The table top or rack mounted processor and display portion of this system conditions and analyzes the output from the photo multiplier tubes by pulse height and validated by a coincidence circuit, thereby permitting the system to eliminate counting most background (noise) counts.

此系统的桌面或架装处理器和显示部分通过脉冲高度和耦合事件修正并分析光电倍增管输出，因此允许系统排除大部分本底噪音。

Tritium-Air includes unique statistical Significance Display.

NEX-氚包括独特的统计学意义显示

- This function rates strength of the data preventing most false positives or negatives:
- 此功能避免了大多数的虚报
 - Significance : **HIGH, LOW, or NOT SIGNIFICANT.**
 - 显著性: **高, 低, 或不显著**



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UNIQUE TRITIUM-AIR DETECTOR CHARACTERISTICS 显著特点

FEATURE 功能	PURPOSE 功能
Ultra High Sensitivity Achieved Through the Following Physical Features: 基于以下功能系统具有极高灵敏度	
Custom Made Anthracene Scintillation Crystals in Technical Associates' Laboratories TA 公司实验室客户定制蒽闪烁晶体	High Beta Sensitivity 高 β 灵敏度
Two (2) 5" Diameter Optical Sensor Arrays (Totaling 200 cm ²) Sensitive Area 2 个直径 5" 光学传感器并列，总灵敏面积 200 cm ²	High Count Rate 高计数率
Special Data Analysis 专用数据分析	As Described in Sensitivity Chart 见灵敏度表格
Guard Detector 宇宙射线探头	Cosmic Ray Rejection 宇宙射线抑制
Four (4) Photo Sensors 4 个光电探测器	True Tritium Pulse Validation 真正氚脉冲验证
Five (5) Flow Channels 5 个样品通道	Assures Smooth Continuous Flow 确保连续样品流
Temperature Controlled Detector Cooler 探测器温控器控制温度	Long Term Accurate Signal Stability 长期精确信号稳定性
Steel, Bronze, and Lead Shielding 钢、铜、铅屏蔽	Gamma Ray Background Rejection 伽马射线本底抑制
Real-Time Temperature Compensation Sensor 实时温度补偿探测器	Improved Sensitivity & Stability 提高了的灵敏度和稳定性



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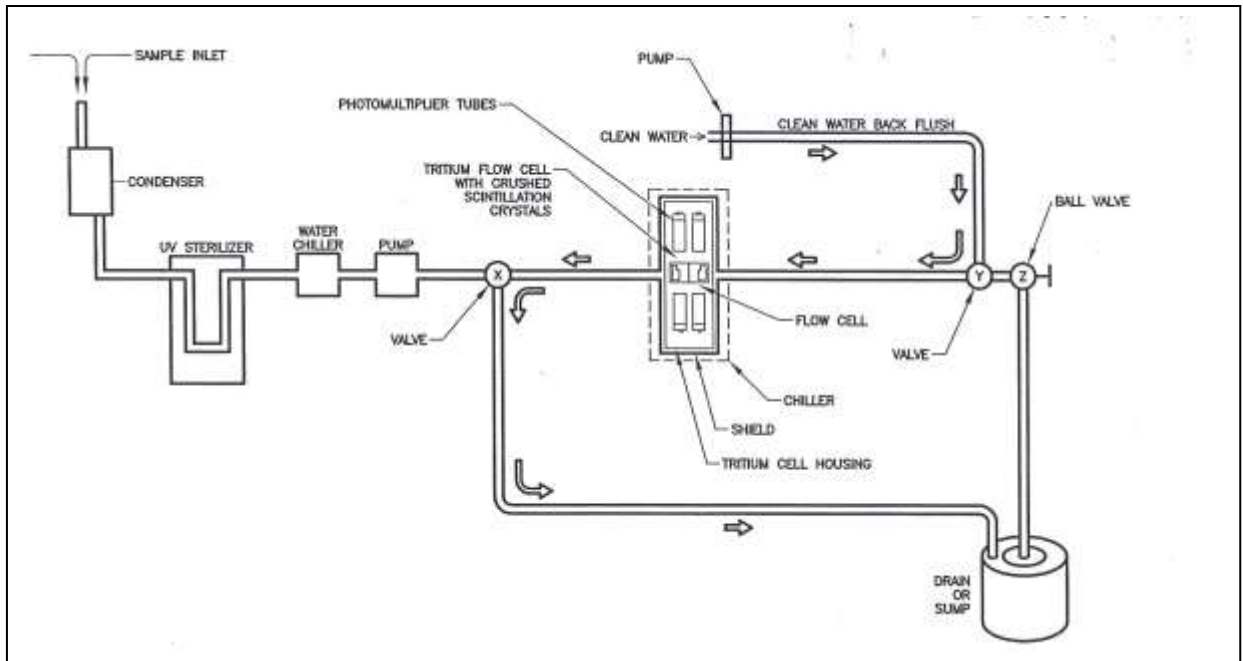
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TRITIUM-AIR FLOW CHART 气氚流程图

1. Efficient Condenser Unit Includes Air Pump:
Extract Tritiated Water from the Air
高效冷凝器包括气泵：从空气中萃取氚化水
2. Chiller 冷凝器
3. Refrigerated Detector & Amplifiers to
Sustain Constant Low Temperature
低温探头& 放大器以持续保持低温状态
4. Flow Cell – 5" Diameter
直径 5"样品腔
5. Photo Multiplier Tube
光电倍增管
6. **OPTIONAL:** Guard Detector
可选：探头保护



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FEATURES OF SENSOR SYSTEM 感测器系统功能

- Real-Time Temperature Detection & Correction
实时温度检测和调整
- Real-Time Dynamic Gamma Background Detector.
实时动态 γ 本底探测器

SPECIFICATIONS:

规格

ELECTRONICS:

电子学

Controls:

Plug In Modules Provide Diversity in Function & Expansion
On / Off Switch
Alarm Reset Switch
Dials: Energy Threshold; High Voltage
(4) USB Ports

控制:

插卡式模块可进行功能拓展
开/关按钮, 报警重设按钮。

Display Update:

刻度盘: 能量阈值, 高压。USB接口
Easy to read color LCD readout.
7" Display Window

显示更新:

Updates Every 2 minutes or User Settable.

Ranges:

易读彩色LCD显示器, 7"显示屏, 每2分钟更新或用户设定

量程:

1 x 10⁻⁴ to 1.0 uCi/l (3.7 KBq/m³ to .37 x 107Bq/m³)

OPTIONAL: Other ranges higher or lower.

Alarm:

1 x 10⁻⁴ to 1.0 uCi/l (3.7 KBq/m³ to .37 x 107Bq/m³), 或者选择其它更高或更低量程。

报警:

Audio / Visual – User Settable

Power:

声光报警-可用户设定

电源:

AC 115V **OPTIONAL:** 220 V

Ambient Temperature:

Detector - < 80° F (**Optional** - to 115° F)

Readout-< 115° F

环境温度:

探头< 80° F (可选- 到 115° F) 读数器-< 115° F

WEIGHT & DIMENSIONS:

重量&尺寸

Dimensions:

Electronics: 电子学

23"H x 16"L x 21" W

Detector: 探头

12"H x 10"D x 27" W

Condenser/Pump: 冷凝器/泵

10"H x 10"D x 6" W



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尺寸:

Weight (Standard Unit):

Detector Housing: 35 lbs. (Unshielded)
Electronics Housing: 40 lbs.
Pump: 8 lbs

重量 (标准型号):

探头组件 35磅 (无铅屏), 电子学组件40磅, 泵8磅

Shipping Weight:

90 lbs.

邮寄重量:

- **Weight and Dimensions shown above do not include Sample Chiller and Refrigeration Units.**

以上尺寸和重量不包括样品冷凝器及冷藏单元

OPTIONS 选择

- **Lead Shielding:** 1/8", 1/2", 1" thick
铅屏:
- Remote readout via Ethernet
以太网远程读数显示
- Network reporting and communication via the ORO overdrive network
通过Overhoff软件通信与报告



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