CONTRÔLE DE L'ÉVACUATION DE L'AIR ET DE LA VENTILATION

peo MEDICAL

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Partner Tracerco

Tracerco est un fournisseur mondial de confiance de solutions de contrôle des rayonnements, offrant des instruments spécialisés pour le contrôle de la contamination, la mesure du débit de dose et la dosimétrie individuelle. Ses technologies sont largement adoptées dans le domaine médical, aidant les hôpitaux, les services de radiologie et les installations de médecine nucléaire à maintenir la sécurité et à respecter les normes réglementaires.

Product offering

Mud Monitor Tracerco™

Mud Monitor Tracerco™

De Tracerco™ Mud Monitor is intrinsiek veilig (is getest en gecertificeerd voor gebruik in explosiegevaarlijke omgevingen, zone 0, 1 en 2). Het instrument wordt eenvoudig vastgeklemd aan de buitenzijde van het modder circulatiesysteem dankzij de krachtige magneet. Het systeem heeft een gevoelige detector die verbonden is met een boring controlesysteem. Het instrument bewaakt continu achtergrond stralingsniveaus. Bij detectie van een verhoging van straling, geeft het systeem een duidelijk signaal van radioactieve lekkage aan de bemanning van het boorgat.

Specifications Mud Monitor From Tracerco

Mud Monitor Tracerco

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Partner SDEC France

SDEC France est un fournisseur de premier plan de technologies de surveillance de l’environnement, offrant une gamme spécialisée d’échantillonneurs et de compteurs conçus pour soutenir la sécurité radiologique dans les milieux médicaux. Ses solutions aident les hôpitaux, les laboratoires et les centres de recherche à contrôler la contamination de l’air et des surfaces, garantissant ainsi la conformité aux réglementations en matière de santé et de sécurité.

Product offering

Isokinetic Sampling Probes – SDEC

Isokinetic Sampling Probes – SDEC

The Isokinetic Sampling Probes (SDEC) are recognized in the nuclear industry and adapted for all type of sampling in single-point or in multi-points.

Isokinetic Sampling Probes features:

- quality and durability
- high level of finish
- customized manufacture
- the best price

Read more about the Isokinetic Sampling Probes on the SDEC website

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Partner Ludlum Medical Physics (LMP)

Ludlum Medical Physics (LMP), une division de Ludlum Measurements, Inc. est spécialisée dans les solutions d’assurance qualité (AQ) en radioprotection et en imagerie médicale. Sa gamme complète de produits aide les professionnels de la santé à maintenir des normes élevées en matière de sécurité des patients et de précision des diagnostics dans diverses disciplines médicales.

Product offering

Model 334A Alpha Air Monitor

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Model 334A Alpha Air Monitor

Caractéristiques

- Installation et utilisation faciles
- Écran LCD et écran tactile intégrés
- Unités de mesure anglaises ou SI
- Modes de dose aiguë et chronique
- Fausses alarmes considérablement réduites grâce à la capacité d'ajustement de forme de pointe
- Autonomie de la batterie de 8 heures
- Option mode Radon

Le modèle 334A est un moniteur d'air alpha compact, léger et portable conçu pour fonctionner à la fois comme moniteur de lieu de travail et comme moniteur d'air continu (CAM) pour les mesures dans les situations d'intervention d'urgence. Sa fonctionnalité est renforcée par son boîtier étanche aux éclaboussures et à la poussière avec une électronique résistante aux éclaboussures.

L'analyse spectrale est effectuée via un analyseur à 1024 canaux qui transmet les données au processeur embarqué. La configuration d'usine permet soit de mesurer la concentration potentielle d'énergie alpha (PAEC) de matières nucléaires spéciales (SNM), soit de produits dérivés du radon.

Les mesures peuvent être prises dans le cadre d'évaluations à réponse rapide (aiguë) ou à haute sensibilité (chronique), et rapportées en unités anglaises ou SI. Le modèle 334A stocke les données acquises au format .csv (variable séparée par des virgules) reconnu par la plupart des logiciels de feuilles de calcul et de bases de données. Les données peuvent être enregistrées dans la mémoire interne de l'instrument ou écrites sur une carte SD pour une récupération et une révision ultérieures.

La détermination indépendante des pics de nucléides signifie qu'ils sont insensibles aux changements dans l'équilibre du radon, contribuant ainsi aux faibles probabilités d'erreur et de fausses alarmes. Le réglage précis de la queue 218Po offre une excellente sensibilité.

Ce modèle 334A dispose d’un écran LCD et tactile intégré qui affiche des informations sur l’état et les lectures de l’instrument pendant le fonctionnement. La dose estimée du ou des isotopes d’intérêt et l’état de l’instrument sont affichés à tout moment. Une fenêtre ci-dessous peut être basculée entre l’affichage des lectures historiques et de l’état de la batterie, ou l’affichage du spectre actuel.

Le mode Radon configurable en usine permet à l’instrument de surveiller la concentration potentielle d’énergie alpha (PAEC) des descendants du radon.

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Partner Ultra Electronics

Ultra Electronics acquired Lab Impex Systems on July 17th, 2014. This is a known specialized manufacturer in radiation detection solutions and services for use in the global nuclear industry. Founded in 1976, Laboratory Impex Systems Ltd (LIS) is a leader in designing, developing and manufacturing health physics and radiation protection measurement instrumentation focusing on stack monitoring.

Product offering

CMS Iodine Monitor – Lab Impex Systems

Gaseous Monitoring – PG10 Gas Activity Monitor – Lab Impex Systems

PET Cyclotron Facility Stack Monitoring – Lab Impex Systems

CMS Noble Gas Monitor – Ultra Electronics

Stack and Duct Sampling and Real Time Monitoring – Lab Impex

Shrouded Probes – Lab Impex Systems

Continuous Air Monitor – SmartCAM (Alpha & Beta) – Ultra Electronics

CMS Iodine Monitor – Lab Impex Systems

The CMS Iodine Monitor (Lab Impex Systems) is an advanced system for monitoring airborne concentration of radioiodine in the workplace and other areas of interest (stacks, cells and glove boxes).

The monitor is available in isotopic specific configurations including I-124, I-125, I-129 and I-131, and offers real time measurement of both molecular and organic forms of iodine.

In addition, the system is available in a skid, enclosure or cart mounted configuration.

The sensor element of the Iodine Monitor is a patented detector called the CGADC (Continuous Gas Analysis and Detection Chamber). The CGADC combines a sensitive scintillation detector with a stainless steel measurement chamber housing a radioiodine filtration cartridge. The CGADC is packaged as an integrated device, with shielding, pump, flow sensor and CMS processor, and is available in either a fixed or transportable configuration.

CMS Iodine Monitor features:

- filtration mechanism captures all forms of radioiodine
- achieves low MDL’s through unique detector design with Brehmstrahllung shield
- automatic background compensation
- temperature spectrum stabilization reduces inaccurate measurement due to spectrum drift
- CMS analysis algorithm provides a low stable measurement at background, but ensures a fast response to rising concentration levels

Read more about the CMS Iodine Monitor on the Lab Impex Systems website.

Gaseous Monitoring – PG10 Gas Activity Monitor – Lab Impex Systems

The PG-10 Gas Activity Detector (Lab Impex Systems) measures beta or positron emitting radioactive gases in the environment (or in a closed loop system). The detector is suitable for PET Radiation monitoring, Noble Gas monitoring and monitoring of Nuclear Medicine Radio-nuclides.

Primarily used for the measurement of emissions from stack and ducts, the PG-10 detector may also be configured to sample the air in the working environment.

Detectors are normally built for the specific application and supplied with NPL traceable calibration.

The CMS (Continuous Monitoring Station) can simultaneously measure the PG-10 output and the flow rate through the stack/duct and report the discharge rate in days/weeks/months/years etc.

PG10 Gas Activity Monitor features:

- accurate measurement of beta gamma gaseous discharge
- reports discharge emissions inline with regulator requirements
- customized systems to suit all applications

Read more about the PG10 Gas Activity Monitor on the Lab Impex Systems website.

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PET Cyclotron Facility Stack Monitoring – Lab Impex Systems

The PET Cyclotron Facility Stack Monitoring (Lab Impex Systems) provides continuous monitoring of effluent discharges from cyclotron (and other positron gas users) facilities. The well established system measures the activity concentration of effluent being discharged as well as continuously measuring flow of the monitored stack. This allows calculation of the total radioactive effluent discharged to atmosphere.
A software package (9205 PET) provides a comprensive record of all raw data which can be analysed and facilitates the production of standard daily, weekly, monthly and annual reports for the regulator.

The key parts of the LIS Positron Gas Stack Monitor are:

- a continuous monitoring station (CMS PET) which continuously displays realtime indication of activity concentration in the stack and provides local audible and visual alarms.
- a radioactive gas detector (PG-10) which provides accurate measurement of activity concentration of positron gas.
- stack flow measurement device which uses an averageing Pitot and differential pressure monitor (DP2001) to measure the continuous and accumulated flow up the facility stack.

PET Cyclotron Facility Stack Monitoring features:

- designed to provide fast response to positron gas concentration, the CMS-PET system will provide a display of concentration (Bq/m3 or PCi/ml) and volumetric stack flow (m3/sec or CFM).
- the CMS PET Stack monitor can be networked to a facility control centre computer for remote monitoring, alarm annuciation, historical data collection and reporting function. See the 9205PET for more information on this package.

Read more about the PET Cyclotron Facility Stack Monitoring on the Lab Impex Systems website.

CMS Noble Gas Monitor – Ultra Electronics

The LIS Noble Gas Monitor (Lab Impex Systems) is an integrated solution for the measurement of the airborne concentration of radioactive (beta emitting) noble gases. The monitor is suitable for process, stack and health physics applications, and comprises detector, shielding, pump, flow sensor and CMS processor.

The heart of the system is the BG-10 scintillation detector. Offering unparalleled sensitivity to noble gases, the BG-10 uses a specially designed plastic scintillation sensor mounted in a flow through measurement chamber.

Noble Gas Monitor features:

- excellent MDL resulting from minimal detector response to external sources of gamma.- Low response to NORM such as radon and thoron
- available in a fixed or transportable configuration
- CMS analysis algorithm provides a low stable measurement at background, but ensures a fast response to rising concentration levels
- optional gamma dose-rate detector for dynamic gamma background compensation or dose rate measurement

Read more about the Noble Gas Monitor on the Lab Impex Systems website.

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Stack and Duct Sampling and Real Time Monitoring – Lab Impex

Lab Impex Systems have the capability to survey, design, supply, install and commission complete isokinetic sampling and stack flow monitoring systems.

Within any stack monitoring installation accurate flow measurement is an important consideration. Depending upon the geometry and the length of straight duct, either an averaging Pitot or a Pitot array can be used. The Pitot array assembly can contain a section of flow straightener to maximise flow monitoring accuracy by minimising the effects of turbulence and cross flow.

Differential pressure generated by stack airflows tends to be small (typically less than 100 Pascals) therefore the DP2001 Differential Transmitter has been designed specifically for use on this type of facility. The DP 2001 can display flow locally via its integral LCD, provide alarm contacts for high or low flow and can transmit a 4-20 mA signal back to a building management PC.

Isokinetic sample probes can also be included as part of the Pitot Array assembly if required, or installed directly into the stack/duct as individual items. The gas sample may be fed either to a SAS Static Air Sampler or to a CMS 2000 Mk6 or SmartCAM alpha/beta Continuous Air Monitor.

Stack sampling instrumentation can be built into stand-alone cabinets, skids or wall-mounted enclosures. Also included in these assemblies would be vacuum pumps and control gear.

The scope for addressing each projects needs is endless. For example, a stack sampling scheme may call for only one pump, or it could require a duty and standby pump, with automatic or manual switchover in the event of a pump failure or maintenance.
The complete system can be tailor made to suit each customer’s individual site needs, with the number and type of samplers /monitors varying from project to project.

Read more about the Stack and Duct Sampling and Real Time Monitoring on the Lab Impex website

Shrouded Probes – Lab Impex Systems

The Sampling Shrouded Probes (Lab Impex Systems) for extracting particulate matter from stacks and ducts, has several advantages over non-shrouded probes. These include lower internal wall losses, better off-angle performance, lower sensitivity to flow stream turbulence, and the ability to operate in either a fixed flow or variable flow rate mode.

Continuous sampling of effluent discharge gases from stacks and ducts that could possibly emit significant quantities of radio nuclides in the form of gases and aerosols are required to have installed continuous extractive sampling (CES) systems installed by regulatory agencies such as the U.S. Environmental Protection Agency (EPA). To ensure that the quality of the emission data is maintained, it is important that any losses within the sample probe and transport lines are kept to a minimum. A shrouded probe is used to extract the sample from the flow stream in the stack; with an optimally designed transport system used to convey this sample to the sampling or monitoring equipment.

Shrouded probes features:

- lower Internal wall losses
- better off-angle performance
- low sensitivity to flow stream turbulence
- can operate in either fixed or modulating flow rates
- the Shrouded Probe can operate over a range of flow rates.

Read more about the Shroudes probes on the Lab Impex Systems website.

Continuous Air Monitor – SmartCAM (Alpha & Beta) – Ultra Electronics

The Ultra Energy SmartCAM is a next-generation Continuous Air Monitor (CAM) that provides the user unparalleled performance in terms of its detectable limit, sensitivity and speed to alarm. The SmartCAM utilizes state-of-the-art Spectral Measurement Analysis in Real Time (SMART) Technology, that provides real advances in alpha measurement techniques. Using an isotope peak fitting algorithm proven to be more accurate than regions-of-interest or tail-fitting methods, results are faster, more accurate and more reliable than ever.

In operation, the SmartCAM continually monitors alpha and beta particulates deposited on a static filter with a high-efficiency detector. Air is drawn through the filter by an external wall mounted vacuum pump or distributed vacuum main.

Continuous Air Monitor – SmartCAM Features:

- Large color touchscreen display.
- Measurement of alpha and/or beta particulate.
- Allows the user to identify air concentration by isotope or as gross alpha.
- Detachable head assembly for remote monitoring.
- Full alpha spectral analysis with unique radon-thoron peak fitting algorithm.
- Improved measurement quality as a result of alpha spectrum stabilization, by means of continuous air pressure and temperature measurement.
- Fixed filter or moving filter configurations available.

- SmartCAM Fixed Filter Detector Head