(LUCHT)AFVOER EN VENTILATIE MONITORING

peo MEDICAL

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Partner Tracerco

Tracerco is een betrouwbare wereldwijde leverancier van oplossingen voor stralingsmonitoring en biedt gespecialiseerde instrumenten voor contaminatiemonitoring, dosistempo meting en persoonlijke dosimetrie. Hun technologieën worden op grote schaal toegepast in de medische sector en ondersteunen ziekenhuizen, radiologieafdelingen en nucleaire geneeskunde bij het handhaven van de veiligheid en het voldoen aan wettelijke normen.

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 Frankrijk is een toonaangevende leverancier van milieumonitoringtechnologieën en biedt een gespecialiseerde reeks samplers en tellers die zijn ontworpen om de radiologische veiligheid in medische omgevingen te ondersteunen. Hun oplossingen helpen ziekenhuizen, laboratoria en onderzoeksfaciliteiten bij het monitoren van lucht- en oppervlaktebesmetting en zorgen ervoor dat gezondheids- en veiligheidsvoorschriften worden nageleefd.

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), een divisie van Ludlum Measurements, Inc, is gespecialiseerd in oplossingen voor stralingsveiligheid en kwaliteitsborging (QA) van medische beeldvorming. Hun uitgebreide productlijn ondersteunt professionals in de gezondheidszorg bij het handhaven van hoge normen voor patiëntveiligheid en diagnostische nauwkeurigheid in verschillende medische disciplines.

Product offering

Model 334A Alpha Air Monitor

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Model 334A Alpha Air Monitor

Functies

- Eenvoudige installatie en gebruik
- Geïntegreerd LCD- en touchscreendisplay
- Engelse of SI-meeteenheden
- Acute en chronische dosismodi
- Aanzienlijk minder valse alarmen dankzij de mogelijkheid tot piekvormaanpassing
- Batterijduur van 8 uur
- Radonmodusoptie

Model 334A is een compacte, lichtgewicht, draagbare alpha-luchtmonitor die is ontworpen om te functioneren als werkplekmonitor en als continue luchtmonitor (CAM) voor metingen in noodsituaties. De functionaliteit wordt vergroot door de spat- en stofdichte behuizing met spatwaterdichte elektronica.

Spectrale analyse wordt uitgevoerd via een 1024-kanaals analysator die gegevens naar de ingebouwde processor verzendt. De installatieconfiguratie maakt het mogelijk de potentiële alfa-energieconcentratie (PAEC) van speciale nucleaire materialen (SNM) of van radon afgeleide producten te meten.

Metingen kunnen worden uitgevoerd in snelle respons (acute) of hoge gevoeligheid (chronische) beoordelingen, en gerapporteerd in Engelse of SI-eenheden. Model 334A slaat verkregen gegevens op in .csv-formaat (door komma’s gescheiden variabelen) dat door de meeste spreadsheet- en databasesoftware wordt herkend. Gegevens kunnen worden opgeslagen in het interne geheugen van het instrument of naar een SD-kaart worden geschreven om ze later op te halen en te bekijken.

De onafhankelijke bepaling van nuclidenpieken betekent dat ze ongevoelig zijn voor veranderingen in de radonbalans, wat bijdraagt aan een lage kans op fouten en valse alarmen. De nauwkeurige afstelling van de 218Po-staart zorgt voor een uitstekende gevoeligheid.

Dit 334A-model heeft een ingebouwd LCD-scherm en aanraakscherm dat informatie weergeeft over de

status en metingen van het instrument tijdens gebruik. De geschatte dosis van de betreffende isotoop(en) en de status van het instrument worden te allen tijde weergegeven. In een venster hieronder kan worden geschakeld tussen het weergeven van historische meetwaarden en de batterijstatus, of het weergeven van het huidige spectrum.

Door de in de fabriek configureerbare radonmodus kan het instrument de potentiële alfa-energieconcentratie (PAEC) van radon-nageslacht bewaken.

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Partner Ultra Electronics

Lab Impex Systems (LIS) is sinds 17 juli 2014 onderdeel van Ultra Electronics. Zij staat bekend als gespecialiseerde fabrikant van stralingsdetectie-oplossingen en diensten voor gebruik in de wereldwijde nucleaire industrie.

LIS is al sinds 1976 marktleider op het gebied van ontwerpen, ontwikkelen en vervaardigen van meetinstrumentatie speciaal gericht op 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.

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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