Umbilicals for Extractive CEMS

Wet extractive CEMS systems require an umbilical that can handle temperatures above the dew point of the sample, typically 320°F (160°C) to 425°F (218°C). The umbilical must also be able to withstand the thermal cycling seen caused by repetitive calibration cycles. Dekoron Unitherm has refined this design using state-of-the-art materials for a robust umbilical system that is lightweight, flexible, installation-friendly, and virtually maintenance-free.

Extractive CEMS umbilical using fibrous glass thermal insulation.

Extractive CEMS umbilical using high efficiency aerogel thermal insulation.

Application:

- Wet extractive Continuous Emissions Monitoring Systems measuring water soluble constituents with elevated dew points.

Sample and auxiliary tubing material:

- Virgin PFA and PTFE fluoropolymers
- Pre-treated and cleaned PFA fluoropolymer
- FEP fluoropolymer (for calibration gasses)
- High Density Polyethylene (for blowback)
- Nylon (for vacuum sensor or blowback)

Thermal Insulation:

- High efficiency, aerogel thermal insulation.
- Low chloride, non-wicking fibrous glass thermal insulation

Outer jacket materials:

- Lead-free UV Stabilized low temperature flame retardant PVC
- Halogen free UV Stabilized thermoplastic polyurethane
- High temperature UV Stabilized thermoplastic polyolefin

Heating Cables:

- 18 watt/ft constant power density heating cable using a high temperature inorganic insulation system.
- Fluoropolymer insulated series resistance heating wire.

Auxiliary Items:

- Single or multiple temperature sensors
- J and K thermocouple or Pt100 2 or 3 wire RTD
- Shielded sensor cables
- Fluoropolymer insulated power leads
- Communications cables
- Fiber Optic cables

For more information see:

links to other pages

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