

PEGASUS System

Passive Gaseous Effluent Monitoring System

PEGASUS makes evaluation of radiological impact during filtered containment venting easy and reliable.

Challenge

Short term emergency response measures as well as correct assessment of long term environmental impact require reliable and representative measurement of radionuclides released in during filtered containment venting in the course of severe accidents.

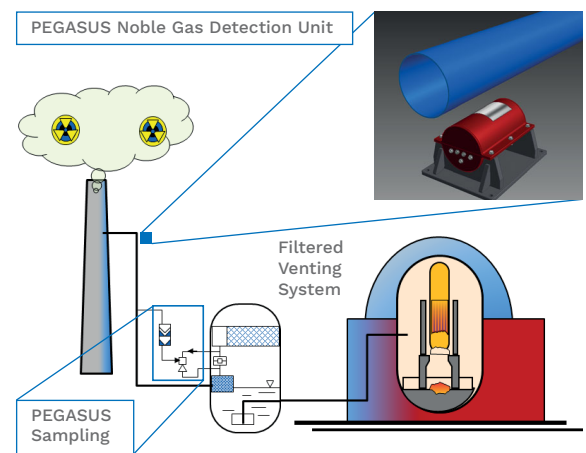
Solution

PEGASUS Noble Gas Detection Unit (PEGASUS I)

- Online monitoring of noble gases released during filtered containment venting
- Directly installed at the venting line to measure the high dose rates occurring during early venting phases
- Designed and optimized for filtered containment venting scenarios
- Facilitates backfitting to installed systems
- Data bases stored on electronic memories allow online determination of the released radioactivity, e.g. in units of Bq/s or Bq/m³
- An uninterruptible, battery-based backup power supply is able to tide over power outages

PEGASUS Sampling Solution (PEGASUS II)

- Aerosol/iodine sampler for detailed analysis (differentiation between unbound, particle bound, or organically bound iodine) after containment venting; serves to record evidence for the authorities
- Sampling flow generated by gas-propelled jet pump (no rotating parts, no electrical power)
- An uninterruptible, battery-based backup power supply is able to tide over power outages for up to 72 hours for the detection and analysis components



Fission Product	Isotopes	Main Form in Containment Atmosphere
Xenon	Xe-133, Xe-133m, Xe-135, Xe-138	Gaseous
Krypton	Kr-85, Kr-85m, Kr-87, Kr-88	Gaseous
Iodine	I-131, I-132, I-133, I-134, I-135	Gaseous molecular iodine Gaseous organic compounds, Aerosol-bounded
Cesium	Cs-134, Cs-136, Cs-137, Cs-138	Aerosol-bound

Passive Concept

- Low power consuming electronics
- No rotating pump
- No need for cooling water

Customer benefits

- Reliable rugged and cost-effective design
- Meet new regulatory requirements
- Installed references in various nuclear power plants
- Recording of evidence for the authorities
- Basis for an early notification of neighboring States

Your performance
is **our everyday commitment**

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