

New Dimensions in Isotope Ratio Mass Spectrometry

AMD 202-D

An Innovation dedicated for demanding challenges in specific Nuclear Power Plants

A significant contribution to **safety control** of heavy water reactors known as **HWR's**

Detection of **contamination** of light cooling water by heavy water in the **ppb range**

Precise **on-line control** of the H_2^+/HD^+ isotope ratio by application of a new **unique technology** and measuring procedure

The new **AMD 202-D** combines **all advantages** of magnetic sector technology including high resolution, high sensitivity and measuring precision

Monitoring of H_2/HD isotope ratio variations in water with a **precision and accuracy better than 0.1 %**



Unique Features:

- H_3^+/HD^+ ion doublet is separated at a mass resolution of 3.000 (10% valley)
- No application of H_3^+ correction factor for the determination of the HD^+ ion intensity is required
- Any variation of H_3^+ ion intensity during dynamic Hydrogen production in the connected pyrolysis system and on-line measurement of HD^+ is irrelevant

Proven Technology:

- A compact double focusing magnetic sector analyzer applying Reversed Nier-Johnson ion optics
- Unique dual collector arrangement for detection of H_2^+ at low resolution and HD^+ at high resolution
- Latest digital hardware technology for data acquisition and processing and sophisticated software

The Innovators in Magnetic Sector Mass Spectrometry

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