



PRECISE CATALYST LOADING MEASURING ON FUEL CELL MEMBRANES

Ensure maximum efficiency, quality, and cost control in your fuel cell production

What is your challenge?

Do you need to...

- ensure high quality, functionality and reliability of PEM (proton exchange membrane) fuel cells?
- measure Pt (Platinum), PGM (Platin Group Metals) or other catalysts non-destructively and contactless?
- save costs of expensive raw metals?
- minimize production scrap?
- implement offline, at-line, or inline metrology for process control and monitoring?

Solve it with FISCHER!

Our XRF measuring solutions deliver precise, reliable, and efficient analysis of catalyst coatings in fuel cell production – fully tailored to your requirements.

- **Non-destructive, non-contact XRF** measurement of catalyst mass per unit area
- **Market-leading accuracy and precision** for reliable quality control and cost reduction
- **Customized measuring solutions:** from benchtop and handheld instruments to fully integrated inline systems
- **Measure all relevant elements:** Pt, PGM, Ir, Ce, Ru, Ni, Co, Pd and many more
- **Traceable measuring results** using dedicated calibration standards
- **Flexible system configurations** (X-ray tubes, collimators, filters) for optimal adaptation to high throughput, inhomogeneity detection, or multi-element analysis
- **Powerful WinFTM® software** with automation interfaces, programming commands and measuring programs shared across all XRF devices and inline installations

Turn precision into profit!

- ✓ Ensure quality
- ✓ Reduce costs
- ✓ Deliver peak performance

FISCHER - Globally leading in highly precise XRF measuring technology.

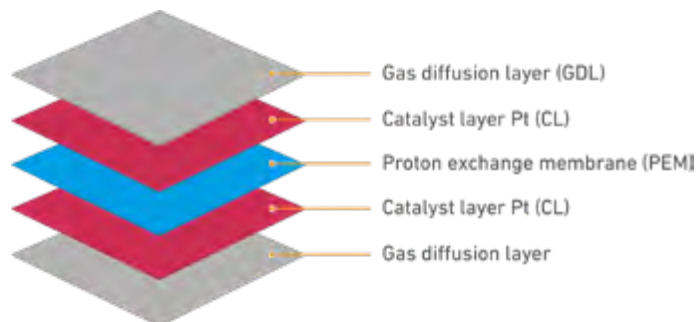
www.helmut-fischer.com



Stop wasting precious metals. Start mastering your MEA performance.

In MEA production, even the slightest deviation in catalyst loading can significantly impact manufacturing costs and fuel cell performance. Precise control is essential as the catalyst layer contains expensive metals such as Pt or other catalyst metals like Ir, Ce, or Ru.

FISCHER XRF measuring solutions help you accurately determine catalyst mass per unit area during manufacturing – offline, at-line, or inline for incoming and outgoing inspection, giving you full control over catalyst loading.



Membrane electrolyte assembly (MEA)

Proven expertise you can trust

- ✓ **Over 10 years of expertise** in fuel cell analysis with offline and inline systems
- ✓ **Made in Germany** for highest quality and safety
- ✓ **Global presence with application and service support** on-site for short lead times and reliable spare-part supply for maximum uptime
- ✓ **Excellent customer service** with individual inspection agreements for reliable operation

Solutions refined for your needs



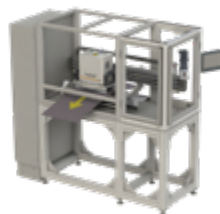
FISCHERSCOPE® X-RAY XDV®-SDD

Benchtop instrument for seamless at-line and offline measurements with maximum flexibility for a broad spectrum of measuring tasks.



FISCHERSCOPE® X-RAY 4200

Robust inline device for continuous process control and monitoring of metal and precious metal content in ongoing plating processes.



FISCHERSCOPE® X-RAY 5000

Precise XRF inline measurement system for monitoring platinum content during fuel cell production. Designed for reel-to-reel production lines.

Discuss your application – get your tailored solution today!



www.helmut-fischer.com/contact