

Algemene informatie

Aanbesteding: X-ray Diffraction System for Energy Materials Characterization
Aanbestedende Dienst: Technische Universiteit Eindhoven
Referentie: PCM2026-10179RfP
Toelichting:
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Vraag en antwoord

Ref.nr. **Onderwerp:**
1 6.2.6 CE Certification, Machinery Directive & EMC Directive

Vraag:
CE marking does not automatically mean compliance with the Machinery Directive. Does this requirement mean required compliance with CE and Machine Directive and the EMC Directive. Electrical connections & power supply according European (Legal) standards?

Antwoord:
Yes, that is correct

Fase:
Inschrijffase

Inschrijfronde:
Inschrijfronde 1

Vragenronde:
Vragenronde 1

Beantwoord op:
30 sep 2026

Percelen:
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Ref.nr. **Onderwerp:**
2 6.4.5 Automated switching

Vraag:
Does automation switching mean fully motorized switch between Bragg Brentano (or parallel beam) powder diffraction, transmission/capillary measurement and thin film measurement modes, all done without manual interaction, by software commands?

Antwoord:
No.

Fase:
Inschrijffase

Inschrijfronde:
Inschrijfronde 1

Vragenronde:

Vragenronde 1

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Onderwerp:

6.4.5 Thin film measurements

Vraag:

Thin film measurements typically require a parallel beam 'Gobel' X-ray mirror, coupled into a germanium (single) crystal monochromator, to produce a very parallel K α 1 X-ray beam. Should the automated & motorized primary optic contain both a parallel mirror and a Germanium monochromator?

Antwoord:

No.

Fase:

Inschrijffase

Inschrijfronde:

Inschrijfronde 1

Vragenronde:

Vragenronde 1

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Onderwerp:

6.4.5 Motorized anti-scatter device

Vraag:

What is exactly meant by a motorized anti-scatter device? As everyone knows, the best anti-scatter device is an automated & motorized knife positioned directly in the middle above the sample. Is that what you mean by the motorized anti-scatter device?

Antwoord:

Yes, this is correct.

Fase:

Inschrijffase

Inschrijfronde:

Inschrijfronde 1

Vragenronde:

Vragenronde 1

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Onderwerp:

Section 6.4.5.

Vraag:

- 6.4.5: Incident Beam Optics / Parallel-Beam Mirror for Thin-Film Analysis

The tender specifies parallel-beam optics for Cu radiation suitable for thin-film diffraction but does not specify a design choice for the parallel-beam mirror.

Two technical solutions can satisfy this requirement:

- o A high-performance parabolic and monochromatizing K α 1,2 multilayer X-ray optic, offering highest spectral purity.
- o A 2-bounce hybrid monochromator for Cu radiation, consisting of a high-performance parabolic multilayer mirror combined with a 2-bounce channel-cut crystal, generating a parallel beam with pure K α 1 radiation.

Which of these two configurations is preferred or required for compliance with §6.4.5?

Antwoord:

Solution number 2:

A 2-bounce hybrid monochromator for Cu radiation, consisting of a high-performance parabolic multilayer mirror combined with a 2-bounce channel-cut crystal, generating a parallel beam with pure K α 1 radiation.

Fase:

Inschrijffase

Inschrijfronde:

Inschrijfronde 1

Vragenronde:

Vragenronde 1

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Onderwerp:

Section 6.4.14.

Vraag:

- 6.4.14: Integrated Cooling Unit

The tender requires a fully integrated cooling unit connected to an external water supply, with automatic water-flow control, de-ionization or equivalent water treatment, and no additional floor space required outside the instrument cabinet.

An integrated cooling unit fully contained within the XRD system cabinet represents a technical complexity that most manufacturers cannot comply with, given the large volume of coolant required to remove the heat generated by the X-ray source.

Two alternative solutions are proposed:

- o A compact water/water chiller connected to an existing water loop, requiring minimal floor space, which can be placed at the back of the instrument — space that is already required for regular maintenance access.
- o Direct connection of the instrument to an in-house cooling loop, rendering a dedicated cooling unit unnecessary, provided the required flow rate and water pressure for the instrument are met.

Would either of the above solutions would be considered compliant with §6.4.14?

Antwoord:

Solution number 2:

- o Direct connection of the instrument to an in-house cooling loop, rendering a dedicated cooling unit unnecessary, provided the required flow rate and water pressure for the instrument are met.

Fase:

Inschrijffase

Inschrijfronde:

Inschrijfronde 1

Vragenronde:

Vragenronde 1

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