EuCARD^2 WP11 Topical Meeting
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ARIES WP14 – Task 14.4: Industrial production of materials for extreme thermal management

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Task description

- **WP14**: Promoting Innovation (PI) – WP leader M. Losasso (CERN). Close relation to industry, final aim to provide society with identified commercial applications of the supported research potential.
- **Task 14.4**: Industrial production of materials for extreme thermal management
  - Contribute to material development in collaboration with **WP17** (PowerMat)
  - Produce at least 10 samples of MgB_2 by Additive Manufacturing on Copper substrate for characterization of the R&D → applications in critical accelerator environments (beam pipes, RF cavities) and other technical domains
  - Demonstrate feasibility of production for industrialisation (with large dimensions, small tolerances)
- **Production objectives**:
  - 30 samples of MgB_2 on metal substrate
  - 30-50 samples of CuCD
  - 40 samples of metal-diamond composite for luminescence studies
  - 50 samples of carbide-graphite or metal-graphite composites
  - 1 large size block of carbide-graphite or metal-graphite composite with tight mechanical tolerance to proof industrialisation

RHP

CERN with industrial partner (BrevettiBizz)

Deliverable

Deliverable Number	Deliverable Title	Lead beneficiary	Type	Dissemination level	Due Date (in months)
D14.3	Production of material samples of carbon-based composites and metal-diamond composites	CERN	Demonstrator	Public	24

D14.3 : Production of material samples of carbon-based composites and metal-diamond composites

- Production of: 50 samples of carbon-based composites with different production cycles and 30 samples of metal-diamond composites, 20 for high energy impact studies and 10 for luminescence studies


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Thank you.