

Presentation of the European Powder Metallurgy Association

June 2017

Presented by

Dr Olivier Coube Technical Director

Overview

- What is EPMA?
- EPMA mission
- Conclusion







Who are the EPMA?

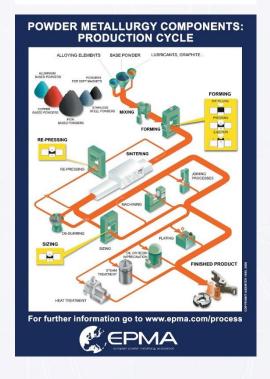
The European Powder Metallurgy Association (EPMA) is a nonprofit association formed in Brussels in 1989 with three key missions:

- Promote and Develop PM Technology in Europe
- Represent the European PM Industry within Europe and Internationally
- Develop the Future of PM

EPMA is what its members want it to be



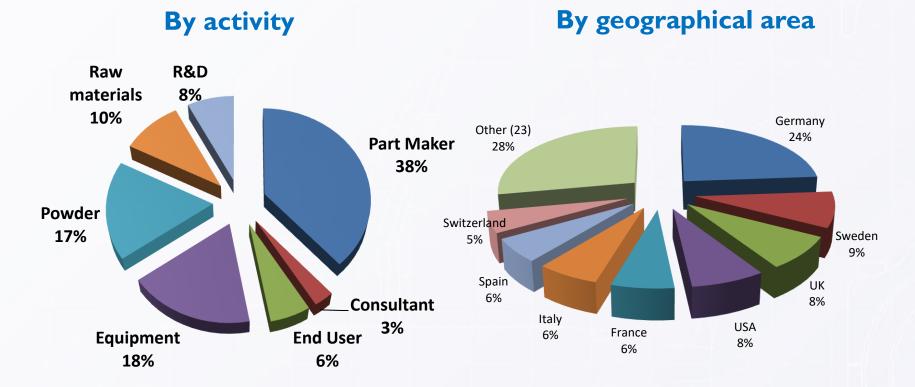






Membership

EPMA members: ca. 190 Corporate + ca. 120 Individual Members



PM Processes and Materials covered by the EPMA

Metal Powders

- Chemical Processes
- Water Atomization
- Gas Atomization
- Plasma Atomization
- Crushing/Milling

Powder Shaping and Consolidation

Parts Design and Production

- Press & Sinter
- Hard Materials
- Metal Injection Moulding
- Hot Isostatic Pressing
- Additive Manufacturing

Parts and Components (Examples)

- Automotive Parts
- Cutting Tools
- Consumer Goods
- Semi-Finished Products
- Ultra Complex Parts





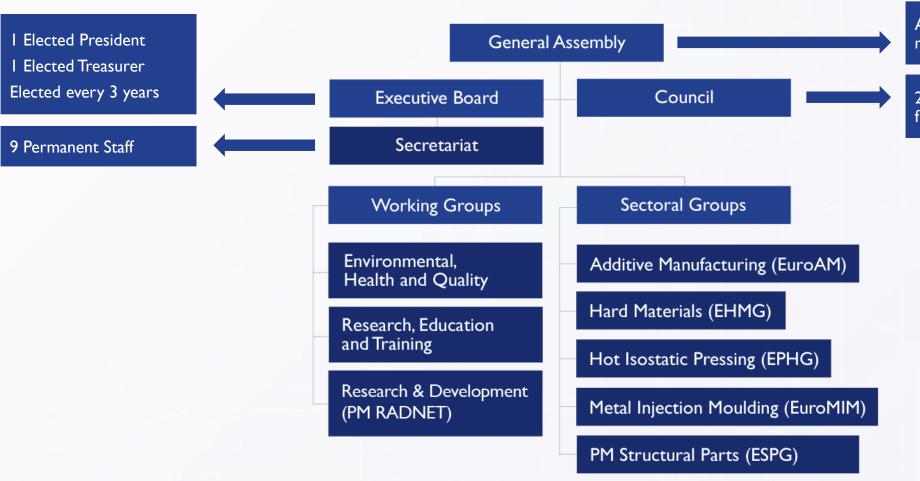


Specifically designed equipment and machinery





Organisation Chart of the EPMA



All Corporate Members meet once a year

20 Elected Representatives from the PM Industry

EPMA Secretariat



Dr Lionel Aboussouan Executive Director



Dr Olivier Coube Technical Director



Mr Andrew Almond Marketing & Exhibition Manager



Miss Kate Blackbourne Congress Manager



Mrs Jackie Peters Accounts and Membership Contact



Miss Scarlett Williams Event and Project Co-ordinator



Mrs Rhianna Jones Events and Administration Assistant



Mrs Tammy Harris Website Administrator



Mr James Batten Graphic Communications Assistant

+ Miss Alice Young Administrative Assistant

www.epma.com/meet-the-team



EPMA Sectoral Groups + PM R&D Network

Technology	Group name	Date of creation	No. of participants	
Press & Sinter	European Structural Parts Group EuroPRESS&SINTER	1989	130	EUROPRESS & SINTER
Hard Materials	European Hard Materials Group EuroHM	1999	32	EUROHM
MIM	European Metal Injection Group European MIM Group	2001	76	EUROMIM AI PHY SECTION COLD
HIP	European Hot Isostatic Group EuroHIP	2009	41	EUROHIP TOTAL EURO A SEC
Additive Manufacturing	European Additive Manufacturing Group EuroAM	2013	60	EUROAM
PM R&D	European Powder Metallurgy Institute EPMI	2005	16	EPMI ATT STATE AND

www.epma.com



EPMA Metal Additive Manufacturing Sectoral Group



- Funded in 2013
- Coordinated by a Steering Committee
- Ca. 60 organisations members
- Focus on Metal Powder Additive Manufacturing only
- Open to Non Members for some activities (need to register)



Ralf Carlström Höganäs Digital Metal Claus Aumund-Kopp Frauhofer IFAM

> Adeline Riou Erasteel

Olivier Coube EPMA

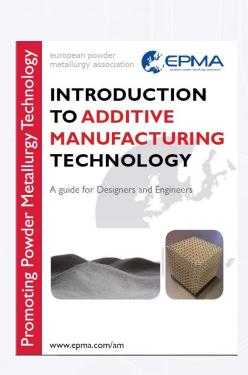
Keith Murray Sandvik Osprey

EuroAM Main Activities





- Increased Presence at the Euro PM2017
- « Club Projects » in AM like « SLM-POWD » (see <u>www.epma.com/projects</u>)
- Involvement in EU Projects
- Open and Special Meetings for EuroAM members
- Metal AM Seminars
- AM Trends Survey
- New Web page on PM R&D Centres
- Flyers and Brochure Introduction to Metal AM (Autumn 2017)



AM and Euro PM2017 Congress & Exhibition





Euro PM is:

- Largest PM Congress & Exhibition in Europe
- Every 6 years: Euro PM = World PM (Euro PM x2)
- Three Day Exhibition featuring over 150 Exhibitors and 200 presentations and Posters
- 800 Delegates
- End User Days and Industry Tours
- Thesis Competition 2017
- Young Engineers Workshops
- I AM Special Interest Seminar on "Developments in Metals AM Materials, powder handling"
- I EuroAM open meeting
- 9 AM tech Sessions: 1/3 of the programme (0% in 2013, 12% in 2014, 20% in 2015)
- Euro PM2018: Ready to have a full AM Congress in //



1-5 Oct 2017

www.europm2017.com



Synergies Activities: EPMA Club Projects

EPNA european powder metallurgy association

Industry-defined Projects open to EPMA Members and Co-ordinated by the EPMA

- Budget: Between €10k and €100k
- Time frame: Between 6 and 18 months
- 19 Projects so far: www.epma.com/projects
- €650k collected in total

Club Projects Webpage: www.epma.com/projects



Club Project meeting participants

Funding from Industry Partners

Club Projects

Co-ordination

by the EPMA

Project Ideas from Universities, R&D Centres and Contractors

www.epma.com/projects

EuroAM Club Project: « SLM-POWD »





Quality Test for Selective Laser Melting (SLM) powder "SLM-POWD"

- 9 Partners + IFAM and EPMA: Heraeus, SMS group, Höganäs, Linde, IMR, Sentes-BIR, Boehler, HC Starck, Granutools
- I Powder
- 3 objectives:
- I. Study the applicability of a metal powder (to be defined) for the Additive Manufacturing process of Selective Laser Melting
- 2. Set up a guideline on how to characterize and specify AM powder for SLM
- 3. Set up a guideline on how to find the right laser parameters to process powder with SLM



Participants of the Project at the Kick-off meeting

(see full project proposal on www.epma.com/projects)

Synergies Activities: EU Funded Projects



Dissemination / Exploitation support:

2011: DIRA-GREEN





• 2013: EFFIPRO



 2016:AM-Motion: A strategic approach to increasing Europe's value proposition for Additive Manufacturing technologies and capabilities





Dira-Green Prototype

Support/Participation to/in Member's Proposals:

- Horizon 2020
- Marie Curie Initial Training Network
- EURAMET
- Knowledge Innovation Community (KIC)
- Etc..



Dissemination / Exploitation support to the Project's Proposal (Impact criterion) through our dissemination events (c€800k).



EFFIPRO Consortium

Open and Special Meetings for EuroAM members





One open Meeting per year during the Euro PM Congress:
 Dissemination and Promotion of EuroAM

 I or 2 Special Discussion Meetings per year for EuroAM members: Brainstorming on EuroAM Strategies





Organisation of Metal AM Seminars





• First one in 2016 at Fraunhofer IFAM, Bremen: 60 participants

• 2nd one in 2017 at MTC, Coventry: 70 participants



Fraunhofer IFAM

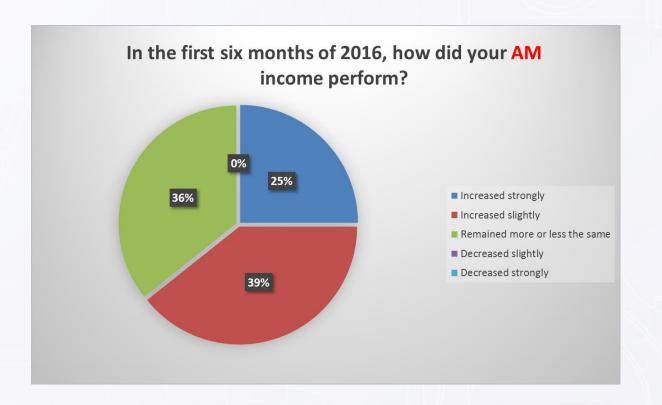
MTC

EuroAM Trends Survey





- First one in 2016. Launched every year around July. Results discussed at Euro PM
- Open to all AM Stakeholder
- 53 participants last year



Developing the Powder Metallurgy



New: PM R&D Centre Webpage

www.epma.com/projects/r-d-centres-mapping





EuroAM Flyers and Brochures

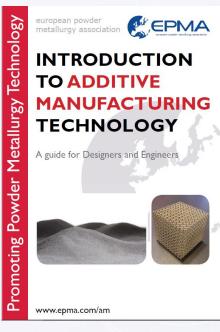
- Free of charge available in Hardcopy and PDF
- First 4 page Flyer in 2014

- First Brochure Introduction to Additive Manufacturing in 2015
- Second version planned for Autumn 2017





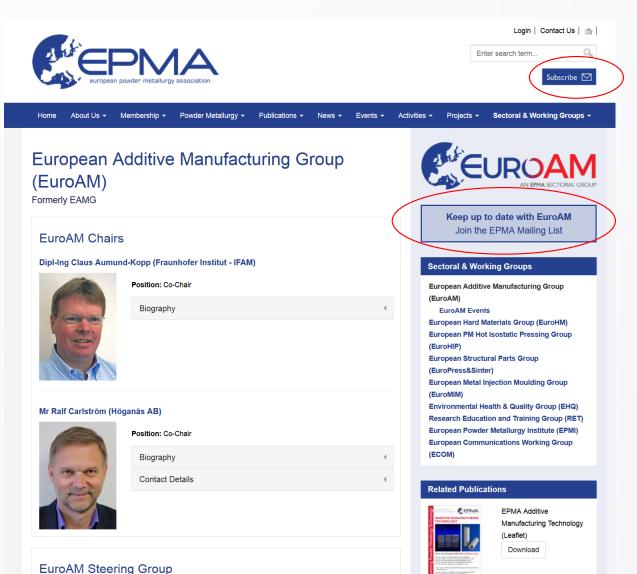




How to follow EuroAM activities







www.epma.com

or

www.epma.com/european-additivemanufacturing-group

And LinkedIn, Tweeter, Facebook, Youtube



Thank you for your attention

June 2017

Presented by

Dr Olivier Coube Technical Director