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POWDER METALLURGY ASSOCIATION OF INDIA

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Editorial

Fascinating developments are taking place in powder metallurgy and these were reflected at the PM15 International Conference & Exhibition held at I.I.T. Bombay, in January, 2015. This event was inaugurated by Hon. Manohar Parrikar, Defence Minister of India. The focus of this issue is on this very successful event. The presentation of PMAI Fellows, memorial lectures, invited & contributed papers, best paper and product awards, certificates of merit, special grand student award, guiding hand award, young professional award and accompanying cultural events are other highlights.

The elected PMAI office bearers for the year 2015-2017 are presented and our congratulations to Mr. N. Gopinath who kindly consented to re-election as president of PMAI for a second term.

The Powder Metallurgy Short Course, PMSC-15, will be held at College of Engineering Pune during Sept. 2015. The major event of PMAI, our next International Conference & Exhibition, PM-16 will be held in February, 2016 at the Hyatt Regency Hotel, Pune.

P. Ramakrishnan

1st ANNOUNCEMENT & CALL FOR PAPER

PM16

INTERNATIONAL CONFERENCE ON POWDER METALLURGY
& PARTICULATE MATERIALS + EXHIBITION
&
42nd ANNUAL TECHNICAL MEETING OF PMAI

Thu 18th - Sat 20th, Feb 2016

Hyatt Regency, Pune – 411014, India
online registration at www.pmai.in/pm16

NEWSLETTER

PM15 International Conference on Powder Metallurgy

The International Conference on Powder Metallurgy & Particulate Materials + Exhibition PM15 was held on 19-21 Jan, 2015 at the Victor Menezes Convention Centre, IIT (B), Mumbai. The Conference was inaugurated by Hon. Manohar Parrikar, Defence Minister of India, an IIT(B) alumni, metallurgy, class of '78.

Prof. Ramakrishnan, Conference Convener introduced the event and welcomed all delegates. PMAI President Mr. N. Gopinath followed and spoke about the role played by the association in developing the PM Industry in India. Prof. Rama Mohan, Co-Convener introduced the Chief Guest Hon. Manohar Parrikar to the delegates.

Mr. Parrikar in his inaugural speech stressed the importance of PM components in defence applications and urged PM corporate, academic & research establishments to work in these areas. Two earlier PMAI conferences had been inaugurated by Hon. Manohar Parrikar both in Goa, once when he was the leader of the opposition and once as the Chief Minister. In recognition of his continuous support and encouragement, PMAI President Mr. N. Gopinath presented Hon. Manohar Parrikar with the Fellowship of PMAI.

PM 15 Fellows & Awards



PMAI President N. Gopinath presenting Fellowship of PMAI to Hon. Manohar Parrikar, Defence Minister of India. Prof. T. R. Rama Mohan & Prof. P. Ramakrishnan, Conveners PM15 & Dr. Deep Prakash, Genssec, PMAI look on



Luigi Alzati, Imerys Graphite and Carbon receiving his Fellowship of PMAI from V. Srinivasan of Hoganäs

Grand PMAI Student Award

To encourage the students to make a career in powder metallurgy, PMAI introduced a Grand PMAI Student Award which comprises a fully paid trip to an international PM Conference outside India.

The winner of this award (chosen during PM15) is **R. Shashanka**, a PhD Scholar of NIT Rourkela for his paper "**Effect of Y_2O_3 addition on non-lubricated sliding wear behaviour of duplex stainless steel**"



Hans Soderhjelm, Hoganäs AB, Sweden, receiving his Fellowship of PMAI

He received an all expense paid trip to **Powdermet 2015** International Conference on Powder Metallurgy & Particulate Materials organised by **MPIF** during **17 to 20th May, 2015 at San Diego, USA**. This award was supplemented by a generous donation from Stefania and Luigi Alzati (Imerys Graphite and Carbon). May they live long and prosper!

The PMAI Guiding Hand Award for Faculty

A cash award of Rs. 25,000/- and a certificate were presented to the principal guide of the winner of the grand PMAI student award Shashanka's lecturer, **Dr. Debasis Chandra**, NIT Rourkela.

The PMAI Award for A Young Promising Professional

A cash prize of Rs. 25,000/- & certificate for the best paper of industrial relevance were given to **Dr. Deepak K. Pattanayak**, Scientist, CSIR-Central Electrochemical Research Institute, Karaikudi.

The Tendulkar Award

A cash prize of Rs. 10,000/- & certificate for the best paper on sintering were given to **Deepak Kumar Mishra**, Scientist, Vikram Sarabhai Space Centre, Trivandrum for the paper "Development of invar-silver composite for MIC carrier plate of satellites"

Best PM Part Award 2015

The Best PM Part Award 2015 was presented to **GKN Sinter Metals P.Ltd** in recognition of their ability to meet the technical challenges in producing a complex part, **Base Plate** (2 Wheeler Engine - Camshaft Assy.)



Best PM Product (Raw Material) Award 2015



The Best PM Product (Raw Material) Award 2015 was presented to **Swastik Tungsten P.Ltd** for the indigenous development of **Tungsten Powder** for strategic applications

← Ajit Arbatti, Managing Director
Swastik Tungsten

Certificates of Merit 2015

Certificates of Merit 2015 were presented to **Speciality Sintered Products P.Ltd** for the development of a large PM part, Lever for Automotive Transmission & the manufacturing method to obtain close dimensional tolerances and **Singhal Sintered P.Ltd** for the conversion of a previously forged part Clutch Head (for automatic slack adjuster), into a PM part

Exhibition

The accompanying PM15 exhibition of 27 national and international companies was inaugurated by Hon. Parrikar. He spent considerable time at most stalls during a walk around with PMAI office bearers



In discussion with Mr. Sundar Sriram of Sundaram Fasteners on the Integrated facilities the TVS group has for defence production



In discussion with Mr. Aniket Gore, Indian representative of Dorst compacting & sizing presses.

Closed door meeting with the Defence Minister



After the inaugural ceremony a closed door meeting was held where Hon. Manohar Parrikar met the sponsors and industry experts. The purpose of this meeting was to apprise the Defence Minister of the capabilities of Indian PM companies and also to air the difficulties faced by them in government procurement. PMAI President N. Gopinath moderated the discussion and led with a presentation on the status of the Indian PM industry. He highlighted two issues, the provisions of an antiquated Arms Act that prohibits Indian firms from manufacturing component parts of firearms and the provisions of the foreign trade policy that works against Indian manufacturers and users of tungsten & tungsten carbide products. Briefly, tungsten is a rare strategic material which needs to be recycled. Impex regulations prohibit the import of scrap while allowing its export. In the discussion that followed Mr. Krishna Chivukula of Indo MIM and Mr. Adwait Dharmadhikari of Electronica Tough-Carb elaborated on these subjects. Clarification on the Ordnance Factory Board viewpoint came from Mr. V.K. Singh. Several other invitees contributed to the animated discussion.

Hon. Manohar Parrikar admitted to the cumbersome procurement procedures and asked the delegates to look out for a revolutionary policy from his new Govt. for enhancing the fortunes of the Indian manufacturing industry.

Chilling after a long day



Audience laughs with Atul Khatri, standup comedian



Sponsors of PM15

Dorst Technologies, Germany
GKN Sinter Metals
IMERYS Graphite & Cabon, Swiss
Makin Metal Powders, UK
Rio Tinto Metal Powders
SLM Metals
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Industrial Metal Powders Pune
Newmet
Singhal Sintered Products
SMS Meer GmbH, Germany
Sundaram Fastners

Fluidtherm Technology
Hoganas India
Kandoi Metal Powders
Pometon India
Sintbush (India)
Speciality Sintered
Swastik Tungsten

Exhibitors in PM15

Ametek Instruments
IMCO Alloys
MEMS IIT Bombay
SIMO Corporation

Chennai Metco
Innomet Powders
Osterwalder AG, Switzerland
SRP Tungten

Codina Metalic
Lechtech Materials
SACMI, Italy
Yangzhou Haili, China

PMI office bearers for 2015 – 17

Gopinath, N.	President	Fluidtherm
Deepak Grover	Vice President	Hoganas India
Narendra Dhokey	Vice President	CoEP
Rajendra Sethiya	Vice President	GKN
Deep Prakash	General Secretary	BARC
Aniket Gore	Joint Secretary	Ceramet
Rajat Varshney	Joint Secretary	Star Sintered
Murli Gopal, K.	Treasurer	Novoken
Ajit Arbatti	Member	Swastik Tungsten
Raj Kumar Kandoi	Member	Kandoi Metal
Ramakrishnan, P.	Member	I.I.T(B)
Ramamohan, T. R.	Member	Consultant
Sachdeva, J. S.	Member	Newmet
Sivan, P.N.S.	Member	Sintbush
Velmourougane, D.	Member	Tenneco
Virendra K Sud	Member	Pometon India
Sandeep P Butee	Co-opted Member	CoEP
Chandrachud, N. L.	Co-opted Member	Industry expert
Mahesh Nipani	Co-opted Member	Hoganas India
Mahesh Kamble	Co-opted Member	Speciality Sintered
Malobika Karanjai	Co-opted Member	ARCI
Niranjan Narkhade	Co-opted Member	Speciality Sintered
Piyush Agarwal	Co-opted Member	SLM Metals
Sidharth Singhal	Co-opted Member	Singhal Sintered
Varshney, D. K.	Co-opted Member	Star Sintered

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POWDER METALLURGY SHORT COURSE



PMSC 15

**Thurs. 24th – Sun. 27th
September, 2015**

Venue

**Dept of Metallurgy and Materials Science,
North campus of College of Engineering,
Shivaji Nagar, Pune – 411005**

Powder Metallurgy Short Course 'PMSC 15' is designed for professionals engaged in the use, design, specification, purchase and the manufacture of sintered metal & ceramic parts (PM, MIM, CIM, AM, HIP etc.)

- Powder Production
- Characterization of Powders
- Consolidation of Powders & Presses
- Design and Fabrication of Dies and Tooling
- Sintering
- Characterization and Evaluation of Sintered Components
- Powder Injection Molding
- Sintering Furnaces and Atmospheres
- Heat Treatment & other downstream processes & equipment
- Quality in PM Manufacturing
- Porous PM Materials
- Advanced Ceramics and Composites
- Aerospace and Defense Materials
- PM in Nuclear Engineering and Energy Generation
- PM in Bio Materials
- Friction Materials
- Technology Management
- Metal Injection Moulding

Convener: Dr. N. B. Dhokey

Co-Convener: Dr. S. P. Butee

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www.pmai.in/pmsc15