



POWDER METALLURGY ASSOCIATION OF INDIA

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Editorial

This issue begins with a report on the 44th International Conference on Powder Metallurgy & Particulate Materials, PM-18, held at the CIDCO Exhibition Center, Navi Mumbai during 21-23, Feb 2018.

Mr. N. Gopinath, President of PMAI in his presidential address, covered the status of the PM industry in India. Dr. Hans Soderjhelm, Vice President of Hognas in his keynote lecture dealt with the Future of the PM industry. The Tamahankar, P.R. Roy & Acharyulu Memorial lectures covered the topics of Hybrid processes & Multiple Technologies, Fabrication of Metallic Fuels for Nuclear Research Reactors and DMRL's role in advances in Powder Metallurgy and Defence applications respectively. The Fellowship of PMAI was conferred on Mr. V. Srinivasan, MD of Hognas India for a lifetime of contribution to the PM industry in India. The PMAI best student paper award was conferred on M. Rahul Mane of I.I.T. Hyderabad and Dr. Bharat B Panigrahi was the recipient the PMAI award given to Young Promising Professionals. A commendation certificate was conferred on Dr. Manoj Kumar Jain, DMRL – the lead author of the paper presented at the conference by Dr. Jiten Das, DMRL which qualified for the Tendolker award.

This issue also covers the AGM of PMAI for 2018; the PM Auto 2018 held in Isfahan, Iran; the Hognas POP day in Iran; growth of PM industries like Singhal Sintered and Sintercom India Ltd., the establishment of a not for profit R & D facility for Micro and Nano Materials by CMTI in Bengaluru and the 50th anniversary celebration of Widia India. Forthcoming international events include POWDERMET2018 & AM/PM 2018, U.S.A., The World Congress, WorldPM2018, in China and EuroPM 2018 in Spain. At home PMAI is participating in the International Conference of the Heat Treatment Society 2018 conducted by the ASM International India Chapter during Sept 2018 at Navi Mumbai.

The APMA 5th International Conference on Powder Metallurgy in Asia will be hosted by PMAI, concurrently with the 45th ATM of PMAI during 18-21 Feb, 2019 at JW Marriott Hotel, Pune. **This is the first time an APMA conference will be held in India and is expected to be the biggest conference so far on Powder Metallurgy & Particulate Materials held in India.** All are requested to register for the conference which is being attended by a large number of expert speakers & exhibitors from APMA member countries.

P. Ramakrishnan

Appeal: We need from PMAI members, news items for publication in this (thrice yearly) newsletter. This includes technical developments, new products, business developments, promotions, job changes, organizational changes, mergers & acquisitions or just plain gossip. We would like to publish your stories (editorial rights reserved) regularly.

NEWSLETTER

PM18 International Conference on Powder Metallurgy

The PM18 International Conference on Powder Metallurgy & Particulate Materials + Exhibition was held on 21 - 23 Feb, 2018 at CIDCO Exhibition Centre, Navi Mumbai. The event was sponsored by Ametek Specialty Metal, Dorst, Fluidtherm, Haili Press, Höganäs, Makin Metal Powders, Pometon, Porite India, Pricol, Rio Tinto, RVB Shorlube, Singhal Sintered, SLM Metal and Speciality Sintered.

A total 64 technical presentations were made during this event which 185 delegates attended.

Convener Prof. P. Ramakrishnan welcomed the delegates and traced the development of PM in India by describing specific components that had made significant impact, starting from the sintered bush to more advanced parts that are on the anvil for meeting stringent emission norms. He described the evolution of nonferrous, hard metal & heavy metal parts & spoke also of the bright prospects for PM tooling & superalloy parts. He explained the potential for PM in the development of electrical & electronic parts in all walks of life.

Mr. N. Gopinath, President PMAI gave a lecture on "The Status of the PM industry in India".



The keynote lecture was delivered by Dr. Hans Soderjhelm, FPMAI, Höganäs AB on "The Future of the PM Industry".

PM18 Memorial lectures

The Tamhankar Memorial Lecture was delivered by Prof. K. P. Karunakaran of IIT Bombay on "Hybrid Processes & Multiple Technologies".



Dr. S. K. Jha of BARC delivered the P.R. Roy Memorial lecture on "Fabrication of Metallic Fuels for Nuclear Research Reactors".

Mr. Bhanu Prasad of DMRL delivered the S. L. N. Acharyulu Memorial lecture on "DMRL's role in the advance of powder metallurgy in defence applications".



PM 18 Fellows & Awards

Mr. V. Srinivasan, MD of Höganäs India was awarded the Fellowship of PMAI for a lifetime of contribution to the PM industry in India. He started his carrier in Sundarm Fastners Ltd. PM plant and was the MD of GKN Sintermetal, Pune.



PMAI Best Student Paper Award

A cash prize of Rs. 25,000 and certificate was given to Mr. Rahul Mane, IIT Hyderabad for his paper "Effect of Configurational Entropy on Sintering Behavior of High Entropy Alloy Powders". This was the Best Student Paper Award (chosen amongst papers presented in PM18).

The PMAI Award for A Young Promising Professional

A cash prize of Rs. 25,000/- & certificate for commendable academic contribution to the development of PM in India was awarded to Dr. Bharat Panigrahi, IIT, Hyderabad.

The Tendolkar Award

A cash prize of Rs. 10,000/- & certificate for the best presentation on basic research in PM was given to Dr. Jatin Das, DMRL, Hyderabad who presented the paper "Analysis of Residual Thermal Stresses in MoSi₂ based Particulate Composites". A commendation certificate was given to the lead author of this paper Dr. Manoj Kumar Jain, DMRL, Hyderabad.

Best PM Part Award 2018

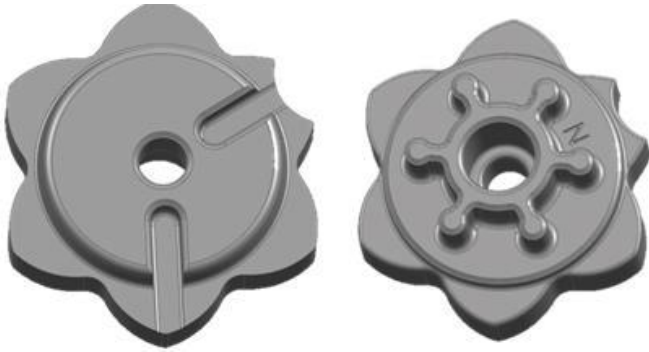
The Best PM Part Award 2018 was presented to Pricol Ltd in recognition of their ability to meet the technical challenges in producing a complex part, Fin Coupling for Agricultural & Industrial pumps.



Certificates of Excellence: PM Part Development 2018

Certificates of Excellence 2018 for producing complex PM parts were presented to-

- GKN Sinter Metals P Ltd for Gear Shaft Cam



- Speciality Sintered Products P Ltd for Interlock Plate



PMAI AGM 2018

The PMAI Annual General Meeting for 2018 was held on 20th Feb, 2018 at Hotel Four Points, Navi Mumbai



PM AUTO 2018

After a gap of 10 years a PM conference was held in Isfahan, Iran which was jointly organised by Mashhad Powder Metallurgy (MPM) and Vienna University of Technology (TU Wien).

The conference Chairman was *Dr. Abolghasem Arvand*-adviser to MPM, the conference Vice Chairman was *Prof. Herbert Danninger*, Technical University of Vienna and the Conference Secretary was *Prof. Ali Haerian*, Sadjad University of Technology. The conference was attended by about 200 delegates with 36 papers presented by 32 authors & 16 posters.

The exhibition of about 16 stalls (Höganäs Pune & Fluidtherm from India) was well attended by the local PM community.



Höganäs POP Day in Iran

Höganäs conducted their popular & useful POP Day in the premises of SAPCO (Supplying Automotive Parts Company) which is the purchasing agent of Iran Khodro, their largest car manufacturer. The event was inaugurated by *Dr. Hossein Karami*, Research Director & the speakers were introduced by *Mr. Esrafil Besharat*, both from SAPCO. The event was well attended by most Iranian PM part makers. Papers were presented by *Mr. Srinivasan* & colleagues of Höganäs, *Dr. Arvand* of Mashhad Powder Metallurgy, *Mr. Jean-Marie Pierson* of Dorst and *Mr. Gopinath* of Fluidtherm.



PMAI Corporate Members' Achievements

Singhal Sintered has achieved a massive growth in sales turnover of about 25% during the FY 2017-18. Singhal Sintered manufactures ferrous and non-ferrous sintered parts for automotive, home appliance and engineering industries.

Singhal Sintered marketing efforts are aided in no small measure by their participation in every PMAI Conference as a Sponsor & Exhibitor

Tenneco has acquired **Federal-Mogul** from Icahn Enterprises L.P. who have created two independent public companies, one being Tenneco Ride Performance + Federal-Mogul Motor parts and the other; Tenneco Clean Air + Federal-Mogul Powertrain.

Höganäs AB has acquired the **Surface Technology & Ceramic Powders (STC)** division of the H.C. Starck Group. STC manufactures a wide variety of thermal spray powders and complementary coating technology materials, as well as ceramic and metal powders.

Fluidtherm Technology reports strong performance for the second consecutive year with the sale of 20 furnaces for the PM industry. The furnaces were supplied within India and to S. Korea, China and USA. The list includes mesh belt furnaces (3x900 & 8x600), high temperature pusher furnaces (two to Germany & one to USA for tungsten ordnance). The company also reported an almost equal sales volume for its range of heat treatment furnaces.

Sintercom India Ltd. was listed on the EMERGE platform of the National Stock Exchange (NSE) on 15 Feb, 2018.

Sintercom incorporated in the year 2007, is engaged in manufacturing of high end sintered metal products for OEMs like Maruti Suzuki, Mahindra & Mahindra, Bajaj Auto and Fiat India Automobiles. They have advanced in-house R&D facilities & a team of capable development engineers. Their main product line is high strength structural sintered components for Engine and Transmission.



The Sintercom team with board members Mr. Jignesh Raval & Mr. Hari Nair with their JV partner Dr. Harald Neubert of MIBA

GKN has been acquired by **Melrose** Industries in what is described as Britain's largest hostile takeover bid. Melrose bought 52.4% shares of engineering giant GKN in a share-for-cash transaction in March 2018.

The 8.1 bn Pound takeover was followed by the entire GKN board including its CEO Anne Stevens resigning. An interim board has been appointed by Melrose to serve until GKN shares stop trading.

GKN is a 259 year old engineering company which includes, amongst other things, a 3.6 bn Pound metal powder division (catering mainly to the automobile sector), GKN Sintermetal & Hoeganaes. This division was to have been hived off even before the takeover occurred.

Melrose Industries was founded in 2003 and is a turnaround specialist. The company's business model involves acquiring, improving and selling underperforming sections of the acquisition. Melrose has committed to maintaining the company's HQ in the UK till 2025.

CMTI has established a Nano Manufacturing Technology Center (NMTC) at its existing location in Bangalore. CMTI is a non-profit R&D organization for micro and nano materials. NMTC has state-of-the-art nano and micro characterization facilities under one roof for measurement & characterization of micro and nano features and materials to serve various R&D institutions, academia and industries. To avail this facility contact Dr. Aravinda, email: aravinda.cmti@gov.in

IEI Award for PMAI life member

Dr S Kavithaa, Scientist, CMTI has been conferred an award for the paper "Nanometric Finishing on Biomedical Implants by Abrasive Flow Finishing" by the The Institution of Engineers (India). Dr S Kavithaa is a PMAI Life member. She has received a medal & certificate. Her paper was also published in the Institution Journal, Series C, Volume 97, 2016.



Widia India celebrates 50 years

The company promoted by Meturit AG. Switzerland, was set up at Bengaluru in 1964. The Widia group was taken over by the US-based Kennametal Inc in 2002. The WIDIA Business Group recently celebrated 50 years of its presence in India along with its sales distributors at Bengaluru.



**PMAI participation
at
ASM-HTS 2018**

Navi Mumbai

www.htsexpo.in; www.metexpo.in

PMAI is participating in the International Conference HTS 2018 of ASM International India

**27- 29 Sep, 2018
CIDCO Exhibition Centre,
Navi Mumbai, India**

Visit our stall
where experts will be available for advice on PM processes

Forthcoming Events:

<p>June 17–20, 2018 Grand Hyatt San Antonio San Antonio, TX</p>	<p>POWDERMET 2018 & AM/PM 2018 www.mpif.org/meetings/2018/powdermet2018</p>	
<p>September 16-20, 2018 China National Convention Centre Beijing, China</p>	<p>WORLDPM 2018 (WORLD CONGRESS) www.worldpm2018.com</p>	
<p>October 14-18, 2018 In Bilbao, Spain</p>	<p>EuroPM 2018 www.europm2018.com</p>	



Asian Powder
Metallurgy Association

Members:
PM Associations From
China
India
Japan
Korea
Taiwan
Thailand

1st

**ANNOUNCEMENT
& CALL FOR PAPER**

APMA 2019

www.apma2019.com

SEMINARS & SIPs ON:

- PRESS & SINTER TECHNOLOGY FOR AUTO, ELECTRICAL & MACHINE PARTS
- POWDER INJECTION MOULDING (MIM & CIM)
- ADDITIVE MANUFACTURING (3D PRINTING)
- HARD METALS & DIAMOND TOOLS
- DEVELOPMENT OF MATERIALS & ALLOYS FOR EMERGING APPLICATIONS
- TECHNICAL CERAMICS & COMPOSITES

**5th INTERNATIONAL
CONFERENCE ON POWDER
METALLURGY IN ASIA
+ EXHIBITION**

**Registration & pre-conference events: Mon 18 Feb, 2019
Conference: Tue 19 to Thu 21 Feb, 2019**

JW Marriott Hotel Pune
Senapati Bapat Road
Pune- 411053, India

- Largest conference on Powder Metallurgy & Particulate Materials ever held in India
- Technical sessions on current & emerging opportunities
- Speakers & delegates from all over the world
- Accompanying exhibition showcases innovative products, technologies & organizations
- Large delegation from all APMA member countries
- Several generous awards for students, academia & young professionals

HOSTED BY POWDER METALLURGY ASSOCIATION OF INDIA

APMA 2019 runs concurrently with the 45th Annual Technical Meeting of PMAI
www.pmai.in

