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## Editorial

The next major event of PMAI is 'PM-09', The International Conference with Trade Exhibition, 5th in the series, along with 35th Annual Technical Meeting, in Feb. 2009 at Goa. Some details are provided here.

This issue also features a report on the International Conference and Exhibition along with the 34th Annual Technical Meeting held at Chennai in Feb. 2008. Best paper award was given to the paper titled 'Structural, electrical and magnetic properties of nanosized NiCo ferrites prepared by high energy ball milling'.

The other features of this issue include: 'Development in water bench test facility for atomization systems', 'Employment opportunities in Sandvik Asia Ltd.', 'Distribution of ID cards to PMAI members', 'Publication of PMAI Directory incorporating PMAI members and Who's Who in particulate materials', 'Special publication of Powder Metallurgy for the 21st Century' and 'Proposed PMAI delegation to U.S.A.'

This issue of News Letter has been sponsored by Höganäs.

P. Ramakrishnan

**5th in Series**

**PM-09**

International Conference With Trade Exhibition

HIGH PERFORMANCE MATERIALS BY POWDER METALLURGY  
FOR AUTOMOTIVE AND ENGINEERING INDUSTRY AND  
THE 35<sup>TH</sup> ANNUAL TECHNICAL MEETING OF PMAI

**Feb. 16-18, 2009**  
**Cidade De Goa Resort**  
Vainguinim Beach, Panjim Goa

**ORGANISED BY**  
**PMAI** **THE POWDER METALLURGY**  
**ASSOCIATION OF INDIA**  
Website : [www.pmai.in](http://www.pmai.in)

Powder Metallurgy and Particulate Materials

## Editorial Board:

Editor : P. Ramakrishnan  
Members : T.R. Rama Mohan, D.K. Varshney, U. Basak, PNS Sivan, K.S. Samant

**Report - PM 08****INTERNATIONAL CONFERENCE  
& 34th ANNUAL TECHNICAL MEETING of PMAI.**

(L to R Mr. Gopinath, Mr. Bijoy Sarma, Mr. V. Srinivasan, Mr. P.N.S. Sivan and Mr. B.S. Bhatia at the podium)

The conference was held at Chennai Trade Centre, Chennai on 20th and 21st February 2008 with the theme of 'Cost effective technologies for net shape production'.

President of PMAI Mr. Bijoy Sarma welcomed the gathering. Mr. N. Gopinath, Convener reviewed the highlight of the event. The conference was inaugurated by Mr. B.S. Bhatia, Member Ordinance Factories Board who gave the inaugural address. Mr. P.N.S. Sivan, General Secretary of PMAI proposed vote of thanks.

Prof. G.S. Upadhyay and Mr. S.R. Sunderam were felicitated with PMAI Fellowships.

The inaugural function was immediately followed by the Key Note address 'PM Industry in India' by Mr. V. Srinivasan of Hogenas India; Pune.

This was followed by a special lecture by Mr. P.S. Upadhyaya, Director (Technical) of NMDC Ltd. Hyderabad, on 'NMDC initiatives in the area of Powder Metallurgy'.

The P.R. Roy Memorial Lecture entitled 'Design and performance of fast reactor fuels: Towards energy sustainability and security' was delivered by Dr. Baldev Raj, Distinguished Scientist and Director of Indira Gandhi Centre for Atomic Research (IGCAR) Kalpakkam. The Tamhankar Memorial Lecture 'Expanding horizons of powder metallurgy' was delivered by Dr. T.R. Rama Mohan, Professor (Retd) IIT Bombay, consultant and Honorary Fellow of PMAI.

The conference was attended by about 200 delegates from India as well as from abroad and covered various aspects of Powder Metallurgy. More than 50 technical papers by authors from countries like Singapore, U.S.A., Germany, Switzerland, Canada, Venezuela, Czech Republic, Turkey South Korea, Ukraine etc. in addition to India, discussed the developments in the investigations on microstructures and mechanical properties, powder metallurgy of ferrous and non ferrous alloys, nuclear materials, nano-structured composite materials and electronic materials.

The best paper award was given to 'Structural, Electrical and Magnetic Properties of Nanosized NiCo Ferrite Prepared by High Energy Ball Milling' by R. Rakesh Radhakrishnan, G. Sreenivasulu, B.S. Murthy of IIT Madras, Chennai.

**PMAI News****From PMAI Office**

PMAI office has prepared ID cards for members. Some of them were distributed during PM08 at Chennai. Others have been sent by post. In case of non receipt of the ID card please contact PMAI office by e mail or letter.

Postal address : 1002, B Wing, Kingston, High Street,  
Hiranandani Complex, Powai, Mumbai-400076  
Tel. : 022-25704588

E mail address : [pmai\\_pm@yahoo.com](mailto:pmai_pm@yahoo.com)

**PMAI Directory**

The new **PMAI Directory (Feb.08) incorporating members of PMAI and WHO'S WHO in Particulate Materials** in India has now been published. It is priced @Rs.250/. (U.S.\$10/for foreign countries) inclusive of postage. Those interested in procuring it should send the amount by local cheque (@Mumbai), or draft at PMAI office in Mumbai. In case of outstation cheques please add Rs.50/.

The directory can also be purchased by personal visit to PMAI office.

**Powder Metallurgy for the 21st Century**

PMAI has published a special volume of Transactions, April 2008, entitled '**Powder Metallurgy for the 21st Century**'. This was the theme of the National Conference of PMAI at Chennai during Feb.3rd and 4th 2000.

Copies of this issue have already been dispatched to all the members. Copies are also available for sale @Rs.500/ for Indian subscribers and US \$ 50/ for Overseas subscribers.

**PMAI Delegation to U.S.A.**

Efforts are being made for a PMAI delegation to attend Powder Metallurgy World Congress, Washington D.C., starting from 8th June 2008 followed by discussions with few key PM people and visit to Industries.

**International PM Events****POWDER METALLURGY SHOW CASE OF METAL FORMING  
DESIGN SOLUTION (WITHIN SAE WORLD CONGRESS)**

April 14-17, 2008 Detroit, U.S.A. [www.sae.org](http://www.sae.org)

**HIP'08 - THE 9TH INTERNATIONAL CONFERENCE ON HOT  
ISOSTATIC PRESSING**

May 6 - 9, Huntington Beach, CA, [www.hip2008.com](http://www.hip2008.com)

**2008 WORLD CONGRESS ON POWDER METALLURGY &  
PARTICULATE MATERIALS**

June 8 - 12, Gaylord National Hotel, Washington, DC,  
[www.mpif.org](http://www.mpif.org)

**INTERNATIONAL EURO PM 2008, CONGRESS & EXHIBITION**

Sept 29 - Oct 01, 2008, Mannheim, Germany,  
[www.epma.com/pm2008](http://www.epma.com/pm2008)

**5TH INTERNATIONAL POWDER METALLURGY  
CONFERENCE**

Oct 8-12 2008, TOBB University of Economics and Technology,  
Ankara, Turkey, [www.turkishpm.org](http://www.turkishpm.org)

**PM-09, INTERNATIONAL CONFERENCE AND EXHIBITION**

Feb.16-18, 2009, Cidade De Goa, Panjim, Goa [www.pmai.in](http://www.pmai.in)



From PM Industries

# WELLTECH ENGINEERS

**PRECISION AND  
FABRICATION ENGINEERS**

1-4-872/2, New Bakaram,  
Bholakpur, Hyderabad - 500 048.  
Phone : 27601000



## WATER BENCH FACILITY

Well Tech Engineers, located at Hyderabad has been fabricating water and gas atomization systems under the guidance of Dr. Krishna Rao and supplying them. It now has set up a "Water Bench" testing facility for judicial design and development of freefall and close-coupled gas atomization nozzles for different melt flow rates, gas pressure and gas flow rates. The facility will become operational from the month of May 2008. The tests will help in correctly defining the operational windows and optimize atomizer performance. It allows the use of high efficiency close-coupled nozzle designs.

The "**Water Bench**" tests will help **WELLTECH ENGINEERS** to offer appropriate gas nozzles and also service customer's nozzles to ensure optimum performance.

## SANDVIK ASIA LTD.

**Requires Process Metallurgists  
at The New R&D Centre at Pune**

Sandvik Asia Ltd., Pune, is a member of Sandvik Group, Sweden, world leader in the fields of Tooling, Mining & Construction, and Materials Technology. We are looking for **research engineers in the areas of process metallurgy and metal working** for multiple positions in the new R&D Centre of Sandvik Materials Technology, Pune.

Resumes are invited from candidates with strong academic background and relevant experience, preferably with Ph.D. or Masters degree in Materials and Metallurgical Engineering, with excellent analytical and communication skill and capability to work with an international team.

### Position-1:

**Research Engineer - Process Development and Hot Working**

Process development in **hot working**, such as hot rolling, forging and extrusion.

### Position-2:

**Research Engineer - Medical Materials Processing**

Hot working, such as hot rolling, forging and extrusion, for **medical materials**.

### Position-3:

**Research Engineer - Process Metallurgist with Focus on Medical Materials**

Production technologies for **medical materials and orthopedic products**

### Position-4:

**Research Engineer - Powder Technology**

Develop production technologies including gas atomisation for **metallic powders**.

### Position-5:

**Research Engineer - Process Metallurgy**

Raw materials, **electric arc furnace technology, AOD** and ladle furnace

### Position-6:

**Research Engineer - Production Processes for Advanced Materials**

Focus on **remelting metallurgy and solidification/casting**

**For all the positions, the engineers will be employed in India but will work in Sweden for the initial two to three years on an expatriate contract. After this period, the researchers will come back to join the Indian operations.**

**HOW TO APPLY:** The interested candidates should email their CV's mentioning "Applications for SMT R&D" in the subject line to [careers.india@sandvik.com](mailto:careers.india@sandvik.com). Read about Sandvik at [www.sandvik.com](http://www.sandvik.com)

Sandvik Materials Technology is a business area within the Sandvik Group and a world-leading manufacturer of high value added products in advanced stainless materials, special alloys, metallic and ceramic resistance materials, as well as process plants and sorting systems. Annual sales 2006 were about USD 2.8 billion with 8,600 employees. The product areas comprise Tube, Strip, Wire, Kanthal and Process Systems.



## You buy more than metal powder – you buy knowledge!

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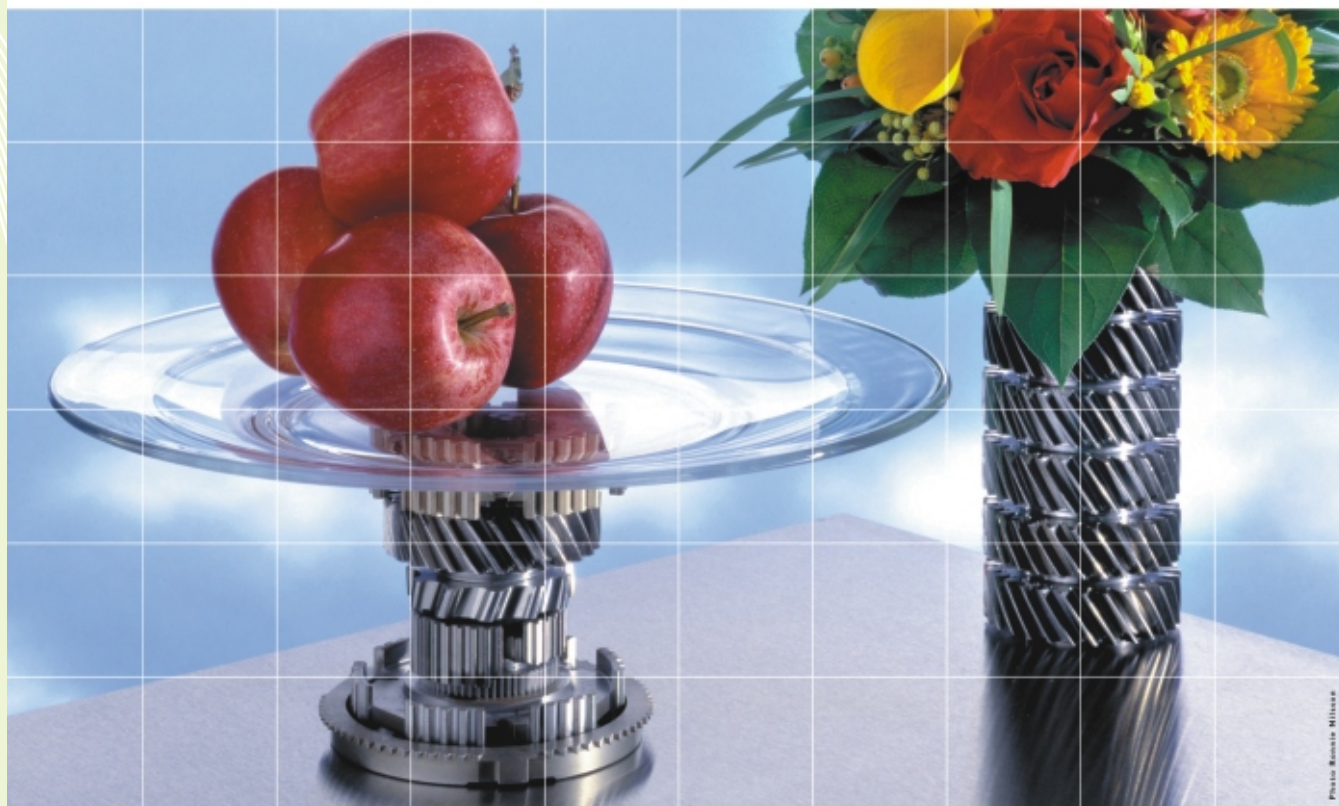


Photo: Benoit Milner



Höganäs is the world's largest producer of metal powders. Not just in terms of mass but also geographically. In fact, we are all over the world – branching out from our headquarters in Sweden further on to USA, Brazil, India, China and Japan.

Metal powders open up new possibilities for creative technical solutions. Powder components require little or no subsequent machining, achieve nearly 100% material utilization, and deliver numerous performance benefits – including the lowest total unit cost for the manufacturer.

These are just some of the reasons why over 40 million powder components are produced every single day. Actually, you find more and more of them in cars, computers, household machines and electrical tools.