

Executive Director Report



Takashi Saito, New Executive Director JPMA

I thank you very much for your supports with JPMA activities.

I, Takashi Saito would like to introduce myself who succeeded Mr. Kazunori Arai as Executive Director of JPMA. I do hope you to cooperate with JPMA as before.

In April 2016, JPMA will meet the 60th Anniversary. Since the establishment, the Japanese PM Industries have experienced and overcome various difficulties to extend its scale and technologies.

During late several years, Lehman Shock and East Japan Great Earthquake attacked our PM Industries as well, however they could be getting away from such crises through their steady endeavor, I believe. Also, Japanese government economic promotion policies since the year before last and Yen depreciation have revived tremendously Japanese economy. We think such economic conditions make Japanese PM industries keep steady for the time being.

The PM product volume in Japan 2013 dropped 3.6% than 2012, and this tendency is similar to 2013 automobile production units result in Japan (dropped 3.1%) but the drop down was saved by the government policy and Yen depreciation.

Therefore the PM product amount showed

only slight drop, but a steady transition. The PM weight per a vehicle turned to decrease due to market tendency for smaller and lighter cars.

As for 2014, the PM products are expected steady, but it could not be optimistic because the consumption tax increase (8% from 5%), the possible economic slowdown of new development countries.

I would like to introduce JPMA main activities in 2013.

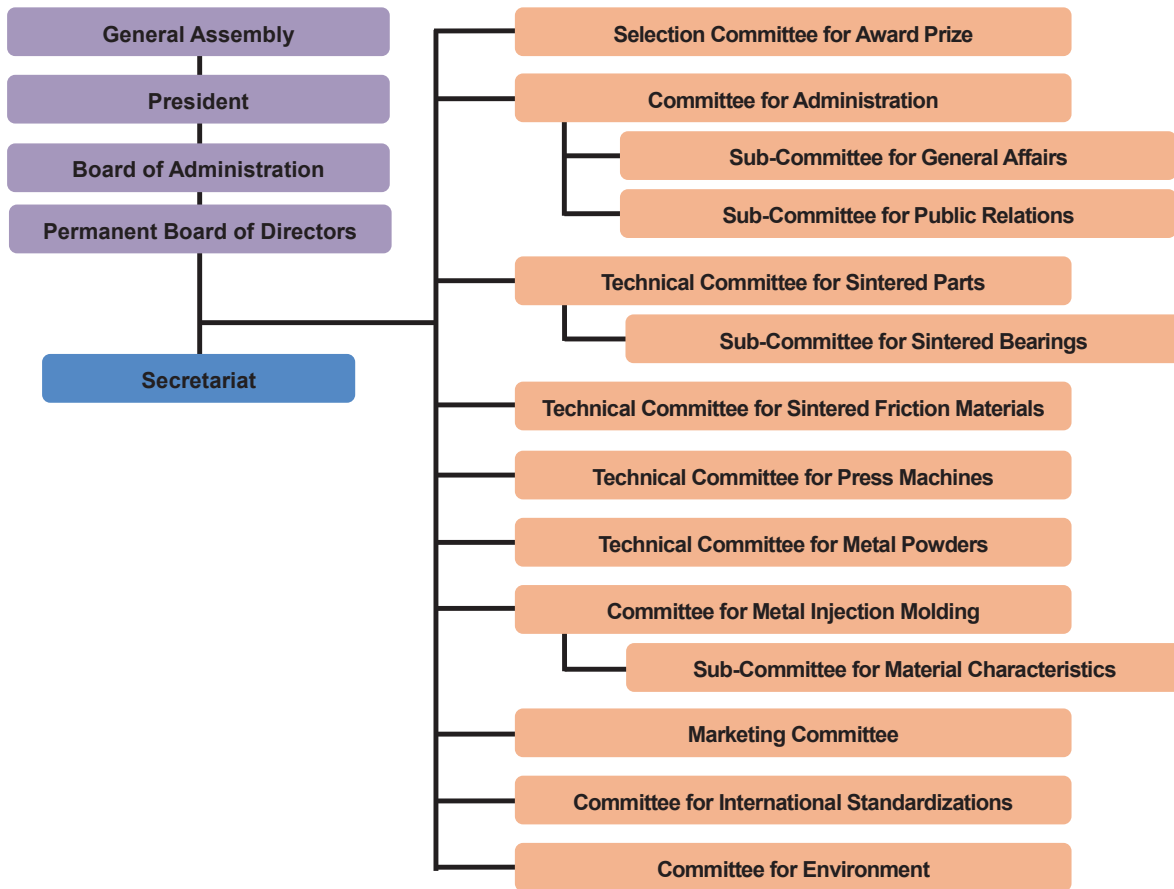
- The committee for public relations held human resources development seminar to educate young engineers. At the seminar, a couple of group discussed about value engineering by using actual case study and value engineering method.
- JPMA Development Prize 2013, 11 products were elected by selection committee. The trend of products are in relation to the environment and energy saving.
- JPMA supported APMA congress in Xiamen China held in November 2013. Mr. Isamu Kikuchi, president of APMA made the opening address. Mr. Tetsuo Ito, president of JPMA spoke about PM industries in Japan at PM Forum. At the 5th APMA board of directors meeting, APMA2015 Congress venue was decided held in Kyoto Japan in autumn 2015.

JPMA will cooperate closely with the Japan Society of Powder and Powder Metallurgy, and promote the system to create synergy effects by academic institutes and enterprises to widen PM applications.

Also, We will continue promoting PM industries through strengthen the relationship with PM societies of Asia, Europe and America.

Your further support for JPMA would be much appreciated.

Organization of JPMA



Board Members

President

□ Mr. Tetsuo Ito

General Manager, Powder Metal Products Business Sector, Automotive Products Business Headquarters,
Hitachi Chemical Co., Ltd.



Executive Director

□ Mr. Kazunori Arai

Japan Powder Metallurgy Association

Permanent Board Members

□ Mr. Mamoru Moritani

Sumitomo Electric Industries, Ltd.

□ Mr. Yoshiyasu Iino

DIAMET CORPORATION

□ Mr. Yoichi Inoue

FINE SINTER CO., LTD.

□ Mr. Isamu Kikuchi

PORITE CORPORATION

□ Mr. Isao Takagi

KOBE STEEL, LTD.

□ Mr. Carl-Gustav Eklund

Höganäs Japan K.K.

Board Members

□ Mr. Junichi Takahashi

IWAKI DIECAST Co., Ltd.

□ Mr. Masaaki Matsumoto

Tungaloy Corporation

□ Mr. Kiyonari Nakai

Tokai Carbon Co., Ltd.

□ Mr. Yoshimasa Nishimura

Fukuisinter Co., Ltd.

□ Mr. Akihiko Hamano

JFE Steel Corporation.

□ Mr. Atsumi Hatano

Daido Steel Co., Ltd.

□ Mr. Atsushi Nagano

Dowa Electronics Materials Co., Ltd.

□ Mr. Masakatsu Sato

Nippon Atomized Metal Powders Corporation

□ Mr. Shuzo Sonoda

Fukuda Metal Foil & Powder Co., Ltd.

□ Mr. Kazuaki Kusakari

Mitsubishi Materials Techno Corporation

Auditor

□ Mr. Akihiko Tajima

Daido Steel Co., Ltd.

JPMA Secretariat

□ Mr. Yusuke Watanuki (Deputy Manager)

General Assembly, Committees, Events, Web, Publication

□ Ms. Aoi Yamanaka (Staff)

Statistics, Events and General affairs

□ Ms. Tokie Sakamoto (Staff)

Accountant and General affairs

Activities of Committees

Selection Committee for Award Prize

Number of Committee Members: 14 persons



Chairman: Mr. Yoshiyasu Iino
(DIAMET Corporation)

*Selection Committee for JPMA Award (Development Prize)



New Design

Development of Oil-impregnated Sintered Bearing for Motor of Idle Speed Control System of Small Motorcycle

DIAMET Corporation

Committee for Administration

Number of Committee Members: 24 persons

Sub-Committee for General Affairs

Number of Committee Members: 7 persons



Chairman: Mr. Atsushi Tamaki
(Sumitomo Electric Industries, Ltd.)

*Planning and operating of the PR meeting "JPMA Awards Special Session" at JSPM Spring Meeting in May

*Planning and operating of "the tour of Committee for Administration"

*Publication of the report "Analysis of investigation results of sintered parts demand structure 2012" in June

*Edition of the Brochure "2012 JPMA Annual Report (English)" in May and "2012 JPMA Annual Report (Japanese)" in July

*Planning and operating of "PM information Exchange Meeting" and "the Technical Information Meeting"

*Support of the APMA2013

Sub-Committee for Public Relations

Number of Committee Members: 8 persons



Chairman: Mr. Takashi Saito
(Hitachi Chemical Co., Ltd.)

*Planning of "JPMA Website"

*Planning of operating of "Human resources development seminar"

*Publication of JPMA News "Funmatsu Yakin" (No373-376)

Technical Committee for Sintered Parts

Number of Committee Members: 9 persons



Chairman: Dr. Yoshimi Sugaya
(Hitachi Powdered Metals Co., Ltd.)

- *Discussion of the matter for ISO/TC119/SC3 and SC5
 - *Planning of the Domestic Standard(JIS) Draft “Sintered metal materials – Specification”
 - *Support of the APMA2013 Keynote Lectures
 - *Planning and operating of “Joint Meeting by three technical committees”
-

Sub-Committee for Sintered Bearings

Number of Committee Members: 4 persons



Chairman: Mr. Sanpei Seki
(PORITE CORPORATION)

- *Discussion of the matter for ISO/TC119/SC3 and SC5(Bearings)
 - *Deliberation of Standardization for Sintered Bearings
 - *Deliberation of update of JPMA website for Sintered Bearings
-

Technical Committee for Sintered Friction Materials

Number of Committee Members: 3 persons



Chairman: Mr. Yoshihisa Ueda
(FINE SINTER CO., LTD.)

- *Deliberation of revision for Collection of Excerpt of the Standard of Friction Material
 - *Exchange of Information for Friction Material
-

Technical Committee for Press Machines

Number of Committee Members: 7 persons



Chairman: Mr. Katsuo Murakami
(YOSHIZUKA SEIKI CO., LTD.)

- *Deliberation of requests of Press Machines and Compacting
 - *Deliberation of update of JPMA website for Press Machines
 - *Planning and operating of “Joint Meeting by three technical committees”
-

Technical Committee for Metal Powders

Number of Committee Members: 16 persons



Chairman: Mr. Akio Sonobe
(JFE Steel Corporation)

- *Discussion of Matter for ISO/TC119/SC2
 - *Introduction of topics about “Metal Powder” by Committee members and exchange of views
 - *Planning and operating of “Joint Meeting by three technical committees”
-

Committee for Metal Injection Molding

Number of Committee Members: 12 persons



Chairman: Mr. Isamu Otsuka
(EPSON ATMIX CORPORATION)

- *Investigation of the Japanese MIM market
 - *Operating on the Standardization of the *Materials Property (fatigue, impact and tensile) with Sub-Committee for Material Characteristics
 - *Planning of “the MIM booklet”
-

Marketing Committee

Number of Committee Members: 14 persons



Chairman: Mr. Kimihisa Maekawa
(FINE SINTER CO., LTD.)

- *Introduction of topics by Committee Members and exchange of views
 - *Introduction of Information Gathering of User Market and Other Market
-

Committee for International Standardizations

Number of Committee Members: 7 persons



Chairman: Mr. Tetsuya Sawayama
(KOBE STEEL, LTD.)

- *Attendance of 2013 ISO/TC119 Meeting in Stockholm, Sweden
 - *Discussion of related matters for TC119, SC2, SC3 and SC5
-

Committee for Environment

Number of Committee Members: 5 persons



Chairman: Mr. Masahiro Oki
(Hitachi Powdered Metals Co., Ltd.)

*Investigation of 2012 follow-up survey for “Voluntary Action Plan for Environment of PM Industry”

*Introduction of Case Study of “CO2 Emissions Reduction”, “Waste Product Reduction” and “KANKYO HIYARI”

JPMA Events and International Communications

16, January

Gathering of 2013 New Year Greeting and Ceremony of Awarding Various Honors in 2012

15, March

The 19th Technological Information Meeting 4 research reports were presented by each winners of 10th Research Promotion Program.
The 8th PM Information Exchange Meeting

23, May

2013 JPMA General Assembly
Mr. Tetsuo Ito was elected as a new President.
The 2013 Working Plans and Budget of JPMA

27, May

JPMA Special Session at the JPMA Spring Meeting

21, June

Tour of Committee for Administration
Honda Motor Co., Ltd. Hamamatsu Factory

7, July

Human resources development seminar

11-13, September

ISO/TC119/2013 Meeting at Stockholm, Sweden
4 representatives of JPMA took part in this meeting for ISO/TC119, SC2, SC3, SC5 and Workshop

25, October

2012 JPMA Fall General Assembly (Cancellation)
Announcement of 2012 JPMA Awards

3-6, November

APMA2014 2nd International Conference on Powder Metallurgy in Asia (Xiamen, China)

4, November

APMA, 5th Board Meeting

15, November

The 31th Case Studies of Production Efficiency Improvement Meeting and the 17th Metal Powder and Equipment PR Meeting

6, December

Joint Meeting by three technical committees
Theme of discussion “filling”
MPIF / EPMA / JPMA Meeting

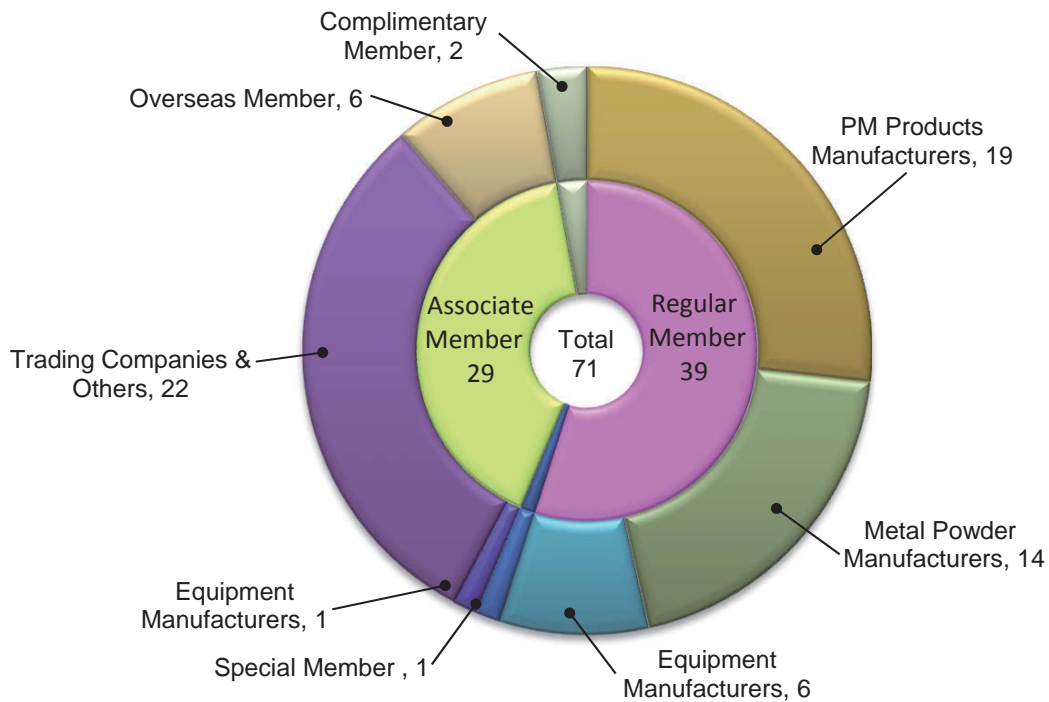
JPMA Publications

The 34th Investigation Collection Results of Sintered Parts Demand Structure

JPMA Report, 2012 (English and Japanese)

JPMA News “Funmatsu Yakin” (No373-376)

JPMA Membership



2013 New Members

Regular Member / PM Products Manufacturer

NTN powder metal corporation



Associate Member

Chuo Hatsumei Institute Co., Ltd.



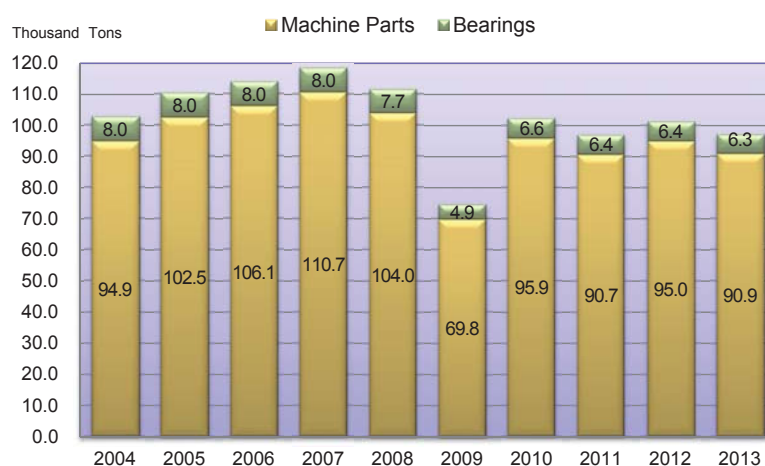
Statistics of Japan

Production of PM Products in Japan

Fig1 shows the production volume change of Machine Parts and Bearings for the period from 2004 through 2013.

Machine Parts volume was 90,911 ton, 4.3% decrease from the previous year. Bearings volume was 6,288 ton, 1.5% decrease from the previous year. As the other products, Friction Materials volume was 605 ton, 1.7% decrease from the previous year. Electric Contacts volume was 59 ton, 7.8% decrease from the previous year.

Fig1. Production of Machine Parts and Bearings (Calendar Year) (Source: METI)



Machine Parts and Bearings

Fig2 shows the analysis of demand for Machine parts and Bearings for the period from 2004 through 2013

Machine Parts Production volume for Vehicles was 84,526 ton, 4.0% decrease from the previous year.

This is because of the reactionary decrease of discontinuance of sales tax reduction of vehicles. Because of sales tax increase at April, 2014, we expect the temporary decrease, but overall we expect the slow recovery of market.

As well as Machine Parts, Production volume of Bearings for Vehicles was 3,939 ton, 1.4% decrease from the previous year.

Fig2. Analysis of Demand for Machine Parts and Bearings (Calendar Year) (Source: METI)

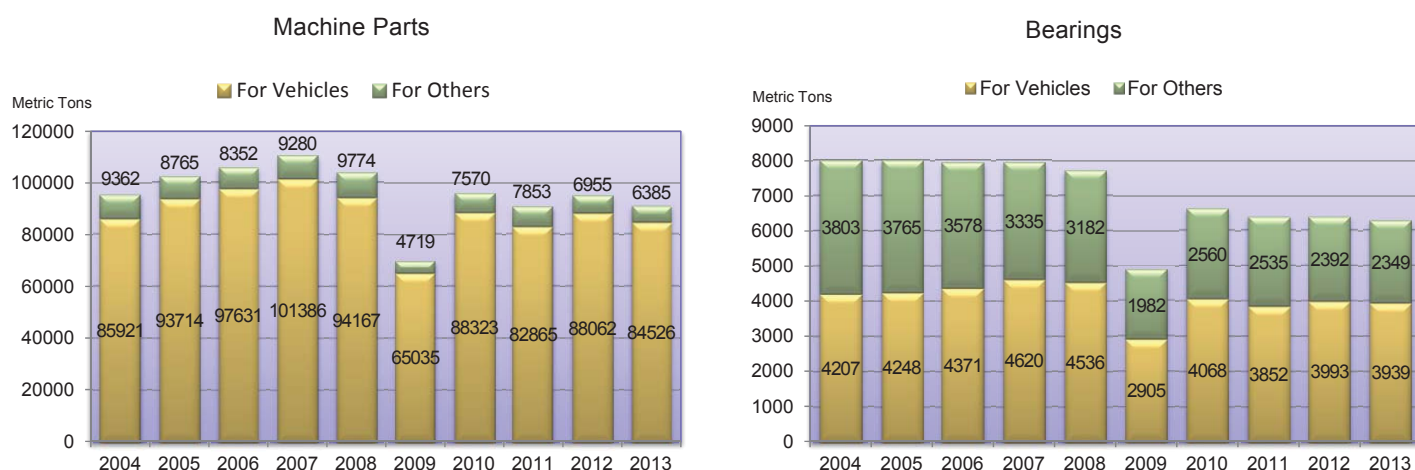


Fig3 shows the use breakdown of Machine parts and Bearings in vehicle in 2012 based on the demand structure survey by JPMA.

52.3% of Machine parts were for engine use. The main trends of machine parts are to use the parts contributed to the cost saving of fuel by HEV/EV, CO₂ reduction and the low noise countermeasure at the time of engine stop. For the adoption to new technology, we need to make the parts which has high function and high tolerance. So the research & development is always needed.

The main demand of Bearings is for electrical use. For Bearings, long life and high silence performance are required, the requirement for silence performance is very high. The bearing to use for the fun motor for cooling battery for HEV/EV is changed from ball bearing to the oil impregnated bearing with high tolerance. And the same kind of change will be occurred in future.

Fig3. Breakdown of Machine Parts and Bearings for Automobile (2012) (Source: JPMA)

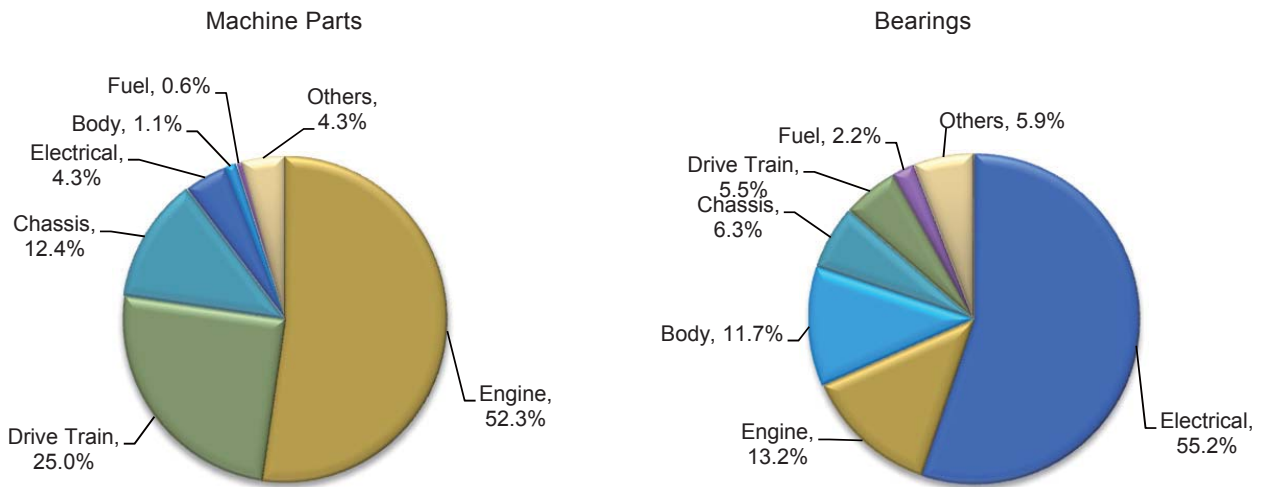


Fig4 shows the weight of sintered parts used for one car and the car production in Japan for the period from 2003 through 2012.

The weight of sintered parts used for one car in 2012 was 9.0kg in Japan, 19.8kg in U.S. and 8.8kg in Europe.

Fig4. Weight for sintered parts used for one car (Source JPMA and JAMA)

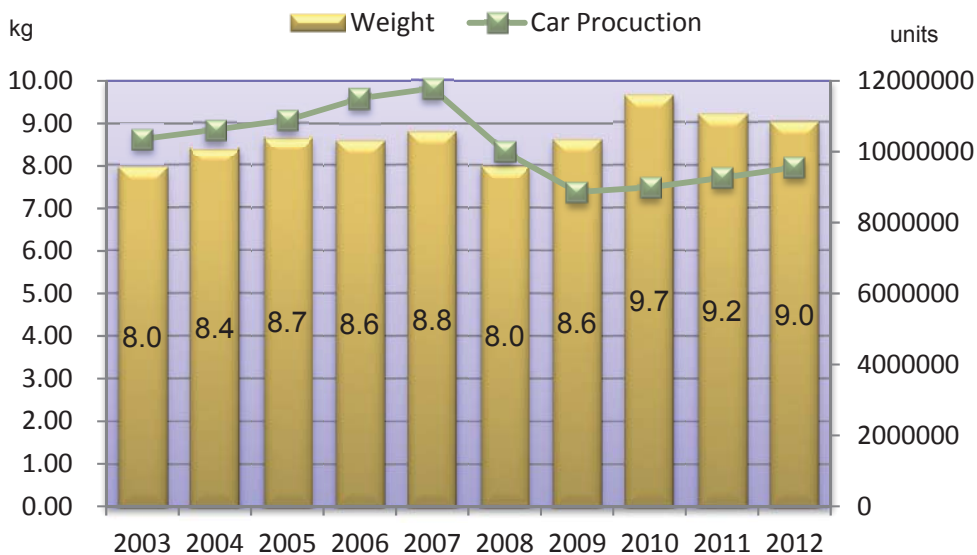
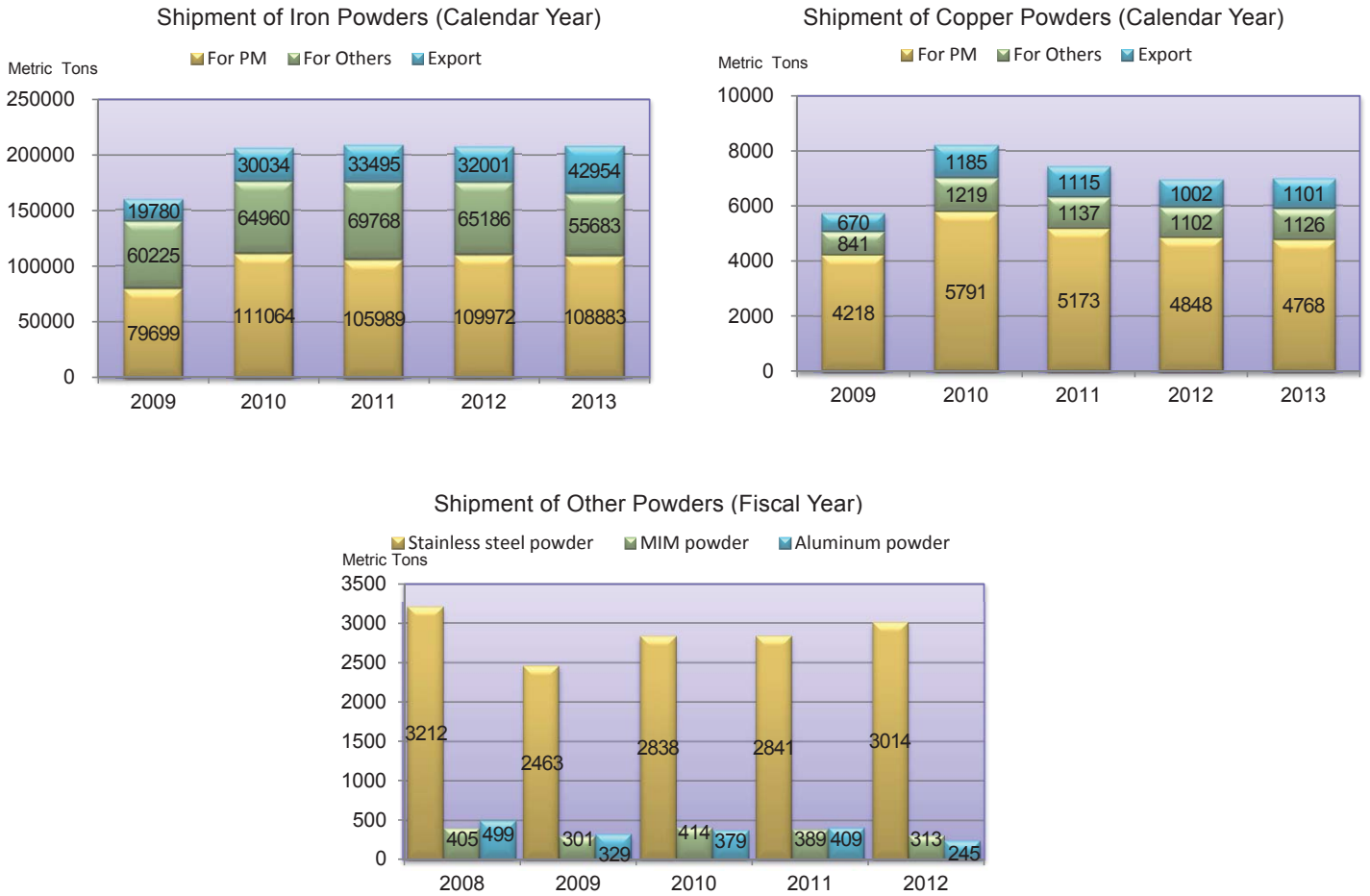


Fig5 shows Shipment of Metal Powders.

Fig.5 Shipment of Metal Powders (Source JPMA)



Awards

Personal Prize

Mr. Yutaka Mizuno

Adviser of FINE SINTER CO., LTD.

2006-2013

Chairman

Board Member

Chairman of Selection Committee for Award Prize



Mr. Yasuhiko Hayashi

Vice Chairman of

FUKUDA METAL FOIL & POWDER Co., Ltd.

2004-2013

Board Member



The late Mr. Junichi Asami

Former Organization for

Small & Medium Enterprises

and Regional Innovation, JAPAN

1988-2012

Councilor

Member of Selection Committee for Award Prize

Special Member of Technical Committee

for Metal Powders

Chairman of Committee for JIS Draft



Development Prize

A New Design

A-1

Development of Oil-impregnated Sintered Bearing for Motor of Idle Speed Control System of Small Motorcycle



DIAMET CORPORATION

A-4

Development of the sintered bearing for battery cooling fan motor, used for a HEV and EV



Porite Corporation

A-2

Development of Joint Part for Motor of Electric Power Steering



DIAMET CORPORATION

A-5

Electric Oil Pump Rotors for Use under Silent Environment



DIAMET CORPORATION

A-3

Mass-production of light weight piston with thinner thickness for motor cycle



FINE SINTER CO., LTD.

A-6

Development of the parking component used in the transmission for PHEV



SUMITOMO ELECTRIC INDUSTRIES, LTD.

B New Materials

B-1

Development of the oil seal made of sintered metal for variable valve timing device

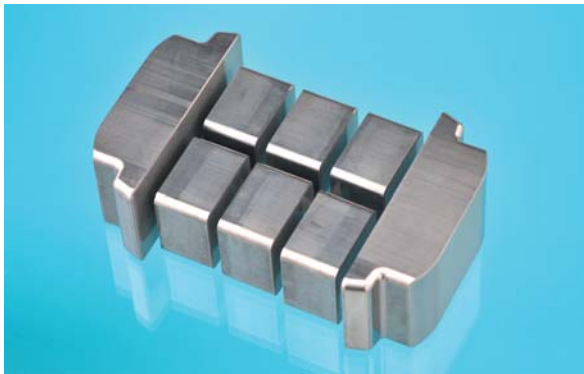


NTN powder metal corporation

C Process Development

C-1

Development of low cost pure iron based Soft Magnetic Composite Core for automotive reactor



SUMITOMO ELECTRIC INDUSTRIES, LTD.

C-2

Development of high-precision gear used in the vehicle attitude control



SUMITOMO ELECTRIC INDUSTRIES, LTD.

F Effort Prize

F-1

The sintered hydrodynamic bearing for super thin fan motor



NTN powder metal corporation

F-2

Development of the high strength and the high dimensional accuracy starter planetary gear for idling stop systems



Hitachi Chemical Co., Ltd.

Prize for Distinguish Service of the Committee Activities

Mr. Masakazu Watarai

Former DIAMET CORPORATION

1995-2012

Chairman and Member of Committee for Administration
 Chairman and Member of Sub-Committee for General Affairs
 Chairman and Member of Sub-Committee for Public Relations
 Chairman of PM2012 Fourth Committee
 Member of Selection Committee for Award Prize
 Member of Technical Committee for Sintered Parts
 Member of Marketing Committee



Mr. Takashi Fukuzawa

Former Porite Corporation

1993-2013

Chairman and Member of Committee for Administration
 Chairman and Member of Sub-Committee for General Affairs
 Chairman and Member of Sub-Committee for Public Relations
 Vice Chairman of PM2012 Steering Committee
 Member of Selection Committee for Award Prize
 Member of Sub-Committee for Edit
 Member of PM2000 Steering Committee
 Member of Committee for 40th Anniversary Edit
 Member of Committee for 50th Anniversary Edit



Mr. Yoshikazu Seki

KOBE STEEL, LTD.

1997-2013

Chairman of Technical Committee for Metal Powders
 Acting Chairman of Selection Committee for Award Prize
 Member of Committee for Metal Injection Molding
 Member of Committee for International Standardizations
 Member of Committee for JIS Draft



Recognition of Superior Employees

2013 prizewinner numbered 21 persons
 (15 member companies)



APMA Activities

The 5th Board Meeting

Date: Monday 4th November 2013 10:00 - 12:00

Venue : Xiamen International Conference Center

Participants :

APMA Board Member

President	Mr. Isamu Kikuchi (JPMA, Japan)
Director	Prof. Jai Sung Lee (KPMA, Korea)
Director	Mr. Chiu-Lung Chu (TPMA, Taiwan)
Director	Mr. N. Gopinath (PMAI, India)
Director	Dr. Han Wei (SATI-PM, China)
Auditor	Prof. Hideshi Miura (JSPM, Japan)
Secretariat	Mr. Kazunori Arai (JPMA, Japan)
Interpreter	Mr. Takashi Saito (JPMA, Japan)

Conclusion

- *2013 Finance was approved
- *Next APMA Conference decided at Japan
- *The check of the problems of PM2018 venue
- *Next APMA Board Meeting decided at PM2014 Florida

APMA2013 Xiamen, China review

APMA made a start at Asian PM related association Conference that was held at the time of PM 2008 in Washington, U.S.A. by the appeal of JPMA.

After the start, we had the board members meeting every year. The first Asian Powder Metallurgy Congress (APMA2011) was held in 2011 to promote the exchange and to strengthen the connection. So this is the 2nd Congress.



APMA2013 was held at Xiamen International Conference Center Hotel in Xiamen, China by 4 days schedule from November 3rd through 6th

under the organizers of SATI-PM · TPM (APMA approval) .

“Asian PM Congress” will be held in the year that “PM World Congress” will not be held, by the decision of APMA Board Meeting at the same time of the regular meeting of APMA member association.

In APMA2013, 516 persons from 11 area, mainly from Asian area, attended.

The conference was started by the registration on November 3rd, APMA Board Meeting, Opening Ceremony and Invitation Lecture were scheduled on November 4th, Invitation Lecture, Forum and Presentation of research report were scheduled on November 5th and Presentation of Research report was scheduled on November 6th again. Exhibition was scheduled all days in the period.

○APMA Board Meeting (November 4th)

The 5th Board Meeting was held. 7 areas, 9 associations and 30 members were participated. It was decided and exchanged opinions as follows under the chairmanship of Mr. Kikuchi.

- Situation Report of APMA2013
- Business condition of each country
- Report of revenue & expenditure
- It was decided to hold 2015 3rd Asia PM Conference in Japan.
- Opinion exchange about the site of PM2018



○Opening Ceremony of Exhibition (November 4th)

The opening ceremony of exhibition was held in front of the entrance of exhibition with the chairmanship of Prof. Wen-Cheng Chang, Vice chairman of organization, after the greeting by Dr. Chai Rang, Chairman of organization.



○Opening Ceremony (November 5th)

In the opening ceremony, after the exhibition by Chinese harp, Dr. Chai Rang, Chairman of organization did welcome greeting and introduction of VIP. After that, Mr. Kikuchi, President of APMA, A person from Chinese government, Mr. Chu, President of TPMA, Mr. Serge Sella, EPMA President representative, ERASTEEL, and Dr. R..M. German, MPIF President representative, did greeting.



○Invited Keynote Lecture (November 4th ~5th)

At the Invited Keynote Lecture, 8 lecturers that the organization committee had requested before-hand made the research report or the new situation report.



○PM Forum (November 5th)

At the PM forum which was planned for the exchange and co-operation between Asian area associations that was the purpose of APMA, 7 associations made the report about the current situation and their activities.



○Welcome Dinner Meeting (November 5th)

After PM forum, welcome dinner meeting was held and 7 attractions and the toast was done by VIP member under the chairmanship of Dr. Yu Yang who was a committee member of technical committee.



○Presentation of Research report (November 4th~6th)

Total 170 presentations of research report were done (by congress guide). In that, there were 60 oral presentations and 110 poster presentations. The oral presentations were done at 3 meeting places and by 6 categories. The poster session was done from November 4th through 6th.



○Exhibition (November 4th ~6th)

The exhibition was held at the lobby and meeting rooms of meeting place. 60 companies (24 companies were out of Asia) exhibited. Total visitors were about 700.



PM Production in Asia

PM Production (Source JPMA, PMAI, KPMI, TPMA and CMPMA)

(Metric Tons)

AREA		2011	2012	2013	13/12(%)
Japan	Iron-base	93,538	96,979	96,820	99.8
	Copper-base	3,567	4,427	4,488	101.4
	Total	97,105	101,406	101,308	99.9
China	Iron-base	134,544	129,485	145,291	122.2
	Copper-base	8,884	10,011	11,293	112.8
	Total	143,428	139,496	156,584	112.2
Korea	*Iron-base	62,543	64,026	65,877	102.9
	Copper-base	1,318	1,209	585	48.4
	Total	63,861	65,235	65,877	101.0
Taiwan	Iron-base	27,000	26,000	29,000	111.5
	Copper-base	1,800	1,200	1,500	125.0
	Total	28,800	27,200	30,500	112.1
India	Iron-base	35,400	37,000	**38,300	103.5
	Copper-base	14,500	14,500	**15,000	103.5
	Total	49,900	51,500	**53,300	103.5
Malaysia	Iron-base	6,009	5,335	5,419	101.6
	Copper-base	162	244	239	97.9
	Total	6,171	5,579	5,685	101.9
Singapore	Iron-base	1,744	1,413	1,442	102.0
	Copper-base	674	654	626	95.7
	Total	2,418	2,067	2,069	100.1
Thailand	Iron-base	15,401	16,029	15,156	94.5
	Copper-base	145	6	7	116.7
	Total	15,546	16,035	15,163	94.6
Indonesia	Iron-base	—	—	2,732	—
	Copper-base	—	—	0	—
	Total	—	—	2,732	—
Total	Iron-base	376,179	376,267	399,453	106.2
	Copper-base	31,050	32,251	33,738	104.6
	Total	407,229	408,518	433,191	106.0

*Included "Others", **Provisional value

Application Field Ratio of PM Production (2013) (%)

AREA	For Transportation Machines	For Industrial Machines	For Electrical Machines	For Others
Japan	92	4	3	1
China	61	2	28	9
Korea	93	0	4	3
Taiwan	45	25	10	20
India	—	—	—	—
Malaysia	57	2	41	0
Singapore	51	5	44	0
Thailand	87	3	10	0
Indonesia	100	0	0	0

PM Production of Asia in the World (Source MPIF, EPMA and JPMA)

*North America & Europe, based on Shipment of Fe & Cu Powder for PM Use

