Annual REPORT

2006 - 2007

INDIAN MACHINE TOOL
MANUFACTURERS' ASSOCIATION

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EXECUTIVE COMMITTEE 2006 - 2007

President

Mr. N. K. Dhand
Chairman-cum-Managing Director
Micromatic Grinding Technologies Limited.

Vice President

Mr. M. Lokeswara Rao
Managing Director
Lokesh Machines Limited.

Members

Mr. V. Hemachandra Babu
Managing Director
HMT Machine Tools Limited.
[Replaced Mr. A. V. Kamat, who became Chairman of HMT Limited]

Mr. Satish Godbole
General Manager &
Business Head - Machine Tools
Siemens Limited.

Mr. H. R. Gupta
Director
Bharat Fritz Werner Limited.
[Expired in September 2006]

Mr. K. Jagannathan
Executive Director - Marketing
Guindy Machine Tools Limited.

Mr. Rakesh Kumar
Managing Director
SRB Machines Private Limited.

Mr. Lalit Kumar Pahwa
Managing Director
TAL Manufacturing Solutions Limited.
[Resigned from TAL Manufacturing Solutions in March 2007]

Mr. Vikram Salunkhe
Managing Director
Accurate Engineering Company Private Limited.

Mr. P. V. N. Sanjay
Chief Executive Officer - BMTG
Batliboi Limited.
[Replaced Mr. K. A. Pillai]

Mr. Uttam Sarda
Director
East Coast Enterprises Limited.

Mr. P. P. Sastry
Vice President (Machine Tool &
Engineering Division)
Premier Limited.

Mr. Vikram Sirur
Executive Vice Chairman
Miven Machine Tools Limited.

Past Presidents

Mr. Nirmal Bhogilal
Batliboi & Company Limited. *

Mr. Vinod L. Doshi
The Premier Automobiles Limited. *

Mr. Jamshyd N. Godrej
Godrej & Boyce Manufacturing Company Private Limited. *

Mr. V. S. Goindi
Parishudh Machines Private Limited. *

Mr. J. N. Mehrotra
Batliboi & Company Private Limited. *

Mr. S. N. Mishra
Bharat Fritz Werner Limited. *

Dr. C. A. Phalnikar
Mysore Kirloskar Limited. *

Mr. C. P. Rangachar
Yuken India Limited. *

Mr. Jayant H. Shah
Batala Engineering. *

Mr. G. A. R. Shaikh
Voltas Limited. *

Mr. Shailesh Sheth
Simtools Limited. *

Mr. Shrinivas G. Shirgurkar
Ace Designers Limited. *

Mr. Bir D. Singh
Voltas Limited. *

Mr. R. Srinivasan
Widia (India) Limited. *

Mr. C. R. Swaminathan
PSG Industrial Institute. *

Co-opted Members

Mr. A. Rasquinha
Chairman and Managing Director
Electropneumatics & Hydraulics (India) Private Limited.
[Resigned from IMTMA Executive Committee in October 2006]

Invitees

Mr. Ghanshyam Agrawal
Director
Nagel Special Machines Private Limited.

Mr. P. Ganesan
Vice President (Machine Tool Division
& Foundry Division)
Lakshmi Machine Works Limited.

Mr. Parakram G. Jadeja
Chairman - 'UDAAN' &
Chairman and Managing Director
Jyoti CNC Automation Private Limited.

Mrs. Manisha G. Kannur
Deputy Chairperson - 'UDAAN' &
Manager - Business Planning
Ace Designers Limited.

Ms. Sonali Kulkarni
President and Chief Executive Officer
FANUC India Private Limited.

Mr. M. Lakshminarayan
Joint Managing Director
Motor Industries Company Limited.

Mr. S. R. Pophale
Managing Partner
Electronica Machine Tools Limited.

Mr. Aditya Puri
Managing Director
I S G E C.

Secretary and Executive Director

Mr. V. Anbu.

* Companies represented by Past Presidents during their tenure of Presidency.

NEW PARADIGMS FOR NEW CHALLENGES

Overall Growth

At the end of every fiscal – for the last three years, there has always been a dilemma about its being rated as the best performing year of the Indian economy and the industry. 2006-2007 came to be seen as no different – 9+ % GDP growth, 11+ % and 12+ % industry and manufacturing growth, respectively; optimistic trade with quantum leap in exports and imports;and sound growth in virtually all key segments of manufacturing. And at the back of an exponential performance, the country and the industry continue to aim for an even higher pedestal for the current fiscal.

Within Indian manufacturing, there is clearly a sense of rejuvenation in view of an apparent (and belated) realisation that real advancement of any industrial economy can happen only when the manufacturing sector is competitive and growing. **The best part is that globally too Indian manufacturing's "can do and will do" attitude is being taken rather seriously** – evident from the high volume of joint ventures, overseas collaborations and investments taking shape.

Machine Tool Performance

The machine tool and manufacturing solutions sectors – the enablers to manufacturing competitiveness and excellence – have reasons to be gung-ho about their performance and the figures show it loud and clear. Indian consumption of machine tools is today around 1.2 billion US Dollars, more than twice of what it was two years ago. We have leaped from the 16th position to the 11th spot in the global machine tool consumption ranking. **No wonder, India is now a major destination for global investment in the machine tool industry**.

While the prospects and opportunities are enormous, there is also a growing sense of concern. The share of indigenous machine tools in the country's consumption has plummeted to a new low and stands at just 25 %. If we, the local machine tool industry, do not soon shed our complacency, we may just end up as the 'poor cousins' within our own country. The shift in focus and strategy has to be addressed on a war-footing. IMTMA has taken the first step by instituting a study on the falling market share and what actions are required – at the industry level

and at the individual organisation level. Results of this will hopefully lead us to a strategy to redeem our position within the home market.

Having lent an ear to our customers, we need to also assure them about the timely meeting of their requirements and expectations. If they don't get our shoulder to lean on, they are bound to seek the support of others (as is now happening).

Most users want their machine tool suppliers to be turnkey solution providers rather than stand-alone vendors. Here lies the challenge and the opportunities. This cannot happen if we don't grow ourselves. **Capacity expansion, strengthening our back-end supply chain, together with a strong emphasis on technology and people development should be our mantra for the future.**

Association Focus

For the Association, 2006-2007 was a watershed year, and marked the launch of its biggest and the most ambitious project – Bangalore International Exhibition Centre (BIEC). The long-cherished desire of our founding fathers – to have our own state-of-the-art exhibition premises and conference facility – finally became a reality on 18 January 2007 with IMTEX and Tooltech 2007. Despite initial glitches, the new premises proved to be an excellent exhibition venue and provided everyone at the show with very promising business opportunities.

Efforts are on to fully complete BIEC so as to enable it to be world-class facility for organising international events and high quality industrial exhibitions in India, and more specifically in Bangalore.

The other two major initiations of our Association were the international seminar on sheet metal forming technology during October 2006 in Pune and the second machine tool industry summit during May 2007 in Goa.

Our Association has been taking up new endeavours in keeping with changing requirements of the industry. This year we have set the ball rolling on a unique initiative : **'UDAAN' – Emerging Leaders Expanding Horizons.** A club comprising second generation entrepreneurs, young leaders and emerging professionals of the machine tool industry, constituted with the objective of developing and enhancing future business leadership within the machine tool fraternity. With a membership of around 40 young enthusiasts, 'UDAAN' has framed its own charter in keeping with the younger generations' focus and needs. **Our effort is to enlist the active participation of our next generation in all activities of IMTMA.**

We are now looking forward to the two key events scheduled by our Association – Productivity Summit 2007 and the VISION 2015 Conference. This year's Productivity Summit will create a benchmark for the productivity movement launched last year in April 2006. Scheduled from 23 - 25 August 2007 at BIEC, Productivity Summit and IMTMA - Siemens Productivity Championship Awards 2007 will be all about sharing and learning best productivity achievements in the industry and recognising the productivity champions. VISION 2015 Conference is being scheduled from 21 - 25 November 2007 in Bhubaneswar to enable our CEOs, the next-level decision makers and our emerging young leaders to further evolve cohesive directions for the industry.

While we had several other memorable achievements, we also had our share of setbacks. The passing away of the two greatest mentors and guiding gurus of the Association and the industry : Mr. D. S. Mulla and Mr. H. R. Gupta – in IMTMA's 60th year. Mr. Mulla had a stellar role in conceiving and bringing together machine tool manufacturers under one roof in the 40s and actually hand-held the Association (over 50 years) to reach a stage of national and international prominence. Mr. Gupta was instrumental in authoring for IMTMA the VISION Strategy, the Business Excellence activity and the Strategy Map initiative and gave the quality movement in the machine tool industry a new shape and vigour. We, in the Association and particularly in the Executive Committee, will profoundly miss their affection, guidance, warmth and effervescent support.

It has been a gratifying experience for me as President of IMTMA. The accomplishments of the Association have been made possible because of proactive assistance by the Executive Committee and membership, the enduring guidance and untiring contribution of all Past Presidents, and in particular the overwhelming support of my immediate predecessor Mr. C. P. Rangachar and in equal measure of our Vice President, Mr. M. Lokeswara Rao. I shall look forward to their continued encouragement in all the future endeavours of the Association.

N. K. Dhand
President

60th ANNUAL SESSION

The 60th Annual Session of Indian Machine Tool Manufacturers' Association (IMTMA) was scheduled on 01 September 2006, along with a Seminar on 'Cost Management'.

Seminar on Cost Management

To focus on cost management and to emphasis its multifarious benefits within the machine tool industry, the Association scheduled a seminar on this topic. The seminar was facilitated by a reputed expert in this field, Mr. M. Hariharan.

The daylong event enlightened attending delegates about various models pertaining to cost management as well as about its perspectives towards customer value creation. Mr. Hariharan mentioned in detail about the primary purpose of cost information systems – to support decision making process – vital to any business organisation.

Annual and Business Session

The seminar was followed by the 60th annual session of IMTMA. Addressing the annual session, IMTMA President, Mr. C. P. Rangachar congratulated the association and the membership for completing 60 years. He briefly mentioned about the multifarious initiations of IMTMA, which can be matched with some of the leading all-industry confederation bodies.

According to Mr. Rangachar, the last ten years have heralded significant transformation. Not only did the domestic machine tool industry emerge from its inward-looking phase to become more vibrant and competitive, but also at the association level there was a paradigm shift in thinking and approach.

On the Indian economy, Mr. Rangachar spoke about emergence of India on the global manufacturing platform. Focusing on the machine tool industry, IMTMA President felt convinced about a positive year ahead for the industry. He, however, warned that imports would continue to outperform the domestic industry, given the current trend.

Mr. Rangachar called for the need to double the current level of domestic machine tool turnover in order to regain market share and support Indian economy to achieve 10 - 12 % GDP growth.

Spelling out his vision for the future, the IMTMA President suggested five mantras which needed immediate priority at the association, industry and the organisation level – improvement, technology, human resources, customer delight and partnership. These mantras, he felt, will be the path forward to achieve the twin priority goals of high growth and enhanced market share.

Mr. C. P. Rangachar thanked the membership, the executive committee and the secretariat for providing invaluable assistance, guidance and support in all the major endeavours of the Association and hoped for their continued proactive encouragement in future.

The IMTMA President took up the statutory agenda of the 60th business session of the Association, which was unanimously carried by a voice vote.

Following the annual address, a special ceremony was scheduled, in which Det Norske Veritas Certification Agency (DNV) presented the ISO 9001 : 2000 certification to IMTMA. IMTMA joins the select league of premier industry associations in India to be ISO certified. The accreditation certificate was given by DNV to IMTMA President Mr. C. P. Rangachar.

The 60th annual session of IMTMA concluded with a vote of thanks to the current office bearers.

CALENDAR OF EVENTS

2006

July

- Workshop on 'Calibration of Dimensional Measuring Equipment & Fundamentals of Machine Tool Calibration' in **New Delhi on 06 and 07.**
- Workshop on 'Calibration of Dimensional Measuring Equipment & Fundamentals of Machine Tool Calibration' in **Bangalore on 17 and 18.**
- Workshop on 'Effective Maintenance of CNC Machines for Productivity Improvement' in **New Delhi on 20 and 21.**
- Workshop on 'Technology Sourcing and Cooperative Research in Machine Tools and Manufacturing Technology – Interaction with Technical University Darmstadt, Germany' in **Bangalore on 24.**
- Seminar on 'Metrology for Cost Effective Production' in **Pune on 28.**

Aug.

- Workshop on 'Calibration of Dimensional Measuring Equipment & Fundamentals of Machine Tool Calibration' in **Bangalore on 17 and 18.**

Sep.

- Workshop on 'Cost Management' in **Bangalore on 01.**
- 60th Annual Session of IMTMA in **Bangalore on 01.**
- IMTMA participation at IMTS 2006 in **Chicago, United States of America from 06 to 13.**

Oct.

- International Seminar on 'Sheet Metal Forming Technology' in **Pune on 09 and 10.**
- Workshop on 'Enhancing Productivity through Appropriate Automation in Metal Working' in **Bangalore on 16 and 17.**

Nov.

- 'Road Show on IMTEX and Tooltech 2007' in **Ludhiana on 01.**
- 'Road Show on IMTEX and Tooltech 2007' in **Pune on 06.**
- 'Road Show on IMTEX and Tooltech 2007' in **Mumbai on 08.**
- 'Road Show on IMTEX and Tooltech 2007' in **New Delhi on 14.**
- 'Road Show on IMTEX and Tooltech 2007' in **Bangalore on 24.**
- 'Road Show on IMTEX and Tooltech 2007' in **Chennai on 28.**

2007

Jan.

- 13th Indian Machine Tool Exhibition with international participation – **IMTEX 2007;** and ninth International Exhibition of Cutting Tools, Tooling Systems, Machine Tool Accessories, Metrology & CAD/CAM – **Tooltech 2007**, in **Bangalore International Exhibition Centre (BIEC), Bangalore from 18 to 24.**
- 'IMTMA - H. R. Gupta Lifetime Achievement Award' in **Bangalore on 18** *(concurrent with IMTEX and Tooltech 2007).*
- Seminar on 'Productivity Enhancement through Appropriate Level of Automation' in **Bangalore on 19** *(concurrent with IMTEX and Tooltech 2007).*
- 'Past Presidents' Evening' in **Bangalore on 19** *(concurrent with IMTEX and Tooltech 2007).*
- 'International Machine Tool Forum' in **Bangalore on 20** *(concurrent with IMTEX and Tooltech 2007).*
- Seminar on 'Productivity Enhancement through Use of New Generation Cutting Tools' in **Bangalore on 22** *(concurrent with IMTEX and Tooltech 2007).*
- Seminar on 'Productivity Enhancement through Optimum Workholding and Fixturing on Machine Tools' in **Bangalore on 23** *(concurrent with IMTEX and Tooltech 2007).*

Mar.

- Seminar on 'Machining Pizza' in **Bangalore on 02.**

Apr.

- IMTMA group participation at CIMT 2007 in **Beijing, China from 09 to 15.**

May

- 2nd 'Machine Tool Industry Summit' in **Goa from 03 to 05.**

June

- Workshop on 'Professionalism & Succession Planning in Family Businesses' *(for members of 'UDAAN')* in **Bangalore on 23.**

The apex exhibition on machine tools and manufacturing solutions in South and South East Asia – IMTEX and Tooltech 2007, lived up to its exalting status of fostering competitiveness and enabling excellence in manufacturing. Scheduled from 18 - 24 January 2007, the b2b mega-event was held for the first time in South India and at IMTMA's own exhibition and conference facility – Bangalore International Exhibition Centre (BIEC).

13th in the series, IMTEX 2007 featured latest trends in metalworking technologies such as dry machining, high speed machining, versatile and multi-functional machines, compact machines and machines with smaller footprints. Ninth in the series, Tooltech 2007 revealed a wide range of cutting tools, tooling technologies, production aids, machine tool accessories, metrology, CAD-CAM equipment and software. In all, over 1,200 metalworking machines – conventional and CNC – together with a wide range of allied equipment were showcased at the exhibition.

1,187 Indian and overseas companies took part at IMTEX and Tooltech 2007 – across five halls covering over 50,000 square metres of gross area and 30,000 square metres of net area. 703 companies exhibited their products in the IMTEX pavilions, while the balance 484 companies displayed their cutting tools and tooling systems in the Tooltech one. The fair comprised as many as 800 exhibition stands – the largest number in any IMTEX and Tooltech show.

For exhibitors, it was an opportunity to showcase their innovations since the last show. In particular, for SSIs as it was an excellent marketing link. The fair also emerged as a platform to exchange technology know-how between peers and develop vendor bases.

The exhibition had a large overseas presence from 24 countries, representing 47 per cent of the total participation – yet another high at any IMTEX fair. Overseas participation also comprised six country-groups from China, Germany, Singapore, Spain, Taiwan and United Kingdom.

IMTEX and Tooltech 2007 – the maiden event of BIEC – had a truly memorable inauguration by three distinguished friends of the industry : Mr. Kamal Nath, Union Minister for Commerce and Industry, Mr. H. D. Kumaraswamy, Chief Minister of Karnataka and Mr. Katta Subramanya Naidu, Minister for Major & Medium Industries, Government of Karnataka on 18 January 2007.

From then till the end of the fair, the exhibition was witness to a colossal flow of business visitors, totalling 1,30,000 numbers and setting a new feat. The seven-day exhibition drew decision makers, middle level management and operators from diverse engineering industries, as also a host of academicians, R&D specialists and young engineers. The exhibition was also graced by a number of dignitaries including state ministers, elected representatives, senior bureaucrats and members of the diplomatic corp.

The flavour of the business visitor turnout was enhanced by high-level delegations from user industries, group visits by most manufacturing conglomerates and several Indian and international business delegations.

IMTEX and Tooltech 2007 enabled business visitors to witness the latest revolutions in the industry and to source their ideal manufacturing requirement from a wide range of possibilities. The fair also became a forum to forge strategic alliances and new partnerships.

The culmination was clearly revealing! Business contracts worth Rs. 6,000 million and enquiries worth Rs. 50,000 million set a new benchmark for IMTEX fairs.

IMTEX 2007

Concurrent Show

Tooltech 2007

ACTIVITIES DURING 2006 - 2007

MAJOR EVENTS

International Seminar on Sheet Metal Forming Technology

In order to bring to the fore newest technological developments in the sheet metal industry the Association organised the 'International Seminar on Sheet Metal Forming Technology' on 09 and 10 October 2006 in Pune. This was the eighth in the series of international seminars on metal-forming organised by IMTMA.

Key aspects covered at this seminar included high speed automation systems, servo-mechanical presses, presses with intelligence, hydro-forming, electro- magnetic forming, pulse forming, hot stamping, etc.

Facilitators at the seminar comprised a galaxy of Indian and overseas experts from globally renowned companies. They spoke on advanced materials and their applications, effect of spring back in high strength steel sheet metal tooling, use of CAD, CAM and CIM, tailor-welded blank development, hydro-forming of skin panels and complete development from design to final products by use of computer graphics.

The two-day event, attended by nearly 300 delegates from all across the country, was inaugurated by Mr. Madhur Bajaj, Vice Chairman, Bajaj Auto Limited and President of the Society of Indian Automobile Manufacturers (SIAM). The inaugural session also had a keynote presentation from Professor Hartmut Hoffmann of the University of Munich, Germany. The seminar was wrapped up with an interactive panel discussion – 'CROSS FIRE'.

2nd Machine Tool Industry Summit

In order to bring together the machine tool fraternity to deliberate and chalk-out strategies on 'gearing up for the explosive growth in manufacturing', the Association organised the 2nd Machine Tool Industry Summit from 03 to 05 May 2007 in Goa.

Focus of the Summit was on core areas such as manufacturing, supply chain management, marketing, quality and reliability. In addition, there was a special emphasis on design, technology & innovation and also included a special session for CEOs.

Facilitators comprising industry experts and representatives of reputed companies brought into sharper focus how the machine tool industry could move up the value chain.

The 2nd Machine Tool Summit was inaugurated by Dr. R. Chidambaram, Principal Scientific Advisor to the Government of India on 04 May 2007. The inaugural session had a keynote address by guest of honour, Mr. Roger Cope, Vice Chairman and President, MAG Industrial Automation Systems, USA. The three-day summit concluded with a provocative panel discussion – 'CROSS FIRE'.

Calibration of Dimensional Measuring Equipment

The Association organised three workshops on 'Calibration of Dimensional Measuring Equipment & Fundamentals of Machine Tool Calibration'. The workshops were scheduled on 06 and 07 July 2006 in New Delhi, on 17 and 18 July 2006 in Bangalore and yet again on 17 and 18 August 2006 in Bangalore.

The two-day workshops at both places were conducted by a well-known industry expert in the field of precision measurements and metrology. The expert guided participants on ways and means to obtain accurate, reliable and traceable measurements.

Interesting aspect of the three workshops were plant visits to well-known metrology companies, which provided practical exposure to participating delegates.

Effective Maintenance of CNC Machines

To address various issues on 'why' and 'how' of preventive and breakdown-maintenance of CNC machines, the Association scheduled a workshop on 'Effective Maintenance of CNC machines for Productivity Improvement'. The workshop was held on 20 and 21 July 2006 in New Delhi.

Presentations were made by renowned experts and leading manufacturers of CNC machines as well as CNC control system at both places. Faculty updated participating delegates with the latest in production and maintenance as well as the newest trends in various sub-systems available in the country and elsewhere.

Technology Sourcing and Cooperative Research

Technology Services Division of IMTMA scheduled a workshop on 'Technology Sourcing and Cooperative Research in Machine Tools and Manufacturing Technology – Interaction with Technical University Darmstadt, Germany' on 24 July 2006 in Bangalore. This was in sequel to the technology mission of machine tool industry CEOs to Darmstadt University in 2005.

Metrology for Cost Effective Production

The Association organised a seminar on 'Metrology for Cost Effective Production' on 28 July 2006 in Pune. Objective of this seminar was to highlight how metrology can be effectively dovetailed into manufacturing operations, in order to minimise production costs. Reputed experts from well-known Indian companies in this field facilitated the daylong programme and explained to delegates about multifarious aspects of metrology measurement.

Appropriate Level of Automation

The Association organised two seminars on 'Productivity Enhancement through Appropriate Level of Automation in Metalworking'. The first programme was scheduled on 16 and 17 October 2006 in Bangalore and the second one on 19 January 2007 concurrently with IMTEX and Tooltech 2007 in Bangalore. Well-known industry experts and reputed companies shared their experience on implementing appropriate automation in the shop-floor along with its economic benefits.

'Road Shows' on IMTEX 2007

IMTEX and Tooltech 2007 was being scheduled for the first time in Bangalore at IMTMA's newly-built Bangalore International Exhibition Centre (BIEC). To familiarise exhibitors and potential visitors about BIEC,

its facilities and infrastructure, the Association scheduled a series of six 'Road Shows on IMTEX and Tooltech 2007' in November 2006 at Ludhiana, Pune, Mumbai, New Delhi, Bangalore and Chennai.

Facilitated by office-bearers and Past Presidents of IMTMA, the 'Road Shows' briefed invitees about various new initiatives by the Association on the exhibition and the facilities offered for exhibitors and visitors.

International Machine Tool Forum

In order to expose the manufacturing industry to newer facets of emerging technology developments in Germany, a major symposium – 'International Machine Tool Forum' was held on 20 January 2007, concurrently with IMTEX and Tooltech 2007. This event was organised by IMTMA along with CMTI, Fraunhofer Institute, Saxony State Ministry for Economic Affairs & Labor, Siemens Limited, VDMA and VEMAS.

The programme was inaugurated by Mr. Thomas Jurk, Minister of Economic Affairs and Labor, State of Saxony in Germany. Delegates at the Forum were informed by visiting German experts about the vast potential of emerging technologies such as high speed machining, near-net-shape manufacturing, intelligent machine systems for forming processes and mechatronics.

New Generation Cutting Tools

There are several challenges confronting the cutting tool industry, in the wake of increased demand for cutting tools to remove material at a faster pace with higher consistencies. This was the focus of a seminar on 'Productivity Enhancement through Use of New Generation Cutting Tools' held on 22 January 2007 concurrently with IMTEX and Tooltech 2007 in Bangalore.

Workholding & Fixturing on Machine Tools

A seminar on 'Productivity Enhancement through Optimum Workholding and Fixturing on Machine Tools' was held on 23 January 2007 concurrently with IMTEX and Tooltech 2007 in Bangalore. It focused on innovative fixturing for large volume production, new solutions in CNC workholding and solutions for small batch production.

Machining Pizza

Technology Services Division of IMTMA scheduled a seminar on 'Machining Pizza' on 02 March 2007 in Bangalore. The seminar on reconfigurable machines, described current R&D in international institutions, design concepts developed by Brakes India and presented concepts for reconfigurable machining systems of the future.

Professionalism & Succession Planning in Family Businesses

As part of its endeavour to involve second generation entrepreneurs, emerging leaders as well as young professionals in the machine tool industry into the mainstream activities of IMTMA, the Association has formed a club called **'UDAAN' – Emerging Leaders Expanding Horizons.** Formed during IMTEX 2007, key objective of 'UDAAN' is to nurture, develop and enhance future business leadership within the machine tool fraternity.

As part of its initiative, a special workshop on 'Professionalism and Succession Planning in Family Businesses' was scheduled by the Association for 'UDAAN' members on 23 June 2007 in Bangalore. Facilitated by well-known experts in this field from S. P. Jain Institute of Management & Research, the workshop discussed in detail and at length on various aspects connected to succession planning.

SPECIAL EVENTS

IMTMA - H. R. Gupta Lifetime Achievement Award

Mr. H. R. Gupta was a gifted individual who made a profound impact on the machine tool industry in India till his untimely demise on 12 September 2006. The industry has, clearly, re-learnt the art of manufacturing machine tools under his able guidance and tutelage.

As recognition of his enormous contribution and to spur more professionals to achieve excellence in the machine tool industry, the Association instituted an 'IMTMA - H. R. Gupta Lifetime Achievement Award', with Bharat Fritz Werner Limited sponsoring it. The award was conceived to recognise outstanding persons with distinguished contribution to growth and development of the machine tool industry.

The first 'IMTMA - H. R. Gupta Lifetime Achievement Award' was conferred on Mr. Shrinivas G. Shirgurkar, Managing Director of Ace Designers Limited. Mr. Shirgurkar was recognised for his pioneering work in developing new concepts in machine tool manufacture and assembly.

Mr. Shirgurkar received the award from Mr. Kamal Nath, Union Minister for Commerce and Industry, at the inauguration ceremony of IMTEX and Tooltech 2007 on 18 January 2007.

Past Presidents' Evening

To commemorate the 60th anniversary of IMTMA and recognise the contribution of all the Past Presidents, the Association scheduled a special 'Past Presidents' Evening' on 19 January 2007 in Bangalore. The function, attended by most Past Presidents of IMTMA, members of the IMTMA executive committee and a galaxy of dignitaries relived the nostalgia of the past and shared the dreams for the future.

OVERSEAS PARTICIPATION

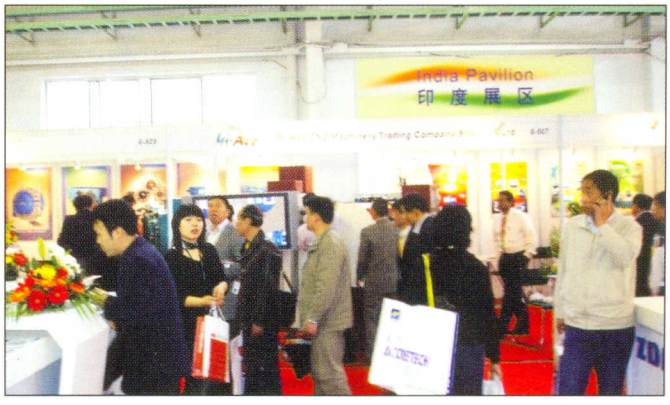
IMTMA Participation at IMTS 2006

The Association took part in the International Manufacturing Technology Show (IMTS 2006) from 06 to 13 September 2006 at McCormick Place in Chicago, United States of America.

Participation gave the Association an opportunity to gauge the technological innovations by machine tool majors in the developed world, especially in United States. It also helped in visualising market potential for Indian-built machine tools in the US industry.

IMTMA Participation at CIMT 2007

To drive export-led growth of the machine tool industry, the Association organised a group participation of Indian manufacturers at CIMT 2007 – the 10th China International Machine Tool Show, held from 09 to 15 April 2007 at China International Exhibition Centre (CIEC) in Beijing.



The 'India Pavilion' had representation from four companies, who exhibited their product displays over a net space of 100 square metres. It attracted 2,000 business visitors over seven days of the exhibition, which resulted in all Indian exhibitors firming up satisfactory orders.

ACTIVITIES OF IMTMA FOUNDATIONS

Focus of IMTMA Foundations during 2006-2007 was to provide trained designers for the machine tool industry. This is currently one of the key constraints facing the industry.

Machine Tool Sector Awareness Seminar

IMTMA Design Institute organised an 'Awareness Seminar' to create awareness about machine tools and manufacturing industry in engineering colleges. The objective was to attract students to the machine tool industry so that they will take it up as a career option. Main focus of the seminar was to bring out the potential for professional growth and opportunities that are available for gaining expertise in a core industrial segment like machine tools and manufacturing solutions.

Machine Tool Design Course

IMTMA Design Institute scheduled two machine tool design courses of 15 weeks' duration. The thirteenth course commenced in May 2006 with 14 participants and the fourteenth course in November 2006 with 12 participants.

Participants gained in-depth knowledge of machine tool theory and technology. They worked on group projects, emphasising development of design skills. The courses also comprised plant visits to machine tool manufacturing companies, foundries, pattern shops, user companies as well as R&D establishments.

Participants of both these courses have been suitably placed in various companies around the country.

ACTIVITIES IN BANGALORE INTERNATIONAL EXHIBITION CENTRE

IMTMA launched the India's most premier world class exhibition and conference facility – Bangalore International Exhibition Centre (BIEC) in January 2007 with IMTEX and Tooltech 2007.

BIEC offers its exhibitors services and amenities of the highest quality at par with international standards. Beautifully landscaped over 40 acres this multi-purpose facility is a common ground for industry exhibitions, conferences, product demonstrations and training programmes.

BIEC complements its 20,000 square metres covered space in two aesthetically and functionally designed exhibition halls (20,000 sqm exhibition space has been partially built and completion process under progress) with adequate outdoor area for display, perfectly suitable for showcasing large and heavy machines. VIP Lounge and Business Centre are attached with every hall, in addition to exhibition management facilities.

BIEC has now emerged as the leading exhibition centre in the country. Four domestic shows have already been staged within a short span of six months. BIEC is also emerging as an international destination for exhibition organisers like Deutsche Messe, Messe Munich and others for organising their international trade shows in India. Many prestigious and popular domestic exhibitions like Bangalore BIO, Bangalore IT.in, Indiawood and many medical exhibition and conferences are also being organised in BIEC during 2007.

WORLD MACHINE TOOL SCENARIO IN 2006

2006 calendar year was marked by major gains for the global machine tool industry, with many manufacturing nations registering double-digit growths. World output of metalworking machine tools increased to nearly 60 billion US Dollars – recording a growth of over 10 %. Asian builders showcased their prowess and increase their production at a faster pace than those in Europe or the Americas. And China continued its dominance as the world's largest machine tool consuming country.

Global Production

Japan held on to its numero uno position as the largest machine tool manufacturing country with an output of 13.5 billion US Dollars, albeit with a marginal growth.

There was a bit of shrinkage in Japan's lead over Germany, which remained at the second position with a turnover of 10.2 billion US Dollars, on a moderate 5 % growth. The other EU nation – Italy, which was on the fourth slot, recorded a good turnaround of 12 %. As a block, EU nations increased their shipments to around 9 % in the last calendar year. EU nations account for about 42 % of estimated world production of metalworking machine tools.

It was, however, the Asian tigers that hogged the limelight in 2006. Not just China – which posted the second-highest growth of 37 % to remain as the third largest machine tool manufacturing country. But also about South Korea, which moved up the ladder into the fifth slot and virtually tied up with Taiwan and United States – following close behind. India – for the first time – was also in the news for registering highest growth of 43 % in the year that went by.

Overall, the growth for Asian builders last year was 12.4 %, outpacing the global industry gains as a whole. Perhaps more remarkable is that those countries were coming off an already-strong surge.

United States machine tool industry grew at a respectable 5 % during 2006.

World Trade

Exports of metalworking machine tools by 29 countries in 2006 totalled 33.7 billion US Dollars, registering a 12.6 % increase – outpacing global turnover. The global industry, sure enough, got just a little more trade-oriented in its scope. Germany was the largest exporter of metalworking machine tools, followed closely by Japan. Among other producing countries that made substantial percentage increases in exports last year included South Korea, China and Canada.

Switzerland had the highest export ratio of 89 % followed by Taiwan of 79 % and Germany of 73 %. Japan, often noted as a strong supplier of machine tools to overseas factories, had a relatively moderate export ratio of 51 %.

Among importers, China again led the pack, with an estimated 7.1 billion US Dollars worth of metalworking machine tools shipped in. It was followed by United States, South Korea and Germany. United States increased its metalworking machine tool imports significantly by 26 % over 2005 calendar year.

Overall Consumption

Among consuming nations, China retained the number-one position with nearly 13 billion US Dollars worth of metalworking machine tool installations in 2006. Value of Chinese machine tool consumption is equal to more than 21 % of the total output of all machine tool manufacturing countries – simply put, one out of every five machines made anywhere in the world ends up in China.

The next biggest consumer, Japan, installed 7.4 billion US Dollars and the third largest consumer – United States 6.26 billion US Dollars worth of metalworking machine tools.

On a per-capita basis, Swiss, Taiwanese and Koreans spend the most on production machinery. Switzerland ranks at the top, spending more than 116 US Dollars for every Swiss on new machine tools.

Global Machine Tool Production

Rank	Country	2006 (Value in US $ million)			2005 (Value in US $ million)	Change in US Dollars
		Total	Cutting	Forming	Total	
1.	Japan	13,522.0	88 %	12 %	13,186.3	3 %
2.	Germany *	10,276.6	73 %	27 %	9,797.0	5 %
3.	People's Republic of China	7,000.0	74 %	26 %	5,100.0	37 %
4.	Italy *	5,451.6	51 %	49 %	4,862.5	12 %
5.	Republic of Korea	4,144.0	72 %	28 %	3,510.7	18 %
6.	Taiwan (ROC)	3,692.0	77 %	23 %	3,394.4	9 %
7.	United States	3,625.3	79 %	21 %	3,467.2	5 %
8.	Switzerland *	2,839.8	84 %	16 %	2,656.2	7 %
9.	Spain *	1,242.4	64 %	36 %	1,124.1	11 %
10.	France *	1,150.5	54 %	46 %	950.9	21 %
11.	Canada	1,145.8	60 %	40 %	949.1	21 %
12.	Brazil	956.9	81 %	19 %	860.7	10 %
13.	United Kingdom *	866.5	78 %	22 %	717.8	21 %
14.	The Netherlands *	465.0	20 %	80 %	420.1	11 %
15.	Czech Republic *	452.2	92 %	8 %	389.8	16 %
16.	Turkey *	426.2	30 %	70 %	374.6	14 %
17.	Austria *	419.8	60 %	40 %	407.7	3 %
18.	India	408.2	88 %	12 %	284.6	43 %
19.	Belgium *	304.5	10 %	90 %	259.8	17 %
20.	Finland *	269.7	16 %	84 %	220.2	22 %
21.	Sweden *	209.3	43 %	57 %	197.6	6 %
22.	Russia	161.4	77 %	23 %	161.4	0 %
23.	Australia	134.0	66 %	34 %	136.6	-2 %
24.	Croatia	98.0	43 %	57 %	89.0	10 %
25.	Denmark *	91.5	40 %	60 %	84.5	8 %
26.	Romania	59.3	56 %	44 %	59.3	0 %
27.	Portugal *	57.6	10 %	90 %	48.5	19 %
28.	Mexico	50.0	35 %	65 %	50.0	0 %
29.	Argentina	28.6	40 %	60 %	23.9	20 %
Total		**59,548.9**			**53,784.4**	**11 %**

* European Union Nations

Credit & Source : **Gardner Publications, Inc.**

Global Machine Tool Consumption

Rank	Country	2006	2005	*Change in US Dollars*
		(Value in US $million)		
1.	People's Republic of China	12,940.0	10,780.0	20 %
2.	Japan	7,432.7	7,758.8	-4 %
3.	United States	6,256.7	5,933.0	5 %
4.	Germany	5,175.9	5,490.2	-6 %
5.	Republic of Korea	5,044.0	4,423.5	14 %
6.	Italy	3,552.9	3,301.3	8 %
7.	Taiwan (ROC)	2,539.6	2,248.1	13 %
8.	France	1,611.7	1,497.8	8 %
9.	Canada	1,608.5	1,442.6	12 %
10.	Brazil	1,426.6	1,253.7	14 %
11.	India	1,275.4	930.8	37 %
12.	Mexico	1,152.5	1,156.6	0 %
13.	Spain	1,100.2	1,070.8	3 %
14.	Turkey	1,093.8	943.8	16 %
15.	Switzerland	867.2	851.4	2 %
16.	United Kingdom	866.5	656.1	32 %
17.	The Netherlands	437.4	407.7	7 %
18.	Czech Republic	404.6	404.7	0 %
19.	Sweden	391.0	370.4	6 %
20.	Russia	388.8	388.8	0 %
21.	Belgium	320.8	287.1	12 %
22.	Austria	295.8	290.9	2 %
23.	Australia	224.0	222.8	1 %
24.	Finland	208.3	182.9	14 %
25.	Denmark	170.4	159.1	7 %
26.	Croatia	159.0	144.8	10 %
27.	Romania	154.6	154.6	0 %
28.	Argentina	142.1	156.0	-9 %
29.	Portugal	121.6	110.6	10 %

Apparent Consumption = Country's Production less Exports plus Imports.

Credit & Source : **Gardner Publications, Inc.**

TRENDS IN INDIAN MACHINE TOOL INDUSTRY

Production of Metalworking Machine Tools

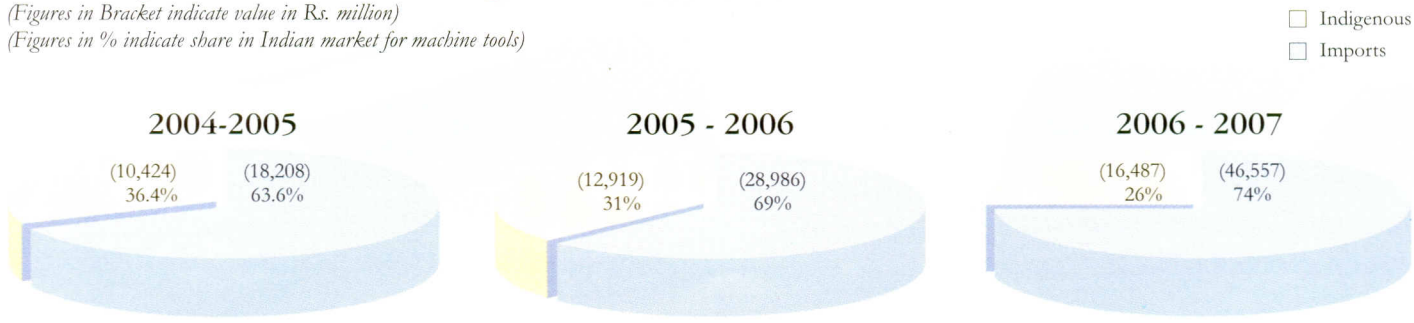
Machine Tools	Year 2004-2005 Qty.	Year 2004-2005 Value (in Rs. million)	Year 2005-2006 Qty.	Year 2005-2006 Value (in Rs. million)	Year 2006-2007 Qty.	Year 2006-2007 Value (in Rs. million)
Metal-Forming						
CNC	230	524.668	196	557.723	248	409.803
Conventional	408	901.436	728	1,231.190	367	1,550.684
Total Metal-Forming	**638**	**1,426.124**	**924**	**1,788.913**	**615**	**1,960.487**
Metal-Cutting						
CNC	3,525	7,446.981	4,127	8,885.223	5,096	11,642.720
Conventional	2,687	2,076.970	2,511	2,846.961	2,088	3,613.643
Total Metal-Cutting	**6,212**	**9,523.946**	**6,639**	**11,732.177**	**7,184**	**15,256.363**
Total Metalworking	**6,850**	**10,950.070**	**7,526**	**13,420.017**	**7,799**	**17,216.850**
of which :						
• CNC is	**3,755**	**7,971.669**	**4,323**	**9,442.939**	**5,344**	**12,052.529**
• Conventional is	**3,095**	**2,978.401**	**3,094**	**4,055.131**	**2,455**	**5,164.327**
Members reporting data	*61*		*73*		*71*	

Export of Metalworking Machine Tools

Machine Tools	Year 2004-2005 Qty.	Year 2004-2005 Value (in Rs. million)	Year 2005-2006 Qty.	Year 2005-2006 Value (in Rs. million)	Year 2006-2007 Qty.	Year 2006-2007 Value (in Rs. million)
Metal-Forming						
CNC	18	33.575	10	18.824	6	13.651
Conventional	11	31.737	4	79.225	13	94.459
Total Metal-Forming	**29**	**65.312**	**14**	**98.049**	**19**	**108.110**
Metal-Cutting						
CNC	129	295.823	133	269.541	201	437.069
Conventional	130	165.005	75	133.985	74	185.361
Total Metal-Cutting	**259**	**460.828**	**208**	**403.526**	**275**	**622.430**
Total Metalworking	**288**	**526.140**	**222**	**501.575**	**294**	**730.540**
of which :						
• CNC is	**147**	**329.398**	**143**	**288.370**	**207**	**450.720**
• Conventional is	**141**	**196.742**	**79**	**213.210**	**87**	**279.820**

Consumption of Metalworking Machine Tools

(Figures in Bracket indicate value in Rs. million)
(Figures in % indicate share in Indian market for machine tools)



NEW PRODUCTS DEVELOPED BY MEMBERS IN 2006 - 2007

Abhijat Equipments Private Limited

1. 2-axis bar work CNC turning centre [Model Deepak 42].
2. 5-axis NC turret lathe for bar work.
3. Customised auto bench lathes for facing and grooving operations.
4. Lapping machine for steam controlling valves.

Amount spent on R&D : Rs. 1.0 million.

Accurate Engineering Company Private Limited

1. Horizontal dual arm type 3 D coordinate measuring machine [Model SEAGULL Dual Arm].
2. Auto gauging system for crankcase.
3. Rotary table for coordinate measuring machine.

Amount spent on R&D : Rs. 4.0 million.

Ace Designers Limited

1. CNC lathe [Model Classic MC-Y].
2. Robo interface for CNC lathes.
3. CNC centre lathe.
4. CNC lathe jobber [Model Junior].
5. Vertical turret lathe [Model VTL-40].

Amount spent on R&D : Rs. 17.9 million.

Acumac Machine Tools Private Limited

1. Acumac precision high speed, high power spindle for machining centres.
2. Acumac CNC turret type internal grinding machine [Model AIGT-100-CNC].

Amount spent on R&D : Rs. 3.0 million.

Alex Machine Tools

1. Horizontal spindle rotary surface grinder with table dia 1,200 mm and 1,500 mm.
2. Duplex grinder with vertical spindle linear through feed.
3. Duplex grinder with horizontal spindle linear through feed.

Amount spent on R&D : Rs. 2.0 million.

Anjani Technoplast Limited

1. 5-axis CNC water jet cutting machine.

Amount spent on R&D : Rs. 1.0 million.

Arsun Engineers

1. 3-axes CNC engraving-cum-milling machine.

Amount spent on R&D : Rs. 0.2 million.

Artech Welders Private Limited

1. Arc stud welding machine.

Amount spent on R&D : Rs. 0.3 million.

Batliboi Limited

1. Drill tap centre with 14 tool ATC [Model DTC-50].
2. Vertical machining centre with 40 mts rapids in axes and 20,000 rpm spindle [Model Chetak 75].
3. Vertical machining centre with 10,000 rpm belt driven [Model Chetak 100 MC].
4. CNC lathe with 11/15 KW motor [Model Sprint 25 TC].
5. CNC lathe with linear tools [Model Sprint 25 TC].

Amount spent on R&D : Rs. 7.1 million.

Bharat Fritz Werner Limited

1. CNC vertical machining centre 'Tejas' [Model DMO 400].
2. CNC vertical machining centre 'Vikrant' [Models TCV 400 and TCV 400 APC].
3. CNC horizontal machining centre 'Shakti' [Models HMC 440 HP].
4. CNC horizontal machining centre 'Vega' [Models H400 MC APC, H400 MC].
5. CNC cam lobe milling machine.
6. CNC moving column rotor coil milling machine.
7. Software quick electronic detection (QED).
8. Software electronic total productive maintenance (E-TPM).

Amount spent on R&D : Rs. 35.0 million.

CADEM Technologies Private Limited

1. Wireless machine tracking device using embedded technology [Model mPOD].
2. Client server based productivity tracking system [Model SHOPtrack v2.0].

Amount spent on R&D : Rs. 5.5 million.

ETA Technology Private Limited

1. Special purpose friction welding machine for welding of copper to aluminium.
2. Boot test rig for fatigue testing of OBJ.
3. 60 T and 150 T friction welding machines for welding rod-eyes to rods of hydraulic cylinders.
4. Twin electric upsetters with auto loading/unloading.

Amount spent on R&D : Rs. 1.0 million.

East Coast Enterprises Limited

1. Electro permanent magnetic system with monolithic working face for holding work pieces magnetically and / or mechanically.
2. Electro permanent system for holding ferromagnetic work pieces magnetically and simultaneously sensing displacement.

Amount spent on R&D : Rs. 1.0 million.

Electronica Machine Tools Limited

1. 5-axes large-size submerged-type CNC wire-cut electro-discharge machine [Model Ultracut S3].
2. 5-axes economical submerged-type CNC wire-cut electro-discharge machine [Model Ultracut S0].
3. 4-axes large size CNC electro-discharge machine with automatic tool changer [Model Xpert II].
4. Economical 3-axes CNC electro-discharge machine [Model Smart CNC EDM].
5. Large size 1000 amp. electric discharge saw [Model EDS-1000].

Amount spent on R&D : Rs. 12.1 million.

Electropneumatics & Hydraulics (India) Private Limited

1. CNC 10-Axes All-Electric Tube Bending Machine.
2. CNC 3-Axes Wire Bending Machine.
3. 63T Servo Mechanical Press.

Amount spent on R&D : Rs. 10.0 million.

Elscint Automation

1. Elscint single vibratory bowl feeder for assembly of screws and washers.
2. Elscint vibrating feeding and take up unit for engine valves.
3. Elscint vibratory bowl feeder for feeding cages / rings of various sizes in two outlets at 180 degrees.
4. Elscint digital frequency controller for vibratory feeders (with feedback control) [Model Elscint_FQ1].

Amount spent on R&D : Rs. 1.5 million.

Gears & Gear Drives

1. Robotic table for 6 degrees movement of table.
2. Motorised linear actuators for thrust loads of 1,200 N to 6,000 N.
3. Universal joints single, double and expandable from Dia 13 to Dia 63.
4. Electric cylinder for thrust load of 25 KN.

HMT Machine Tools Limited

1. CNC internal grinding machine [Model GIN 35/2A].
2. 4-axis CNC high-speed gear hobber [Model L 200 CNC / 4A].
3. Pressure die-casting machine with auto laddle, auto die spray, auto extractor [Model DC 415 CNC].
4. High speed horizontal machining centre [Model HMC 400H].
5. Flexible turning cell [Model FTC 200].
6. Large swing turning centre [Model MEGATURN 550].
7. 9-axes CNC crankshaft pin grinding machine [Model CSG 500].
8. 6-axes CNC centreless grinding machine [Model GCL 140 TG].

Heavy Engineering Corporation Limited

1. CNC deep hole boring machine for solid drilling diameter 250 mm and counter boring 350 mm to 6 m depth [Model BDH 140N].
2. CNC single column vertical turning and boring machine [Model BVS 45 / 70 NM].
3. Single pass under-floor wheel lathe [Model LUW / 175B].

Amount spent on R&D : Rs. 2.2 million.

Hi-Life Machine Tools Private Limited

1. CNC internal bore grinding machine with auto loading and unloading.
2. High performance 45 m/sec cutting speed wheel head installed in CNC cylindrical grinding machine.

Amount spent on R&D : Rs. 2.0 million.

Hindustan Hydraulics Private Limited

1. CNC hydraulic punch press [Model AQUILA 2500].
2. New sheet support system for sheering machine.
3. Programmable new front sheet support system for CNC hydraulic press brake.
4. New AC servo back-gauge for NC hydraulic press brake.

Amount spent on R&D : Rs. 1.0 million.

I S G E C

1. Servo controlled 12,000 KN hydraulic press for hot forming of hi tensile boron steel sheet metal components for automobiles.
2. High capacity pneumatic die cushion of 4,000 KN on a 16,000 KN mechanical link drive press for pressing hi tensile sheet metal components for cars.
3. Automated shrinker for calibrating automotive wheel rims having close loop servo controlled size monitoring.
4. Hi-speed press with 350 strokes per minute for electronic hardware manufacturing.

Amount spent on R&D : Rs. 50.0 million.

Imperial Products of India

1. 'Powder spreader' for bi-metal manufacturing industries.
2. 'Component straightener' for stamping and sheet metal products manufacturing industries.
3. 'Cut to length line' for sheet-metal manufacturers and sheet-metal processing units.

Amount spent on R&D : Rs. 0.6 million.

Ind-Sphinx Precision Limited

1. Micro ball nose end mill dia 0.20 mm onwards.

Jyoti CNC Automation Private Limited

1. Establishment of "Da Vincer & D Center" at Rajkot.
2. CNC turn mill centre [Model TMC 350 / 1700].
3. CNC turning centre [Model DX 350 / 1700].
4. Vertical machining centre [Model VMC 1260].
5. Horizontal machining centre [Model HMC 560].
6. Vertical line series machine [Model AT160, ATM 160, AM430].
7. High speed 5-axis machining centre [Model VMC 70L - 5X].
8. High speed machining centre for die and mould applications [Model K2X10].

Amount spent on R&D : Rs. 65.0 million.

Kawa Press Systems Private Limited

1. Wide bed presses cap. 350 ton.
2. Hydraulic C frame presses cap. 100 and 200 ton.
3. Two point straight sided presses cap. 250, 300 and 350 ton.
4. Hydraulic variable rake angle guillotine shearing machine cap. 4,000 x 16 mm (MS).
5. Hydraulic rear cylinder press brake cap. 4,000 x 20 mm (MS).

Amount spent on R&D : Rs. 1.7 million.

Lavingia Enterprise

1. CNC punch profile grinding machine for grinding tablet making punches.
2. CNC cam profile grinding machine for automotive and other cylindrical cams.

Amount spent on R&D : Rs. 3.8 million.

Makino (India) Private Limited

1. High speed machining centre (VMC) [Model Slim 3].

Micromatic Grinding Technologies Limited

1. B-axis universal cylindrical grinder for OD, ID and face in one setting [Model Flexi F65].
2. Heavy duty CNC grinder for crankshaft middle journals [Model Rhino R80].
3. Compact CNC cylindrical grinder for high volume production of small engine parts [Model Junior 25].
4. High precision CNC cylindrical grinder with hydrostatic guide ways [Model STALLION SH63 S].
5. High speed CBN camlobe grinder for small engine cam shafts with 120 m/s cutting speed [Model GC 20M-20S].
6. Six axes CNC grinder for fuel injection part "nozzle body" with automation in loading / unloading.
7. CNC valve seat grinder with complete automation of loading / unloading [Model GVS CNC].

Amount spent on R&D : Rs. 19.0 million.

Miven Mayfran Conveyors Private Limited

1. Turnover table for auto components handling.
2. HVS & perma flow centralised coolant filtration system.
3. Up-flow conveyor for slim machine.
4. Auger assembly.
5. Pump back station for pumping coolant with chips.

Amount spent on R&D : Rs. 0.2 million.

Motor Industries Company Limited

1. Assembly line for distributor pumps.
2. Filter rod pressing and through flow checking special purpose machine.
3. NR nut tightening and running in SPM.
4. Round table ECM machine.
5. Three spindle gun drilling special purpose machine.
6. Special purpose creep feed grinder for VE roller ring.
7. Endurance test bench for single cylinder pumps.
8. Cylinder head machining line.
9. 2-spindle vertical fine boring special purpose machine for cylinder block.

NRB Bearings Limited

1. Angular contact ball bearings.
2. Needle thrust bearings.
3. Formed strip cages.

Amount spent on R&D : Rs. 17.4 million.

Nagel Special Machines Private Limited

1. 2-spindle honing centre for engine block [Model VARIOHONE].
2. Compact honing centre for hydraulic valve [Model RATIOHONE].
3. CNC deep hole drilling machine ML 200 for common rail diesel engines [Model Multipro].

Amount spent on R&D : Rs. 2.5 million.

Neel Reo Systems Private Limited

1. Fast response, transient free reactive power compensation systems [Model KVAR PLUS].
2. Light energy management system [Model Powerlux].

Amount spent on R&D : Rs. 1.0 million.

Parishudh Machines Private Limited

1. Vertical hard turning and universal grinding centre [Model VTG 300 CNC].

Pinnacle Engineering Enterprise

1. Fully-automatic programmable cycled surface grinding machine [Model FASGM-10030].
2. 3-axis CNC surface grinding machine [Model 3X CNC 8040].

Amount spent on R&D : Rs. 2.0 million.

Plazma Technologies Private Limited

1. Coherent plazma – 2D / 3D multilevel offline and online programming with multiple data input.
2. Roboswift software – offline / online programming software.

Amount spent on R&D : Rs. 2.5 million.

Precihole Machine Tools Private Limited

1. Automobile universal joint assembly and crimping machine.
2. Hydraulic power steering assembly and testing line.
3. Electronic power steering assembly and testing line.
4. Formulation of machine models for deep hole drilling, gundrilling and skiving and burnishing machines.
5. 10 metre CNC deep hole drilling machine.
6. 5 metre CNC turn mill centre.

Amount spent on R&D : Rs. 5.0 million.

Premier Limited

1. CNC high speed gear hobbing machine [Model PHC 150].
2. CNC vertical machining centre [Model PVM 40].

Amount spent on R&D : Rs. 2.5 million.

Rattan Hammers

1. Table type shot blasting machine of size 1,200 mm and 1,500 mm.

SRB Machines Private Limited

1. Four cavity die casting machine for pistons.
2. Valve seat grinding machine.
3. CNC angular plunge grinding machine.
4. Axis CNC correction machine.

Amount spent on R&D : Rs. 0.3 million.

Speedfam (India) Private Limited

1. Diamond plate single side lapping machine [Model FAM 32].
2. Thru feed cleaning machine for 'E' cores [Model SCM 40].
3. Double side flat honing machine [Model DSM 9B-5SSG].
4. Single side lapping machine of plate dia. 1,800 mm [SSM 1800].
5. Double side lapping machine of plate dia. 1,145 mm [DSM 18B].

Amount spent on R&D : Rs. 5.0 million.

Tool Grinding Technologies Inc.

1. 5-axes tool grinding machine [Model GENIUS 5 AXES].
2. 6-axes creep feed grinding for fuel injector groove grinding.

Amount spent on R&D : Rs. 2.0 million.

Trident Tools Private Limited

1. Bi-metal 8 % cobait hand hacksaw.
2. Bi-metal holesaws.
3. Jigsaws.
4. Reciprocating saws.

Unipunch Toolings Private Limited

1. 2-axis NC hydraulic draw bender.
2. 3-axis NC pipe bending machine [Model M 7600].
3. Busbar bending, punching and cropping machine.

Universal Machine Tools Manufacturing Company

1. Automatic 2-axis movement-type runner riser cutting machine [Model RR-LT].
2. Silencing-cum-dust collector system for existing spectro sample polishing.

Amount spent on R&D : Rs. 0.2 million.

Wendt (India) Limited

1. Metal bond and resin bond wheels for prismatic grinding.
2. Precision electroplated profile grinding wheels for automotive industry and ferrite industry.
3. Reverse plated diamond dressing rolls for host of high precision grinding applications.
4. Rough and semi-finish CBN grinding wheels for razor blade industry.
5. Special bonded diamond fluting wheels for micro drills.
6. PCD work rest and workholding fixtures for bearing industry.
7. Special diamond wheels for single stage grinding of picture tube funnels.
8. Diamond / CBN honing sticks with integral shoes.
9. Permanent bonded wheels for polycarbonate glass grinding.
10. PCD tools for carbide roll notching.
11. Centrifuge and coolant filtration system.

Amount spent on R&D : Rs. 7.0 million.

Vaddigiri Factory Automation Private Limited

1. CNC single spindle piston bore boring special purpose machine for machining 6 and 4 blocks for heavy commercial vehicles.
2. CNC closing cap fitting special purpose machine.
3. Cam bush pressing special purpose machine.

Amount spent on R&D : Rs. 5.0 million.

ISO CERTIFIED IMTMA MEMBERS

- Abhijat Equipments Private Limited
- Abro Balancing Private Limited
- Ace Designers Limited
- Arihant Industrial Corporation Limited
- Artech Welders Private Limited
- AMC Private Limited
- Batliboi Limited
- Bharat Fritz Werner Limited
- Birla Kennametal Limited
- Bosch Rexroth (India) Limited
- CMH Tools Limited
- Carborundum Universal Limited
- Crane-Bel International P. Limited
- Denison Hydraulics India Limited
- EFD Induction Limited
- EPE Process Filters & Accumulators Private Limited
- Electronica Machine Tools Limited
- Electropneumatics & Hydraulics (India) Private Limited
- FANUC India Private Limited
- Fenwick and Ravi
- Fluid Logic Systems Private Limited
- Geeta Machine Tools Private Limited
- Godrej & Boyce Manufacturing Company Limited
- Guindy Machine Tools Limited
- HMT Machine Tools Limited
- Hasolon Nylon Products Private Limited
- Heavy Engineering Corporation Limited
- Hi-Life Machine Tools (Private) Limited
- Hindustan Hydraulics Private Limited
- I S G E C
- Imperial Products of India
- Ind-Sphinx Precision Limited
- Jyoti Enterprise
- Kennametal India Limited
- Kirpekar Engineering (Private) Limited
- Kulkarni Power Tools Limited
- Lakshmi Machine Works Limited
- Lokesh Machines Limited
- Machine Tool Prototype Factory
- Machine Tools Traders (Madras)
- Macpower CNC Machines (Private) Limited
- Micro Engineering Works
- Micromatic Grinding Technologies Limited
- Mikronix Gauges Private Limited
- Miven Mayfran Conveyors Private Limited
- Modern Precision Tools Private Limited
- Motor Industries Company Limited
- Neel Controls
- Nugen Machineries Limited
- Oriental Engineering Works Private Limited
- PMT Machines Limited
- Parishudh Machines Private Limited
- Praga Tools Limited
- Precihole Machine Tools Private Limited
- Premier Limited
- Presswel Industries
- Pricol Limited
- Quality Engineering (Baroda) Private Limited
- Rattan Hammers
- Ravjeet Engineering Specialities Private Limited
- SRB Machines Private Limited
- Sandvik Asia Limited
- Seco Tools India (Private) Limited
- Shri Balaji Engineering Works
- Speedfam (India) Private Limited
- State Engineering Corporation
- Stuser Tools Private Limited
- Suhas Hydrosystems Private Limited
- Sunmas Machine Tools Private Limited
- TAL Manufacturing Solutions Limited
- TMC Measuring Instruments Private Limited
- Taegutec India Limited
- Uday Computer Aided Manufacturing (Private) Limited
- Unique Instruments & Manufacturers Private Limited
- Uttam Power Tools Private Limited
- Wendt (India) Limited
- Yuken India Limited

NEW MEMBERS ENROLLED DURING 2006 - 2007

Members Enrolled from April 2006 to March 2007

CHENNAI METCO PRIVATE LIMITED

SP - 100A
Ambattur Industrial Estate
Chennai - 600 058
TAMIL NADU.
[Manufacturer : Accessories for machine tools]

DAGGER MASTER TOOL INDUSTRIES LIMITED

F - 2 / 2 Industrial Area
Chikalthana
Aurangabad - 431 210
MAHARASHTRA.
[Manufacturer : Accessories for machine tools]

GIVI MISURE PRIVATE LIMITED

VITC Export Bhavan
488
14th Cross, 4th Phase
Peenya Industrial Area
Bangalore - 560 058
KARNATAKA.
[Manufacturer : Metrology and measuring equipment]

INDOTECH MACHINES PRIVATE LIMITED

28 - 29
R R Private Industrial Estate
Near Shivna Spinners
Sanwar Road
Indore - 452 015
MADHYA PRADESH.
[Manufacturer : Metal-cutting machine tools]

MEIBAN ENGINEERING TECHNOLOGIES PRIVATE LIMITED

370, 4th Cross
J. P. Nagar, III Phase
Bangalore - 560 078
KARNATAKA.
[Distributor : Metal-forming machine tools]

MERCURY PNEUMATICS PRIVATE LIMITED

D - 134
Ansa Industrial Estate
Saki Vihar Road, Sakinaka
Andheri (East)
Mumbai - 400 072
MAHARASHTRA.
[Manufacturer : Metal-forming machine tools and Accessories for machine tools]

NIPPEI TOYAMA CORPORATION, NTC INDIA

Plot No. A - 64
H Block, M. I. D. C.
Pimpri
Pune - 411 018
MAHARASHTRA.
[Distributor : Metal-cutting machine tools]

PRASHANT ENTERPRISES

Chitra Enclave, III Floor
1 / 6, 1st Street
SBI Officers Colony, Arumbakkam
Chennai - 600 106
TAMIL NADU.
[Distributor : Cutting tools]

SRI YANTRA ENGINEERING AGENCIES PRIVATE LIMITED

F - 65 Industrial Estate
Rajajinagar
Bangalore - 560 044
KARNATAKA.
[Distributor : Metal-cutting machine tools]

TOOL GRINDING TECHNOLOGIES INC.

1 - C, Plot No. 467 - 469
12th Cross, 4th Phase
Peenya Industrial Area
Bangalore - 560 058
KARNATAKA.
[Manufacturer : Metal-cutting machine tools]

Total Membership of IMTMA : 392 members


Manufacturing sector vital for growth: Nath
Kamal Nath seeks investments in machine tool sector
IMTEX
Machine tool indus invest Rs 3,000 cr
Bangalore to host IMTEX
HELD IN C

IN THE NEWS

Indian Machine Tool Manufacturers' Association

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