

EXECUTIVE COMMITTEE

Mr. V.L. Sridharan, Chairman
Econo Valves Pvt. Ltd.
Mr. V.P. Parthasarathy, Vice Chairman
Brakes India Ltd.
Dr. M. Kamaraj, Vice Chairman
IIT Madras
Mr. B.K. Venkatesh, Secretary
Techmat Enterprises India Pvt. Ltd.
Prof. B.S. Murty, Jt. Secretary
IIT Madras
Mr. C.S. Ponnambalam, Jt. Secretary
Madras Metal Treaters
Mr. T.V.K. Kidao, Treasurer
Madras Metallurgical Services Pvt. Ltd.

COMMITTEE MEMBERS:

Dr. K. Bhanu Sankara Rao FASM
IGCAR, Kalpakkam
Mr. D.G. Sastry
Pillar Induction (I) Pvt. Ltd.
Mr. V. Parthasarathy
Wave Current Automotives Ltd.
Mr. R.G. Sadagopan
Welmech Engg. Co. Pvt. Ltd.
Prof. K. Prasad Rao
IIT Madras
Mr. Gopal Kidao
Madras Metallurgical Services Pvt. Ltd.
Mr. S.R. Balasubramaniam
Sri Balaji Alloys
Dr. U. Kamachi Mudali
IGCAR, Kalpakkam
Dr. B. Venkataraman
IGCAR, Kalpakkam
Dr. A.S. Gandhi
IIT Madras
Mr. N. Sampath Kumar
Ambattur Metal Treaters
Ms. S. Uththara
Econo Valves Pvt. Ltd.
Mr. T.S. Sreekumaran
Electrotreatments, Coimbatore
Dr. Gnanamoorthy
IIT Madras
Mr. C. Balasubramaniam
Omplas Systems

ADVISORS:

Dr. Baldev Raj
Director, IGCAR Kalpakkam
Mr. A. Krishnaswami
Malar Metallurgy and
Management Consultants
Dr. N. Gowrishankar, MASM
Director, IP Rings
Mr. V. Mahadevan
Ennore Foundries Ltd.

Awards & Honours
Industrial Visits
Short Term Courses
Seminars
Quiz
Conferences

<http://asmintl-chennaichapter.org>

Chairman's Message



ASM International Chennai Chapter has performed very well during 2007-2008 with multifaceted activities. We are able to establish fruitful collaborations with the other professional societies in and around Chennai and organized several technical talks of significant interest. The technical evenings enabled to develop a deeper understanding among other professional societies and to foster friendship amongst the members.

We have opened up a consultancy cell for providing solutions for industrial problems and the initial response was encouraging. The chapter organized several social and cultural events. The activities of the Chapter have led to its receiving the Chapters of Excellence Award and Five Star Award for the Sixth Consecutive Year.

The four Materials Advantage Student chapters at IIT Chennai, IIT Kharagpur, Mailam Engineering College and PSG College of Technology have also performed well. A new Materials Advantage Chapter was opened during the year at Manakula Vinayaka Engineering College, Pondicherry by the Chapter.

The IIT Madras Materials Advantage Chapter has been doing exceedingly well and has bagged the Award for the most number of new members recruited. Its proposal for school outreach program has won the support of \$800 from ASM International. Incidentally, IIT Madras Materials Advantage Chapter has the highest membership among all the Materials Advantage Chapters in the world.

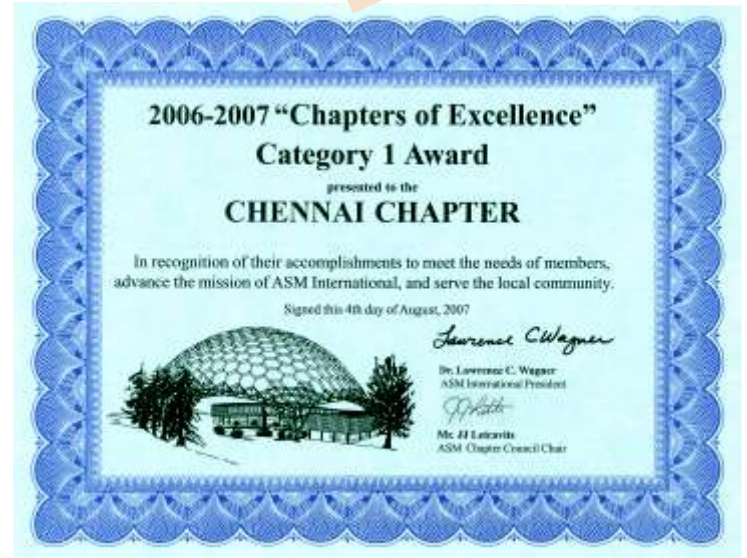
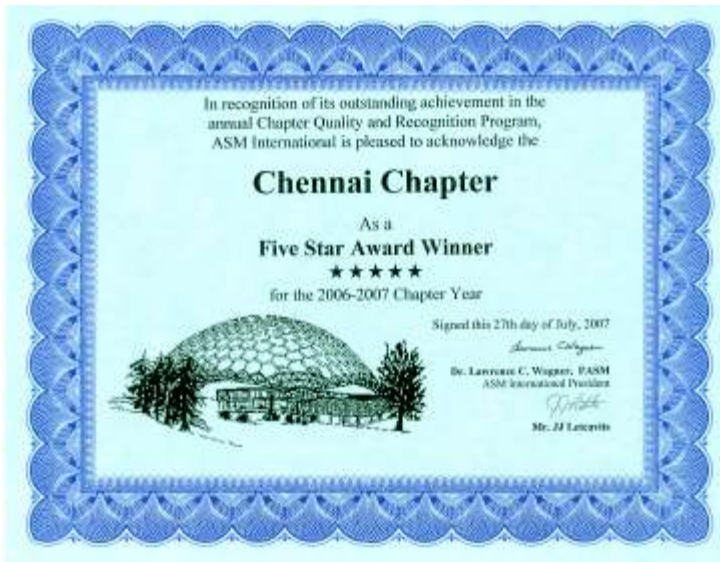
During 2007-2008, we have organized two focused workshops, namely, a Two-day workshop on Metallography, Mechanical Testing and Failure Analysis and a Two-day workshop on Metallurgy for Non-Metallurgists.

All these activities were made possible because of the excellent teamwork of the executive committee and wholehearted support of the enthusiastic members. We have plans to organize a number of such focused workshops during 2008-2009.

We are proud to announce that Chapter will always be looking forward to receive innovative ideas from its members to increase the number of activities of the Chapter.

V.L. Sridharan
Chairman, ASM International Chennai Chapter

AWARDS



From the Editor's Desk

Mr Ash Khare, Member of the Board of Trustees, ASM Materials Education Foundation in his Guest Editorial in July 2008 issue of Advanced Materials & Processes has been very optimistic in training young students in to carriers in Metallurgy and Material Science. The situation is not different in India with less than 350 Metallurgical Engineers turning out every year from Engineering colleges, there is a fathom gap between demand and supply!

The K12 outreach program conducted by IIT Madras Materials Advantage supported by the ASM Chennai Chapter that exposed high school students in to materials and processes is a great beginning. We need such out reach programs to create an interest on more such students to become Material Engineers so that enough Metallurgists are available in the coming years in par with the IT guys perhaps with matching package

The Chennai Chapter has won the "Chapters of Excellence" and "Five Star Award" for the sixth consecutive year! Winning an award and sustaining it year after year undoubtedly reflects the commitment and tire less efforts of the Members. Kudos to the ASM Chennai Chapter for this great achievement!

VP Parthasarathy

Annual General Body Meeting

The Annual General Body Meeting was held on 12th July 2008 at GRT Convention Centre, T-Nagar, Chennai. The Chairman of the Chapter Mr VL Sridharan welcomed the Members and their family. Mr BK Venkatesh, Secretary presented the long list of activities of the Chapter during the year 2007 – 08. Various awards were presented to members for their commendable performances during the year. The new Executive Committee was announced by the Chairman, Award Committee Mr DG Sastry. The meeting was followed by entertainment program for the members and their families organized by Ms Uththara and Mr Gopal Kidao. The AGM concluded with a delicious dinner



Awards and Honours Congratulations

Awards & honours received by the Members of ASM International, Chennai Chapter

- **Prof. B.S. Murty**, MASM, has bagged the prestigious Shanti Swarup Bhatnagar Award. He has also become a Fellow of Indian National Academy of Engineering.
- The IIT Madras Materials Advantage Chapter has received the Award for the most number of new members recruited. It also got the Award for its school outreach program proposal with a cash of \$800 from ASM International. Incidentally, IIT Madras Materials Advantage Chapter has the highest membership among all the Materials Advantage Chapters in the world.
- **Dr. K. Bhanu Sankara Rao**, FASM, Chairman of the Chennai Chapter, has been serving as The Chief Editor of Transactions of The Indian Institute of Metals, Editorial Committee member of International Materials Reviews, Editor of Materials for Energy Systems, Key Reader of Metallurgical and Materials Transactions, and International review Board Member of Materials Engineering and Performance. He is also a member of Technical Books Committee of ASM International.
- **Mr. M. Vasudevan**, MASM, Prof. B.S. Murty, MASM and Prof. K. Prasad Rao, MASM have been serving as Key Readers of the Metallurgical and Materials Transactions A.



Glimpses of some of the seminars held during the year 2007-2008

EVENTS AND PROGRAMS during 2007-2008

Sl. No.	Date	Event
1.	17-06-07	AGM cum family get together held at GRT Hotel, T Nagar
2.	30-06-07	First E.C. meeting was held at MCC club
3.	21-08-07	Technical talk on "Indian aluminium industry present scenario & future prospects" by Dr. KSS Murthy, Professor Emirates, IISc, Bangalore organized in association with Aluminium Association of India, Madras Metallurgical Society and The Institute of Indian Foundrymen, Chennai chapter
4.	05-09-07	Second E.C. meeting was held at Towers Club, Anna Nagar
5.	15 & 16-09-07	Two day workshop on Metallography, Mechanical Testing and Failure Analysis held at Hotel Decan Plaza, Royapettah, About 45 participants
6.	03-10-07	Third E.C. meeting was held at Guindy Lodge,
7.	12-12-07	Technical talk by Dr. Larry Hench, Prof. Emeritus, University of Florida and Imperial College, London on "New Generation bioceramics material for medical application" held in association with Madras Metallurgical Society at Hotel Radha Park
8.	07-01-08	Fourth E.C. meeting was held at MCC club
9.	26-01-08	E.C. members with family visited Pondicherry for attending the Materials Advantage Chapter opening ceremony in Manakula Vinayaka Engineering College, Pondicherry and a social visit
10.	01 & 02-02-08	Two days workshop on Metallurgy for Non-metallurgists held at Hotel Marina Towers. About 60 participants.
11.	05-04-08	Technical talk on "Automatic nitriding potential control in Gas nitriding" by Mr. Michel Korwin, President- Nitrex Metals Inc, Canada held at Hotel Vijay Park in association with Madras Metallurgical Society

Two day course on Metallography, Mechanical Testing and Failure Analysis (15-16 September 2007)

The course was attended by about 60 participants from various industries. Experts from both Academia and Industry gave lectures on fundamental and advanced topics on optical and electron microscopy, colour metallography, image analysis, various mechanical testing techniques, ASTM standards in testing, strengthening mechanisms, NDT, fractography and failure analysis. The course also included a session where experts addressed the practical problems faced by the participants in their industry on various aspects related to the subject.



Two day course on Metallurgy for Non-Metallurgists (1-2 February, 2008)



ASM International Chennai Chapter has successfully organized the Two day course on Metallurgy for Non-Metallurgist. About 60 delegates attended the course and got benefited by it immensely. The course content was chosen meticulously to facilitate the practicing engineers in different industries.

**Orientation Programme/membership drive
October 10, 2007**



Dr. B.S. Murty, Dr. A.S. Gandhi addressing the gathering and interacting about the benefits of MATERIAL ADVANTAGE Membership during the membership drive meet

**One Day One day workshop on electron microscope (30th October 2007)
for School Students of XI and XII level**

This workshop was organized with the support of Science Clubs of Tamilnadu. About 300 school students of XI and XII level from all over Tamilnadu have participated in the programme. The workshop involved lectures by experts on the principles and excitement in electron microscopy and demonstration of scanning and transmission electron microscopes to all the students in about 30 batches of 10 students each.



**K12 Outreach Program
(24th November 2007)**



The ASM International Chennai Chapter gave support to IIT Madras Materials Advantage Chapter in organizing the K12 outreach programme. 60 Participants from Vanavani Mat. HSS, IITCampus, Kendriya Vidyalaya, IITCampus and P.S.HSS, Mylapore, Chennai participated in the programme. Students were exposed to Material joining processes, characterization techniques such as SEM and TEM.



Inside Exploration Technologies



Non-destructive testing – Services & Consultancy, Training & Certification (as per ASNT),
Welder Training & Qualification.

Contact Email: info@ietechndt.com Ph: 91-44-43016096 www.ietechndt.com



ECONO VALVES PRIVATE LIMITED

Manufacturer of Industrial Pipeline Valves – Gate, Globe, Check and Plug Valves. Approved by ISO 9001,
API 6D, Saudi Aramco, KNPC, EIL etc. Contact: 91-44-26257501 Email: econovalves@gmail.com ,
www.econovalves.com



Invited talks by eminent Professors -from India & abroad



- v Dr. U. Ramamurty, Dept of Materials Engineering, IISc, Bangalore -24 August, 2007
- v Dr. Raj Bordia, Dept. of Materials Science and Engineering, University of Washington, 7th and 8th Jan. 2008
- v Dr. N. Subba Reddy, Post Doctoral Research Scientist, Dept. of Materials Science and Engineering, Pohang University of Science and Technology - 19th Feb. 2008

Arthur E. Focke Leader Shape Program

Samyukta Sethuraman from Material Advantage Chennai chapter was selected for Arthur E. Focke Leader Shape Program during 2007-2008. This is the sixth consecutive time that the chapter represented in Leader Shape program. Mr. V. Aravind Subramanyam (2003), Mr. Krishna Iyengar (2004), Mr. Nikil Rangarajan (2005) and Mr. Puneet Choudary (2006) Mr. Naveen Prasanth (2007) are the students selected for leader shape program from ASM/Material Advantage Chennai chapter in the previous years.

Industrial Visit to Tube Products of India, Avadi 9 Feb. 2008



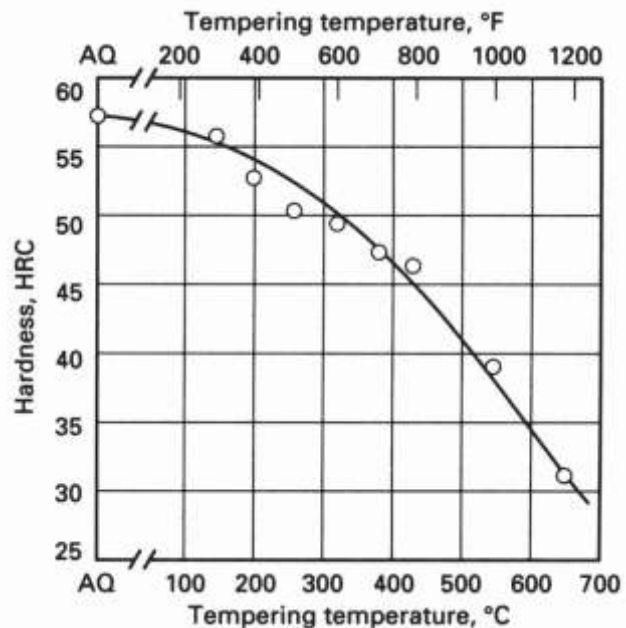
- v 24 members participated in one day visit
- v Participants were exposed to steel tube manufacturing, Cold rolling and Heat treatment of steel products.

ASM International is publishing information on various useful topics under "One Minute Mentor". We will publish such knowledge sharing topics for the benefit of the members of our Chapter

Tempering Medium-Carbon Low-Alloy Steels

Type 4340 steel, the most popular steel in the medium-carbon low-alloy steels class, is deep-hardening steel. In thin sections, the steel is air hardening although in practice it usually is oil quenched.

Hardening consists of heating to 800-845°C (1475-1550°F) and holding 15 min for each 25 mm (1 in.) of thickness; quench in warm oil at 25-60°C (75-140°F). Temper at least 2 h at 455-650°C (850-1200°F); air cool. Double tempering is recommended to optimize yield strength and impact properties. Temperature and time at temperature depend mainly on desired strength or hardness. Tempering below 455°C (850°F) is not recommended because of susceptibility to temper embrittlement.



Variation for hardness with tempering temperature for 4340 steel. All specimens oil quenched from 845°C (1550°F) and tempered 2 h at temperature. AQ = as quenched.

Source: ASM Handbook, Vol. 4, Heat Treating, ASM International, 1991, p 211

Welcome to New member



Mr A Yuvarajan had joined the ASM family as Individual Member. Mr Yuvarajan is a Graduate in Metallurgy and specialized in Heat Treatment of Steel, Furnaces and Atmosphere controls in heat treatment over the last 16 years. Presently he is a consultant in heat treatment, Project Management and Furnace refurbishing. ASM Chennai Chapter join hands to welcome Mr Yuvarajan

Chapter Sustaining Members

We are presenting the profile of the sustaining members of our chapter, which is a step forward in ensuring contacts / communication with fellow members of our chapter. We encourage all our sustaining members to send a brief of themselves and their organization for publishing in this column

Techmat Enterprices India Pvt Ltd

is a genisis company from Tamilnadu Thermal treaters, started in 1984 -85 as a commercial Heattreaters.. Techmat Enterprises has become synonymous with heat treatment name and there is many things first for this company. Like, it was the first commercial heattreaters to have certified for ISO and the first commercial heat treaters have certified for IS 16548 in whole of Chennai M/S Techmat Enterprises India pvt ltd is the first company to set up state of the art Sealead quench furnaces in the commercial heat treatment. . We have great names in our customer group like , TVS group of companies - M/S Lucas TVS ltd, M/S Wabco-Clayton ltd, M/S Brakes India group, etc .We are approved vendors of multinational companies like M/s Cummins USA, M/S Eaton, M/S Scania, Delphi automotive, M/S Ford Ltd, GM etc. .Our clientele speaks about our quality.

M/s. Endotherm Fluids India Private Limited is a company established in the year 1988 for manufacturing chemicals used in the heat treatment Industry and later diversified to undertake critical heat treatment process. Recently the company has started its manufacturing division at Mappedu, Sriperambadur with the facility for making Precision automobile components through Cold Forging, Machining and with heat treatment finish.

The Company has been successful in making very critical parts in a short time and is poised to grow further and is proposing to add more machines to meet the increasing demand by existing clients as well as for new customers.

The Company is ISO certified and is going for TS 16949 certification programme.

For details kindly visit our websites
www.endocomponents.com
www.techmatheattreaters.com



AMBATTUR METAL TREATERS
Where Service Matters



Specialist In:
All Types Of Heat Treatment Processes In Continuous Mesh Belt Furnace & GCF

Ph : 4208 0500 / 4208 0501 / 4208 0502
Fax : 4208 0504 Mobile : 98410 35501

No. 1/A-1, Sidco Industrial Estate, Ambattur, Chennai - 98.
Near Godrej Agrovet. E-mail : amtheat@eth.net



ENDOTHERM FLUIDS (I) PVT. LTD
ISO 9001 - 2000 CERTIFIED COMPANY.

Manufacturers of Engineering Components
Specialised Commercial Heat Treaters

Mfg: COLD FORGING, MACHINING, HEAT TREATMENT
Heat treatment:- Case Hardening, hardening & Tempering
Carburising Sporadised Annealing

FACILITIES:

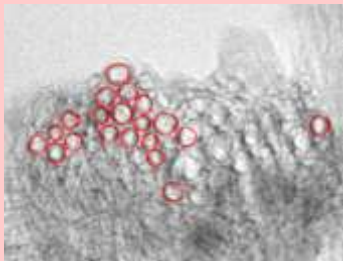
COLD FORGING PRESS, CNC MACHINE, AUTO LATHE
THREAD ROLLING, CENTRELESS GRINDING MACHINE
DRILLING & TAPPING, TUMBLASTING MACHINE,
SLUG CUTTING MACHINE, SEALED QUENCH FURNACE
SPORADISED ANNEALING FURNACE, TEMPERING
FURNACE
PIT TYPE CARBURISING FURNACES,
ALL METEROLOGICAL TESTING AND METALOGRAPHIC
INSPECTION

Plant I : 92-A Sidco Industrial Estate, Ambattur, Chennai 600098
Phone & Fax 26253790 , email: techmat@vsnl.com

Plant II : 126- Mappedu B Block, Husain Nagaram Village, Tiruvallur
Phone: 27699623, 624
email: endothermfluids@gmail.com

NANOTECH solutions

Software Solutions from SMART IMAGING, USA for
NANOTECH Applications

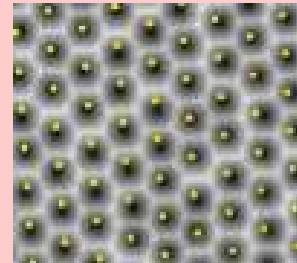


SIMAGIS® Nanotubes: provides automated analysis of images of nanotube structures acquired from SEM, TEM, and AFM, such as "spaghetti", "buckypapers", SWT & MWT.

The suite includes modules for Quality Analysis of Bulk Nanotube Material, Nanotube Diameter Analysis, Carbon Nanorope Thickness Analysis. Nanorope Orientation Analysis, MWNT Structure Analysis

SIMAGIS® Nanofilms: The set of solutions for automated visual analysis of nanofilms, nanopowders and self-organized nanostructures. The suite includes modules for:

Analysis of Microstructure of the Nano-Granular Thin Film (TEM),
Nano-Particles Self-Assembly, Quasi-Regular Grid (TEM & SEM)



NanoDispersion Analysis: solutions for spatial dispersion analysis characterize and analyze spatial dispersion within nanomaterials. Dispersion analysis modules provide a statistical analysis of aggregates (clusters) in a dispersed phase as well as quantification of regularity and distribution of the dispersed phase.

CONTACT

MADRAS METALLURGICAL SERVICE PVT LTD
24 LALITHAPURAM STREET, ROYAPETTAH, CHENNAI 14
TEL: 044 28133093/ 28133903 FAX: 044 28131703 EMAIL: mmspl@vsnl.com