



PUNE CHAPTER

# ASM International, Pune Chapter Chapter News Letter

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**Rahul Gupta**  
Secretary

**Y. S. Gowaikar**  
Treasurer

Issue No. : 02

Editor - Udayan Pathak

Chairman, News Letter Committee - Louis F Vaz

October 2011

### EDITORIAL...✍



Dear Members & well wishers,

It's my pleasure to bring the second edition of Chapter News letter of the year 2011-12. This issue will be released during India National Council meeting hosted by our Pune Chapter, on Saturday 24th September. On the same day, we have Chapter Social Evening and Dinner to celebrate the Chapter Excellence Award 2011 received by us.

Automotive Glasses & current industry trends in this field is an emerging though less focused area. This issue carries a well reviewed article by G Raghavendra on this topic which will definitely prove to be informative.

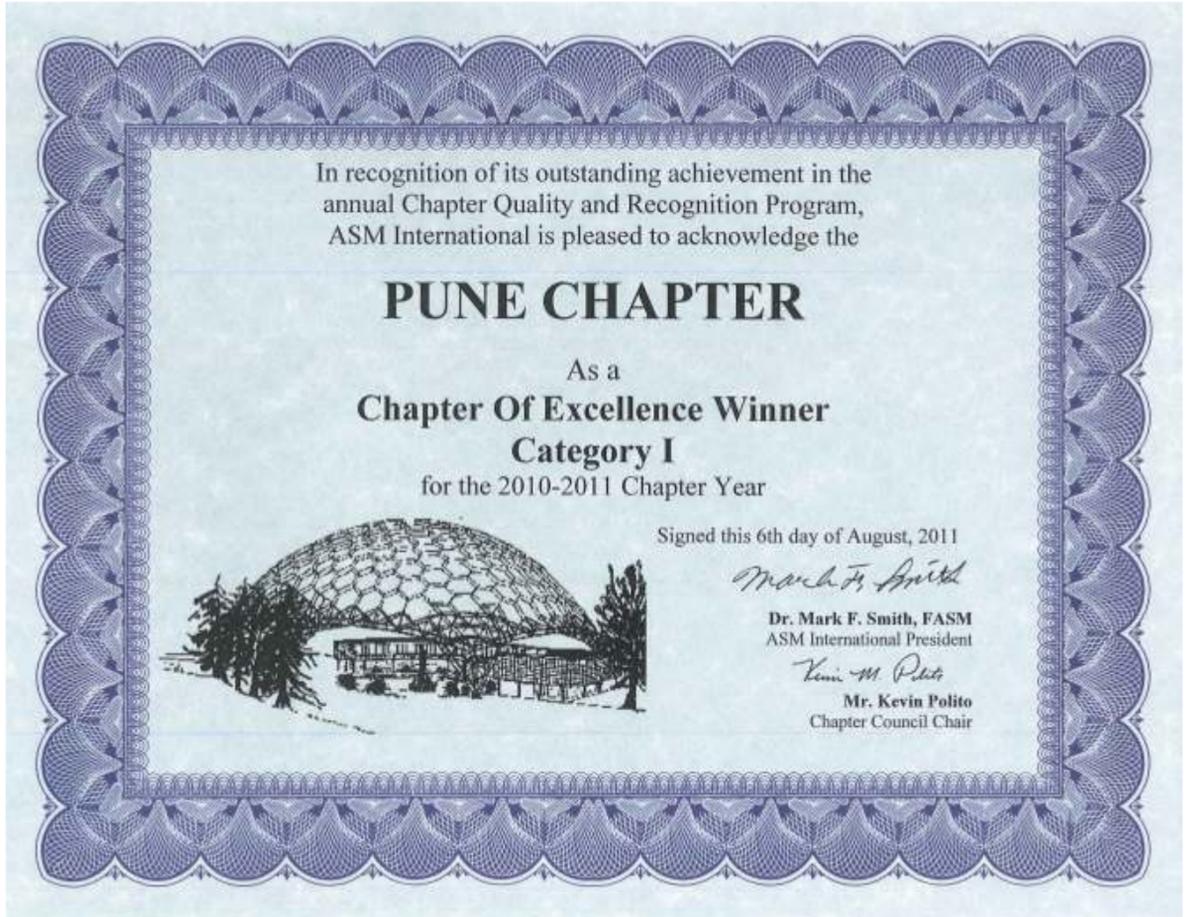
The focus of this year's Chapter activities is – Young Professionals, Students Outreach and Member Recognition & Awards. This issue presents the plans of various focus committees. Vikas Dhamankar, Chairman, newly formed Young Professional Committee has outlined his plans while, Sudhir Phansalkar have outlined Students outreach plans as Committee Chairpersons.

The knowledge shared by all of us is the major backbone of Advanced Materials & Processes (Popularly known as AM&P). Ed Kubel, senior Editor of AM&P has outlined how we can contribute effectively in this knowledge sharing mission. Announcements on forthcoming Technical Education Programs and Technical Presentations are included for your information.

While we introduced our New Chairman & Vice chairman in last issue, we are introducing our new Secretary, Treasurer & Chairman of Membership Development as well as News Letter Committees, in this issue. Also we are glad to include the Profile of our few members.

Your contribution matters much to this news letter. Please send us technical articles, your profile for inclusion in News Letter. We welcome your suggestions to make this news letter more useful & informative to you. Please feel free to write to me at [Udayan.Pathak@tatamotors.com](mailto:Udayan.Pathak@tatamotors.com) or Mr Louis Vaz, Chairman, News Letter Committee at [loufvaz@hotmail.com](mailto:loufvaz@hotmail.com)

Regards  
**Udayan Pathak**  
Editor



## New Office Bearers



**Rahul Gupta,**  
Secretary

**Rahul Gupta** did his Graduation (BE - Metallurgy) from College of Engineering Pune (COEP) in 1984 with a Second Rank from the University of Pune. He later, went on to complete his Masters (ME - Metallurgy) in 1988 from COEP (Project – Super Conductivity).

He started his career as GET in Mukand Iron & Steel, Mumbai where he worked on various steel making activities. Thereafter he worked at Noduron Founders (Now better know as Maval Foundries – TML). He joined his family business M/S N D Gupta

Enterprises – Heat Treatment unit at S-38, MIDC, Bhosari, Pune.

With a 27 years in Steel Making, Foundry, Heat treatment & Surface modification, he has expanded his family business by adding capabilities for Steel Foundry, ADI, FNC & Specialty High Performance parts particularly for export to industry sectors such as oil field, auto, agriculture, wind energy, toolings, die casting, etc. He shares his experience and knowledge through papers on ADI, FNC, Energy Management, etc. at various forums.

Associated with ASM Pune Chapter since 2004, he is on the Executive Committee since last five years. He was Treasurer for Pune – Chapter from 2008 – 2011. He is on the core committee of Students Materials Camp. He is instrumental in starting & holding Materials Camp for four consecutive years. He is instrumental in making and launching of the ASM – Pune Chapter web site "asmpune.org". He is a faculty to many ASM – Pune Chapter training programs. He has attended ASM Leadership Days at Cleveland in 2008.

Rahul, as he would like to called is reachable on his Cell # 9423009829. He can be contacted on email [rahul9463@gmail.com](mailto:rahul9463@gmail.com)

**Y S Gowaikar**, is BE (Metallurgy) from College of Engineering Pune (COEP). He passed out in 1984 with First Rank. He started his career as GET in David Brown Greaves (Now Premium Transmissions Ltd), Chinchwad, Pune. Later he joined Symbiosis College of Management to pursue his MBA (Marketing).

During his MBA he started marketing of various Metallography & Testing Equipment. Later in 1989 he started his own unit manufacturing Material Characterization Equipment. Today



**Y. S. Gowaikar**  
Treasurer

Metatech Equipments has grown from proprietary Small scale unit to Private Limited Company having two Manufacturing Units. Activities at Sinhagd Road Unit include manufacturing of Metallography equipments while Micro Hardness Testers are manufactured at Hadapsar, Pune. Corporate office & Image Processing Software division is located at Laxmi Road, Pune. Y S Gowaikar is passionate about Indigenizing many characterization equipment & offering solution to his customers at competitive costs. He is major supplier to MNCs, Government & Defence Establishments, Many big Corporates & Educational

Institutes all over India.

Y S Gowaikar is associated with ASM Pune Chapter since 2000. He has successfully handled Treasurer position in past also. With the help of LD Deshpande, Chairman, Membership Development Committee, he wants to streamline the membership processing activities & cut down the delays in sending membership fees to Head Quarter. He would like to be called as Gowaikar. He is reachable at [YSG@metatechind.com](mailto:YSG@metatechind.com); [gowaikarys@gmail.com](mailto:gowaikarys@gmail.com) & on his cell 9822012226. He is available at his Laxmi Road Office till late evening.



**Udayan Pathak receiving chapter excellence award from Dr. Chris Berndt, President, Elect ASM International**

For details contact -



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## AUTOMOTIVE GLASS- CUSTOMER EXPECTATIONS AND TECHNOLOGY TRENDS

**G Raghavendra, Asstt. General Manager, Tata Motors Limited, Pune**

Use of glass has evolved from purely architectural purpose to structural, thus encouraging glass technology to advance with the increasing demand. As a result contemporary methods used to produce structural glass provide excellent strength characteristics particularly after special treatments including tempering, annealing etc which reduce vulnerability of glass to cracking and sudden brittle failure.

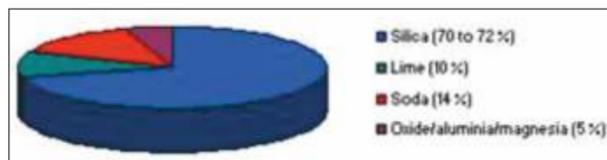
Lamination improves strength and durability of glass by joining strengthened layers of glass using polyvinyl butyral film.

Glass is the name given to all amorphous bodies that are obtained by lowering the temperature of a melt independently of its chemical composition and temperature range of solidification which as a result of gradual increase of viscosity adopts the mechanical properties of a solid body. There is no long range order of position of atoms in the glass

Glass is melted at a temperature between 1000 degC and 2000 degC. The microscopic structure of glass is comparable to that of a liquid in which the individual constituents form an irregular network without a long range order. Glass is also known as cooled melt.

### Raw Materials:

The raw material used to manufacture glass includes Silica (70-72%), Lime (10%), Soda (14%) and Oxide/Alumina/Magnesia (5%). These oxide additives improve the chemical and physical properties of the glass.



### Main Glass groups:

Soda Lime glass

Lead glass

Borosilicate glass

### Main Glass Products:

Flat glass (For architectural or automotive applications)

Glass containers/Glass tubes

Special Glasses

Glass fiber

### Glass manufacturing:

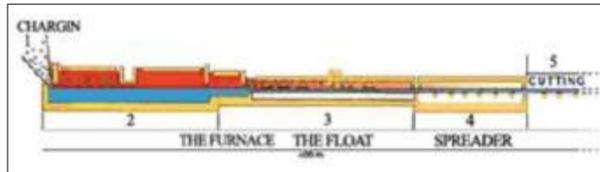
The fundamental composition of the structural glass includes high quality sand, soda ash, limestone, salt cake and dolomite. The melt is heated until the mixture reaches a highly viscous consistency. The glass used in structural applications may begin as float glass or rolled glass, however float glass use is more common.

Float glass requires extremely high quality ingredients unlike other generically formed glasses. The Silica must be over 80% pure to avoid imperfections in the glass. Soda ash is used for easier melting of the melt, limestone for the durability and dolomite for working and weathering properties.

Float glass method of glass making was invented by sir Alastair Pilkington in 1960. He developed a process whereby narrow flow of glass is fed continually from a melting furnace onto a tank of molten tin in Nitrogen rich atmosphere to avoid oxidation of Tin. The molten glass spreads evenly onto the surface of Tin. The Glass is drawn off the Tin bath when the desired thickness is achieved.

### Glass properties:

The main properties of the glass are: transparency, heat resistance, pressure and breakage resistance and chemical resistance. Glasses are mainly of clear and tinted type depending on the visual light transmission. This is done by changing ingredients in glass manufacturing. The tinted



glasses have lower visual light transmission than clear glasses.

### Mechanical properties:

Density: 2500 Kg/m<sup>3</sup>

Hardness: 470 HK. Hardness is established according to Knoop. The basis is the test method given in DIN 52333.

Compression resistance: 800-1000 Mpa. This is the ability of a material to resist a load applied vertically to its surface.

Modulus of elasticity: 70000 Mpa

Bending strength: 45 Mpa. It is a measure of resistance of glass during deflection.

### Thermal properties::

The softening temperature of glass is around 600 degC. At this temperature glass transforms from solid state to viscous plastic state..

### Optical properties:

Glass can be produced in any type of geometrical surface and its optical properties are not affected by aging. The reflective index of glass is 1.52

Glass is generally resistant to acids alkalis and water. The surface of glass is affected if it is exposed for a long time to alkalis (and ammonia gases in damp air) in conjunction with high temperatures

### Wear tests :

Various types of wear tests are conducted to find out the light scatter. A typical test is using 3 kg sand with 0.5/0.71 mm particle size are trickled onto the test surface which is inclined at 45 deg from a height of 1600 mm. The limit of scatter is 2%.

### Automotive Glass

Automotive windows are usually made from laminated glass for windshields and tempered glass for sidelites and backlites. Laminated glazings can also be used for sidelites and backlites mainly to improve safety and security.

### Tempered Glass:

One method of strengthening glass is to enforce compression in the outside skin of a glass panel. This compression serves to close small existing cracks inevitably present from the manufacturing process and

to compensate tensile forces. The glass is then more resistant to impact loads since the induced peak tensile stress at the point of impact is compensated by the compression of the skin.

The process consists of strengthening the glass by very fast blast cooling (From 600 to 300 degC in few seconds) is used to make automobile, building and very speciality flat glass. Tempered glass is also a safety glass. Very violent impact shatters tempered glass into very tiny non cutting fragments. Tempered glass is used generally for all windows except windshield.

The core of the glass cools finally thus pulling the already cooled and hardened surface, leaving it in compression. There is a balance of core and surface in terms of stresses in tempered glass. This balance slows down propagation of new and existing cracks in glass panel. Even a scratch can weaken the surface compressive layer thus leaving the glass susceptible to fracture. Therefore it is necessary to control the stress levels in the glass for tempering to be effective.

### Laminated Glass :

Two glass sheets when joined with an adhesive e.g. PVB (Poly vinyl Butyrate) under 250 degree heat and compression they form a single sheet that has significantly greater strength and ductility than single sheet. Even if one layer of glass is shattered the fragments adhere to the interlayer, thus protecting the passengers. Laminated glass resists penetration and impact which is beneficial in security applications.

### Bullet proof glass :

Bullet proof glasses are designed to withstand one or several rounds of bullets depending on the thickness of the glass and the weapon being fired at it. Bullet resistant glasses are basically made by layering a polycarbonate material between the pieces of ordinary glass by lamination.

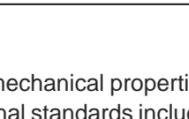


Ability of a bullet resistant glass to resist bullet is determined by its thickness

Polycarbonate is a tough transparent plastic often known by its brand name Lexan. Bullet resistant glasses are typically between 7 mm and 75 mm in thickness. A bullet fired at a sheet of bullet proof glass will pierce the outside layer of the glass, but the layered Polycarbonate-glass material is able to absorb bullet's energy and stop it before it exits the final layer.

### Plastic Glazings :

Plastic glazings are common for their following advantages:

Strength of Plastic Glazing		
Special Styling	→	In Glass not producible parts 
Weight reduction	→	Sidelites: 1 – 1.5 Kg / car Roofs: 3 – 10 kg / car 
Safety	→	High impact resistance Comparable with laminated glass 
Integrated systems	→	Cost reduction 
Appearance	→	Glass like appearance for the black areas Nearly each colour without cost differences 

### Testing Of glass :

Glass is tested for optical and mechanical properties as per different national and international standards including EEC R 43 and IS 2553. The tests include impact test, penetration test, fragmentation test, head form impact test, radiation test, abrasion test, humidity test, visual light transmission, secondary image and optical distortion tests. The aim of these tests is to simulate the usage of automotive glazing during the actual customer usage conditions on the road. These may include abrasion due to dust particles, radiation, stone impact etc. Glass being a safety critical item is ensured for all these.

For this reason glass comes under regulations of CMVR (central motor vehicle regulation) and E marking (homologation for export applications). Glasses need to bear E marking showing that all these tests have been ensured after manufacturing the glass

### Recovery & Recyclability

The most straightforward method of recovering ELV glass is



to break it and collect the fragments in a container which can then be emptied into a suitable skip. This is practical for toughened glasses like door, window and backlite since removing them in single piece will be difficult. Laminated glasses need to be removed in single piece. The difficulties in recovery include:

- It may be difficult to distinguish between clear and tinted glass, thus affecting values of colour contaminated stream.
- In applications where the glass is directly bonded with adhesive instead of using rubber seals, the glass may be contaminated with the bonding agent/adhesive after removal. Removal of such glasses at times is very difficult due to adhesive bonding.

While recycling glass, PVB layer present in windscreen glass is for the time being either land filled or incinerated (resulting in energy recovery like coal). The reason is that recycled PVB is not suitable for reuse automotive glazing applications as different PVB suppliers use different formulations, the mechanical properties here are controlled by plasticisers. Recycled PVB produced by such heterogeneous waste stream will be of inferior quality to be reused in automotive glazings. Possible reuse of the recycled PVB could be in areas of acoustic insulations, PVC replacement, waterproof textile coating, floor tiles, sealants/adhesives etc.

Technically ELV glass is recyclable, but the cost penalty is so large at present so as to render it unacceptable. The efforts include manual removal of glass from widely distributed ELV populations, storing the glass, segregating the same with minimal contamination and then transporting the same to a reprocessing centre. Additional technical problems associated with reprocessing include, difficulty in removal of glass due to adhesive, presence of silver lining in heated rear windscreens and use of ceramic printing to cover the adhesive, thus causing more contamination.

#### Technology trends:

Automotive safety glazing trends include development to enhance safety and comfort.

Various technology trends include:

Water repellent glasses

Heated windscreen

Rain sensor windscreen

IR cut laminated glass

Solar control glass

Glass Antenna

Encapsulated glass

Acoustic comfort glasses

Improved safety is required by customers

To improve drivers' vision and to enhance the visibility in all

weather conditions including deice, defog and rainy conditions. There are low reflective glasses again to enhance visibility.

Use of laminated glass in roof, sidelites and backlites to improve safety, security, thermal comfort and acoustics

#### Water repellent Glass :

Results in much improved visibility in wet and rainy conditions particularly at high speeds. This facilitates night driving in wet condition and deicing in winter conditions.

The coating is generically a solvent based fluorosilane coating which is mechanically stable and lasts longer once applied on glass after cleaning. Basically these coatings reduce surface tension on the glass resulting in falling of water droplets once impinged on windscreen. These coatings are resistant to alkaline chemicals and weathering resistant.

#### Heated Windscreens:

Use the principle of Tungsten wire in PVB or silver ceramic grid lines to melt snow on the windscreen

#### Rain Sensor

They sense the amount of water hitting the outer surface of the windshield and accordingly windshield wiper is made to run faster or slower. Therefore wiper control is not required to be done by driver.

#### Thermal comfort glasses

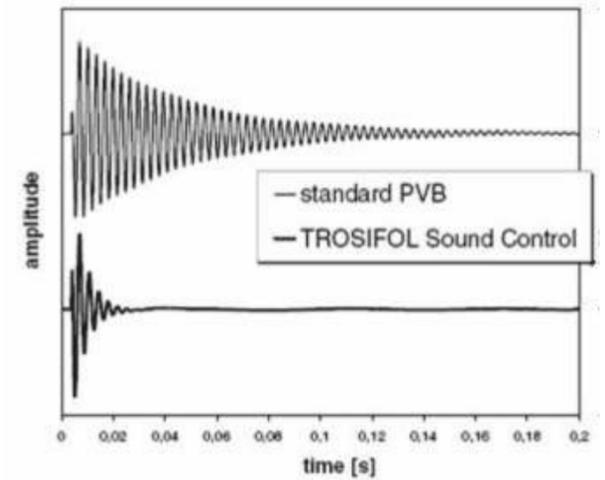
The reflective properties of glasses can be achieved by different coatings on glass and by changing the interlayer with addition of PET along with PVB. The absorptive properties could be achieved by elimination of infrared portion of light passing through glass by suitable change of interlayer. Use of these glasses improves overall solar energy management. AC load is reduced by reducing overall vehicle interior temperature. The cool down time for vehicle interior is reduced and also the skin irritation from solar beam is reduced.

#### Acoustic comfort glasses:

Newly developed PVB films with enhanced vibration damping are now available providing alternative to poured resins for glazing systems designed to meet high sound attenuation requirements. This can further reduce noise levels in cars.

Decay of free vibration on laminated glass with vibration damping PVB.

The main contribution of acoustically effective interlayer's to reducing sound transmission resides in their capability to drastically reduce the amplitude of vibration the partition is excited to under resonance. While the standard PVB does not contribute significantly to damp low frequency vibrations, the acoustics PVB does. At a service temperature of 20 degC and at approximately 280 Hz frequency up to 33% damping can be achieved with vibration damping PVB



compared to standard PVB.

#### Technology Challenges

Though the automotive glass has witnessed various new technologies, still there are technology challenges ahead :

- Recycling of glass and finding good use of recycled PVB : Technology needs to be developed further to ease recycling of glass and find alternative use of recycled PVB in potential areas which are more cost effective thus promoting recycling.
- Special coatings need to be developed to resist yellowing of glass during long exposure to alkaline chemicals, Ammonia atmospheres
- Quantitative methods to find out compressive stresses on toughened glass surface need to be developed correlating the stress levels on the glass and glass fracture behavior.
- Special climatic test cycles need to be developed for validation of glass thus simulating to climatic change including thermal fluctuation temperature and humidity variations.
- As the thermal and acoustic properties of automotive glazings depend on the glass coating and modification of interlayer, more research need to be done on different coatings and interlayer materials to enhance safety and comfort levels in the automotive glazings.

#### About the Author:



G Raghvendra is presently working with Tata Motors Limited as AGM in Engineering research centre materials group from Past eight years. He has done B tech from IIT Roorkee and M Tech from IIT Chennai He is responsible for Chassis, suspension and vehicle components Material/process and design validation . Prior to Tata Motors, he worked with M/S Lucas TVS Limited, Chennai. Valeo Clutch Limited, Chennai.

## Contribute your articles to Advanced Materials & Processes (AM&P)

#### Ed Kubel.

It's my pleasure to communicate with you through this Pune Chapter News Letter. As you are aware AM&P is monthly magazine available online to members. Hard copies are sent to members on request. The circulation of the magazine is approx.10,000 copies & it is accessed on line by over 30,000 people every month. AM&P is known for its reach technical contents and news of ASM happenings all over the world. This is 81st year of AM&P Publication. The magazine was launched in September 1930. The magazine can be accessed online at <http://amp.asminternational.org>

You can contribute your technical articles in this magazine. The first step before submitting anything is to submit to the editor an abstract of the paper. The abstract is reviewed for suitability for publication, after which the complete article needs to be submitted by the date indicated by the editorial board.

Papers should be 1200-1500 words plus 4-6 graphics (photos, graphs, schematics, tables). Photos should be

about 3.5 X 3.5 in. with a 300 dpi minimum resolution in tif, jpeg, or power point format.

Articles also should include a colorful, eye-catching photo related to the topic of discussion to use as the lead photo on the opening page of the article. It can be a stand alone photo; that is, it does not have to be referenced in the article, but should just be related to the topic.

The byline should contain the author(s) name(s), company, and location.

Contact information at the end of the article should contain the author's name, title, company, location, email address, and URL.

Please feel free to write to me in case you need any more details or assistance in your contribution for AM&P at [Ed.Kubel@asminternational.org](mailto:Ed.Kubel@asminternational.org). Typically if you respond fast to our queries and comments on your article, it is published in two months time.

I am thankful to Pune Chapter particularly, Louis Vaz, Chairman, News Letter Committee for giving me an opportunity to communicate directly with you through Chapter News Letter. I am looking forward for rich technical articles from you in good numbers in near future & continuously there after.



Ed Kubel is Senior Editor, Advanced Materials & Processes (AM&P) magazine, the monthly publication of ASM International. He is a metallurgical engineer and worked in the foundry industry for about 20 years prior to becoming involved in the magazine business. Over the past 20 years, he has worked for several trade magazines dealing with advanced materials, manufacturing processes including forming and machining, thermal processing, and materials testing and characterization. He can be contacted through e mails at [Ed.Kubel@asminternational.org](mailto:Ed.Kubel@asminternational.org)



## New Committee Chair Person



**Laxman D Deshpande- LD**  
Chairman - Membership  
Development Committee

**Laxman D Deshpande** popularly known as LD in his friend circle is a Science graduate in Chemistry with honors. He has rich experience of 37 years in field of Metallurgy, Heat Treatment and Green Field Projects.

LD has worked for Bajaj Auto, Pune, Ceekay Diakin, Aurangabad At present he is working as D.G.M Heat Treatment, in RSB Transmissions, Pune. He has successfully increased membership strength of ASM Pune Chapter. He has established good contacts with ASM Head Quarters.

He is targeting to take our chapter to category 2 (101 - 200 Members), in this year. His focus is on increasing the

Sustaining Members for the Chapter while retaining current Individual members. Another focus area for him is - to bring & involve Young Professionals in Pune Chapter activities. In case, you know someone who is our potential member, please introduce him to LD. LD will guide for excellent membership experience.

His hobbies include listening to Indian Classical Music and making friends

He can be contacted on Cell #: 9371838948 and also reachable on email

[l.deshpande@gmail.com](mailto:l.deshpande@gmail.com)

### Are your contacts updated?

Make sure your contacts (Email, Telephone & Postal Address) are updated on ASM Website. You will receive lot of updates, information, discount details, new publication notices etc from ASM International as well as Pune Chapter.

**Difficulty in updating? Contact** - Laxman Deshpande, Chairman, Membership Development Committee, Pune Chapter [l.deshpande@gmail.com](mailto:l.deshpande@gmail.com) or Candace Cunningham, ASM Head Quarter [candace.cunningham@asminternational.org](mailto:candace.cunningham@asminternational.org) for support.



**Louis F. Vaz**  
Chairman  
News Letter Committee

**Louis Vaz** born and raised in the historic city of Pune, Maharashtra, India. He has done his Diploma in Metallurgy from the Govt. Polytechnic, Pune.

Louis is currently engaged as a Metallurgical consultant, in a group of companies. His core strength is in heat-treatment of various steels and centrifugal castings. He started his career with apprenticeship in Mahindra UGINE Steel Company (MUSCO), Khopoli. Later he joined David Brown Greaves (Thapar Group company, now known as Premium Transmissions), Pune. He superannuated in 2006, as Manager, Heat-treatment and Foundry with more than 38 years rich experience.

His hobbies include sight- seeing and bird watching. He is willing to offer his consultancy in the areas of Heat Treatment & Castings.

Louis has been actively associated with ASM Pune Chapter since last four years. While he was Co - chair in Technical Program Committee last year, this year he has taken responsibility as Chairman Newsletter Committee.

Louis can be contacted on his cell no. 9860072430 and on E-mail - [loufvaz@hotmail.com](mailto:loufvaz@hotmail.com)

## Know Our Members



**Nitin Datar**  
General Manager-Heat Treatment  
& Metallurgical Laboratory,  
Turbo Gears India Private Limited  
(Carraro Group Company).

**Nitin Datar** is General Manager - Heat Treatment & Metallurgical Laboratory, Turbo Gears India Private Limited (Carraro Group Company). He joined Turbo Gears - Heat Treatment department in 2005 as Manager. His responsibilities include adhering to production targets, continuous improvements in systems, support for New component development, Resource management, planning for capital and expense budget requirements, customer & supplier interactions, supplier development programs and training to subordinates.

Prior to joining Turbo, he was with Mahindra and Mahindra - Tractor Division, Kandivali since 1996, in Manufacturing

Engineering. He also worked with R&D (PDRDS) as Manager till 2004 Dec. Nitin is Recipient of "Innovation Award" for consecutive two years for major achievement in heat treatment process, involving carbo-nitriding and shotpeening. He was also awarded as "Learning Enabler" for conducting technical trainings for other departments.

Alumni of COEP Pune, 1988 B E Metallurgy batch, Nitin is born and brought up in Mumbai. He passed SSC from S N G Purandare High school, Mulund with flying colours. Later he completed Diploma in Mechanical Engineering from K J Somaiya Polytechnic with honors & joined College of Engineering Pune.

Nitin also acquired additional Qualifications by completing Diploma in Marketing Management from Welinkar Institute, Diploma in Computer Software Technology from Sir Ratan Tata Institute, Certificate course of Internal Auditors based on ISO / TS 16949:2009 Quality Systems conducted by TUV SUD South Asia Pvt Ltd.

Nitin Started his career with Bharat Gears Limited, Mumbra in Heat treatment shop and later worked in Metallurgical Laboratory as Executive. He also worked with Godrej GE appliances in Quality Assurance Department - Metallurgical Lab.

Nitin is Member ASM International since 1996.

## BENCO THERMAL TECHNOLOGIES PRIVATE LIMITED

WE CONTROL HEAT - TO KEEP YOU COOL

BENCO- THE RELIABLE AND INNOVATIVE TEAM



**Panchapakesan Ramachandran**

Panchapakesan Ramachandran is B.Tech in Metallurgical Engineering from Institute of Technology Benaras Hindu University. After his graduation in 1982 he has worked for more than a decade with the thermal ceramics group in the field of heat treatment furnaces, development of energy efficient insulation systems.

In the year 1993 he was awarded AOTS scholarship to do studies in quality management systems 5S lean manufacturing in Japan by the Japanese government.

Mr Ramachandran and his colleagues from BHU had started Benco Thermal Technologies in the year 1990 and to remember their alma-mater their company was named BENCO meaning Benaras Engineering College.

Benco is in the field of Heat treatment furnaces and also have diversified into manufacture of sophisticated material handling systems like vibratory feeders, Vacuum furnaces etc.

The plant with excellent manufacturing facilities is located in Chennai.

## From Young Professional Committee Chair

Dear Members,

ASM all over the world has diverse, highly experienced members many of whom are pioneers and leaders in their fields. The common factor is their passion for Material Science. This has helped in knowledge sharing. To maintain this community of highly dedicated professionals, young members need to be part of this Society for seamless transition and realization of goals of ASM.

We feel there is tremendous scope to involve Young Professionals in Chapter activities & management. Worldwide there are couple of chapters like Rocky Mont which is managed by young professionals - Rebekah Kovarik is Secretary & Emmanuel De Moor is Chairman, while Marissa Reigel is Secretary of Savannah River Chapter. Hence, I took over as Chairman of Young Professionals Committee. Atul Kamble, Aditya Bakshi & Mrs Anita Patki are the members of our committee. Udayan Pathak will be our mentor.

In line with ASM International focus, our committee will focus on young professionals. We will ensure their active participation in chapter activities & management under guidance of veteran members. We will ensure addition of at least five new members this year & sustain all Young Professions. As a first step, we will generate data base of Young Professionals in & around Pune. We are planning separate brain storming meeting with few of our colleagues from various industries, sometime in Oct. Followed by get together of young professionals sometime in Dec. Our target is- 2020 onwards Pune Chapter Management should be by Young Professionals under guidance of veteran professionals.

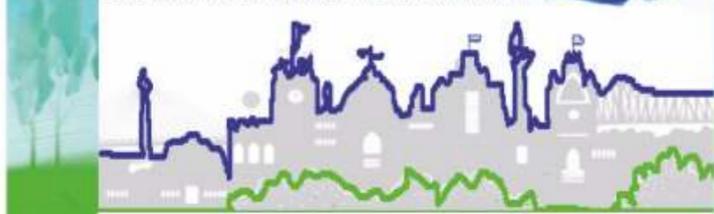
Please send me the names & contact coordinates of Young Professionals known to you, your colleagues, from your suppliers & customers etc. You can send me details on my email id [vikas.dhamankar@fiapl.com](mailto:vikas.dhamankar@fiapl.com) my cell number is 9765999214. Please join me in making your chapter younger & younger day by day.



## Upcoming Conference

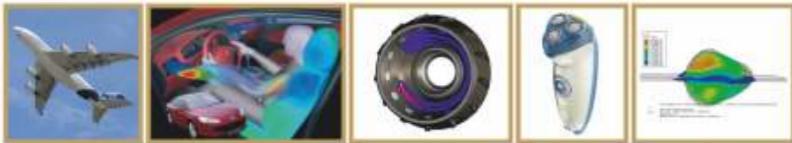
### Indo-Swedish International Workshop on Design of Materials, Manufacturing & Products

24 & 25 November 2011, Oberoi Grand Hotel, Kolkata, India



Indo-Swedish Technological Collaboration of the **Swedish Research Council**  
Organised by **Luleå University of Technology of Sweden & Tata Metallurgical Company**  
and **Jadavpur University of India**

Set in the charming city of joy, Calcutta (now called Kolkata), the workshop will cover the latest developments in modelling of materials, manufacturing processes and products. The integrated modelling of these makes it possible to create products with competitive properties. This is enabled by the integration of material science and computational thermo-mechanics. The workshop will be a meeting place for researchers in academia and industry to share their expertise. Guest speaker - Material science: Professor William Mark Rainforth of the University of Sheffield, UK and Manufacturing simulations: Professor Lars-Erik Lindgren of Luleå University of Technology, Sweden. Professor Rainforth will speak on "Design of Materials Microstructure through optimised processing"; Professor Lars-Erik Lindgren from Luleå University of Technology in Sweden will talk about the integration of material science into computational models and also its use to increase competitiveness in Swedish industry. Examples are taken from companies like Volvo Aero Corporation, Swedish Steel and Sandvik. There will be a number of other talks concerned with subjects ranging from materials science to product development. Some talks will be devoted to *metastable austenitic stainless steels* that do have good formability properties and can, with proper treatment, achieve a very high strength. Engineering sciences that go behind the brand development of Philips electric shaver "Philishave" will be addressed in this context. Two sessions will be dedicated to interesting yet diverse topics like casting simulations, modelling the behaviour of ceramics, simulating the behaviour of electronic materials etc. Other scientists and engineers from industry and academia across the globe will be present and will speak addressing a wide range of industry i.e. aerospace, automotive, biomedical, consumer lifestyle, ceramics, electronics, castings etc.



Register by 31 October 2011: delegates from industry & academia-Rs. 8000. Post Graduate Research Scholars-Rs.3000.  
[www.datametallurgical.com/dmmp2011](http://www.datametallurgical.com/dmmp2011)



Indo-Swedish International Workshop DMMP2012 will be held on 19-20 June 2012 near Luleå in North Sweden, a land of the midnight sun and close to the Arctic Circle.

## Share your knowledge through technical article

Share your technical knowledge across the world. Contribute technical articles for AM&P Please send your articles & enquiries to ED Kubel, Editor AM&P - [edkubel@asminternational.org](mailto:edkubel@asminternational.org) or Editor Chapter Newsletter - [editor.asm.pune@gmail.com](mailto:editor.asm.pune@gmail.com)

## Upcoming Technical Programmes

### Bio Materials & Medical Devices: Global Trends & Testing Solutions

By  
**James Ritchey,**  
Director, Bio Materials & Medical Devices,  
Instron, USA

**DATE** : Wed. 19th Oct. 2011  
**Time** : 6.30 PM  
**VENUE** : Department of Metallurgy & Materials Engineering, College of Engineering, PUNE – 411 001.

*Jointly with IIM. Open to all.*

### "New methods of Quenching Evaluation"

By  
**Dr Prasanna Kumar,**  
Retd Prof IIT Madras, Chennai

**DATE** : Wed. 16th Nov 2011  
**Time** : 6.30 PM  
**VENUE** : Department of Metallurgy & Materials Engineering, College of Engineering, PUNE – 411 001.

*Open to all*

### "Development of Materials for Energy Efficient Transportation"

By  
**Kumar Sadayappan**  
CANMET Materials, Canada

**DATE** : Mon. 5th Dec. 2011  
**Time** : 6.30 PM  
**VENUE** : Department of Metallurgy & Materials Engineering College of Engineering, PUNE – 411 001.

*ASM - IIM Lecture*

## From Chairman, Students' Outreach Committee

Dear Members,

Students' outreach is one of the most focused activity of our Chapter in line with ASM International focus. Members of this committee are - Dattatraya Chivate, Hemant Zaveri, LD Deshpande, Vikas Dhamankar & Udayan Pathak. The students' outreach activity is well supported by Students Outreach committee.

We have two Students Chapter which were dormant last year. This year we are reviving them. As a part of this mission, we had a presentation to the group of students in Sinhgad Institute of Engineering & Technology, Narhe Campus. More than 80 students showing interest in ASM activities attended the presentation. Dr Bagchi, Head Production Engineering & Mrs. Anita Patki, Asst Prof Metallurgy also attended the presentation. Mrs Anita Patki has agreed to support this activity by taking responsibility as Staff Mentor. Mr B R Galgali, our chapter chairman gave

presentation and answered students queries about ASM.

To strengthen students chapter activity this year we are planning - Three Technical Talks by ASM Members & eminent Materials Professional, Two Industrial Visits within Maharashtra and support for taking application oriented projects in member & non-member companies in & around Pune. Student members will be given freedom to choose the topics & industry of their choice for visit.

Although we as a committee are trying to work on this, we need your active support to carry out this activity. Please let me know your convenient dates & time for technical talk / presentation to our student members, their visit to your industry & their participation in your industry with small projects of mutual interest. You may offer them small stipend or support in the form of books, project material, travel cost reimbursement etc.

In addition to two existing chapters we are focusing on Govt. Polytechnic & Cummins College of Engineering for Women Pune to start new chapters this year. These two chapter activities are sponsored by M/S Unitherm, Chakan, Pune. While D G Chivate is concentrating on Govt. Polytechnic, Vikas is concentrating on Cummins College.

In addition to Students Chapters, Materials Camp is another major activity of Students Outreach. During April - May 2012 we will have Fifth Materials Camp. We need many volunteers for this we request you to come forward for this support. Next year we are also planning Teachers Camp to create interest and awareness in materials science amongst High School teachers. For last two projects COEP & ARAI is actively involved with us.

Before I close, I request you to participate in this activity to nurture budding Materials Professionals through this committee. E-mail - [Sudhir.Phansalkar@Dana.Com](mailto:Sudhir.Phansalkar@Dana.Com) Cell no.- 1234567890.