From Founder Chairman’s desk

It gives me immense pleasure in reaching out to SAENIS fraternity and extend my warm greetings through this SAEINDIA Northern Section Newsletter “Sampark”.

I recall the year 1998, where a group of Engineers and Managers came together to start the activities of SAE in India. The main purpose of starting SAE activities was to benchmark best practices in automotive industry and to upgrade the knowledge in the field of automobile industry. The formation of SAENIS has played an important role in spreading out the activities through membership, student chapters and by organizing various technical seminars.

SAENIS has successfully organized three International Mobility Conferences in the years of 2000, 2004 and 2008 and the SAENIS team has shown a good team work while organizing these successful conferences in Delhi. I understand that SAENIS is once again going to organize the next International Mobility Conference in 2012, for which the preparations have already started. I wish all SAEINDIA and Section board members as well as organizing committee of the conference a grand success for this event.

One of the important requirements for SAENIS members is to get proper communication through a media to get acquainted with all the happenings in SAENIS and this gap is now reduced by way of our SAEINDIA, Northern Section Newsletter “Sampark”. The automotive industry in India is growing fast and there is a strong need to meet the future demands in terms of technology and modernization. I appeal to all the present members of SAENIS to spread the word among their fellow members to promote SAE activities to take this to the level of SAE International, USA.

I am very thankful to Mr. Murli Iyer and all the past SAE Presidents in extending their full support to SAENIS and hope the same in future also.

Dr. K. Kumar
Director, Maruti Centre of Excellence
President, SAEINDIA Foundation
1st President, SAE INDIA
Founder Chairman, SAENIS

Innovative Solutions on Electroplating Technologies

The seminar covered the various challenges faced by the platers and new corrosion resistance technologies in Plater industry.

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Simulation Solutions for Automotive Industry

A seminar which aims to showcase broad applications and value of simulation in Automotive Industry with real industry examples illustrating the impact of simulation in various organizations.

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Gasoline Direct Injection

The gasoline is highly pressurized, and injected via a common rail fuel line directly into the combustion chamber of each cylinder, as opposed to conventional multi-point fuel injection that happens in the intake tract or cylinder port.

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Upcoming events…

- Seminar on “Welding Technologies”, End March, Gurgaon

Heartiest congratulations!

Tapan Sahoo, GM-MSIL and Secretary-SAENIS successfully defended his doctoral thesis on “Strategic Technology Management in Auto Component Industry in India” and has been declared eligible for the Ph.D. degree from Indian Institute of Technology, Delhi.

SAENIS community congratulates him on this great achievement.
Innovative Solutions on Electroplating Technologies, 5th February 2011, Gurgaon

A seminar on ‘Innovative Solutions on Electroplating Technologies’ was held recently. It emphasized on the various challenges faced by electroplaters and focused on the new corrosion resistance technologies in the electroplating industry.

Organized by SAEINDIA (Northern Section), the event started with a presentation by Maruti Suzuki India Limited on its experience of ELV implementation in its product lineup. This was followed by case study on the challenges faced by the electroplating industry. Electroplating, which is useful as it not only makes the surface attractive, but also ensures protection of the surface against corrosion and for repairing of finer machine parts.

The event also covered areas like future technologies, application and process of zinc protector technologies, complete chrome free technology and recent trends in electroplating & geomet applications.

The seminar saw an overwhelming response with a participation of more than 110 people from a diverse set of companies such as Lumax, Bajaj Electroplaters, JD Enterprises, Victora Tools.

Simulation Solutions for Automotive Industry, 23rd February 2011, Gurgaon

For the global automotive manufacturers to survive challenges like stiff competition, cost pressure, excessive production capacity, there is a need to focus on minimizing cost and maximizing efficiency.

Upfront design validation is crucial and engineers need a robust, integrated analysis toolset to assure success in this field. Virtual simulation tools can enable the Automotive Industry to shorten up the product development time as well as cost.

The seminar gave an overview of the simulation tools available for studying the linear, nonlinear, and transient dynamic load cases using only a single simulation tool. It witnessed an overwhelming participation of over 60 participants from OEMs and automotive suppliers.

A welcome address by Dr. Tapan Sahoo (Secretary, SAENIS) marked the beginning of the seminar wherein he emphasised on the need for shorter product development cycle along with superior quality.

Application experts from Dassault Systems Simulia Pvt Ltd, delivered sessions on process integration and design exploration, durability analysis, ride and handling. The seminar concluded with an insightful session of case studies on occupant safety presented by the worldwide OEMs.

The contents of the program were well appreciated by the participants who primarily constituted of experienced people from the field of Computer Aided Engineering.

Gasoline Direct Injection

In IC engines, gasoline direct injection (GDI) is a variant of fuel injection employed in modern 2 & 4 stroke gasoline engines. The gasoline is highly pressurized, and injected via a common rail fuel line directly into the combustion chamber of each cylinder, as opposed to conventional multi-point fuel injection that happens in the intake tract or cylinder port.

In some applications, gasoline direct injection enables stratified fuel charge (ultra lean burn) combustion for improved fuel efficiency, and reduced emission levels at low load.

In direct gasoline-injection engines, the Air/Fuel mixture is formed directly in the combustion chamber. During the intake stroke, only combustion air is drawn in through the open intake valve, the fuel being injected at high pressure into the combustion chamber by a high-pressure pump compressing the fuel to the high pressure level required in the fuel rail. The injectors are attached to the fuel rail meter and atomize the fuel extremely fast and under high pressure in order to achieve the best possible mixture formation directly in the combustion chamber.

The engine management system continually chooses among three combustion modes: Ultra lean burn, Stoichiometric, and Full power output. Each mode is characterized by the air-fuel ratio. The stoichiometric air-fuel ratio for gasoline is 14.7:1 by weight, but ultra lean mode can involve ratios as high as 65:1. These mixtures are much leaner than in a conventional engine and reduce fuel consumption considerably.

SAEINdIA NORTHERN SECTION

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VIEW OUR MEMBERS @ www.saenis.org/members

Let the editors know what you think of this Newsletter

SAENIS wishes all the members a Happy Holi!