

Editor's Point – ENGINEERING has a DAY ?

Each day is a day but the society names some of these as special days. Let us refer to the special days in the month of September: 5th happens to be the **TEACHERS Day**, that marks birthday of **Dr Sarvepalli Radhakrishnan**; 14th is **HINDI Divas** to remind us that HINDI was declared National language of India on this day; 15th is **ENGINEERS Day** to mark the birthday of **Sir Mokshagundam Visvesvaraya**, an engineer par excellence; and 17th is celebrated by the industry and engineering institutions as **Vishwakarma Divas**, in the name of the deity of Architects and Craftsmen.

There is a need to recognise and promote talent among engineering FACULTY. Why do we call them PROFESSOR and not TEACHER? They are expected to be PROFESSIONALS first, with strong inclination towards Innovation, R&D, Industry Interaction and excellent mentors. Professional bodies like the Institution of Engineers (India) with over 94 years of existence represent all branches of engineering; there are several associations or institutions of individual disciplines also, like - Societies of Mechanical, Civil, Electrical, Electronics & Telecom, Metals & Materials, Mining, Computers and Production Engineering etc. Each of these celebrate days, conduct National/International Workshops, Graduateship Examinations, Publish Journals,....but are they attracting young generation of engineers?

Call by PM of India on Aug 15, 2014 to establish ADARSH GRAM (ideal Villages) with contribution from MPLAD funds could have active participation of the IE(I) members and Engineering Institutions; it would provide opportunity for practical training in number of engineering disciplines. Why can't each institution adopt a nearby village and tune up with the Govt scheme? If you have a better idea, share with us at ispatbharti@gmail.com

UDYOG Sanchetana is FREE; is it worth it? We solicit your support to reach out to every Institution, faculty and student of engineering? Support us sustain this initiative through small contributions or mini advertisements.

Company Profile - CORNING:

Do You KNOW that a company that started with manufacturing of light bulbs, television tubes and cookware.....has moved during the journey of over 160 years to high-tech products covering the domain of specialty glass, ceramics and optical physics in ceramic substrates, optical fiber, and active-matrix liquid crystal displays.

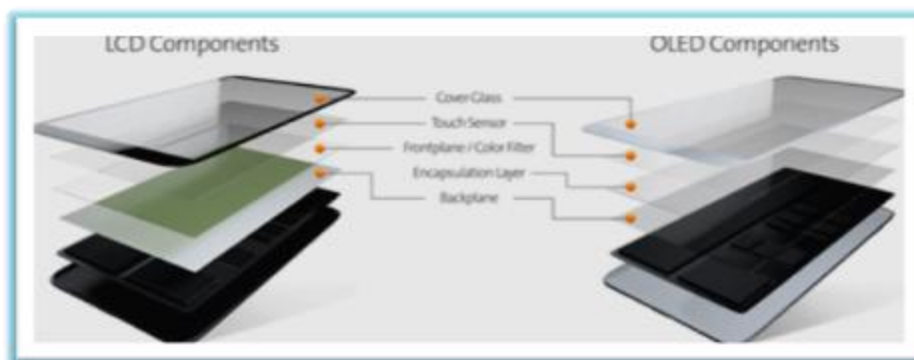
With constantly evolving business and markets, Corning's products enable diverse industries such as consumer electronics, telecommunication, transportation and life sciences. These include:

- Damage-resistant cover glass for smart phones and tablets
- Precision glass for advanced displays
- Optical fiber, wireless technologies, and connectivity solutions for high-speed communications networks
- Trusted products that accelerate drug discovery and manufacturing
- Emissions-control products for cars, trucks, and off-road vehicles

Established by Amory Houghton Sr. in 1851 and strengthened by the efforts of Dr Eugene Sullivan (1872-1962) through creation of a strong R&D environment, the basis of scientific methods of discovery that largely contributed to the innovations. CORNING is virtually in the hands of every individual using Smart Phone.


[A Pictorial View of CORNING Technology -](#)

[Source: <http://www.corning.com/index.aspx>]



Email turned 32 on August 30, 2014 but how many of us know that this quick method of message transfer was invented by an Indian American **V. A. Shiva Ayyadurai** when he was just 14?

The SOLAR Mission {लक्ष्य सौर ऊर्जा}

- 1) SOLAR IMPULSE is a project to undertake **Solar Flight around-the-World in 2015**. The first attempt, Solar Impulse-1 (Si-1) crossed coast to coast in USA from San Francisco to New York City in June 2013. Si-2 had successful flight of around 2-hours in Switzerland on June 2nd 2014. It's a single-seater plane, made of carbon fiber, with 72 meter wingspan (larger than that of the Boeing 747-8i), weighs 2,300 Kg, equivalent to that of a car. The 17,000 solar cells built into the wing supply power to four electric motors (17.5 CV each) with renewable energy. Lithium batteries weighing 633 Kg allow the aircraft to fly at night. Energy density of Batteries: 4 x 260 Wh/kg; Cockpit Size: 3.8 m³; and Solar Cells Thickness: 135 micron. The prototype makes use of existing technologies, but the Solar Impulse HB-SIB requires development of new materials and new construction methods. Solvay has invented electrolytes that allow energy density of the batteries to be increased; Bayer Material Science is allowing the project to make use of its nanotechnologies. 
- 2) 274679 Solar street lights installed in different parts of India - MNRE provides 30% capital subsidy ranging from Rs.81/- to Rs. 135/- per watt peak for installation. <http://www.energetica-india.net/enewsletters/enews-2014-08-21.htm>
- 3) Does Inverter Save Power? This is claimed by an Inverter manufacturer in its advertisement – When a Child is made to claim” बिजली बचाता है “. Can it really save power? Why not make a study at home or in College to check the Ratio of Power Output to Power Input. Calculate EFFICIENCY, it may vary from brand to brand but NO Inverter saves power. Even by rough estimate, a unit of power used through INVERTER takes TWO units to charge the Batteries. Imagine the amount of power wasted! R&D is required to convert all existing Inverters to be charged by SOLAR energy alone. And use your INVERTERS judiciously when unavoidable.

The KNOWLEDGE Link(s)

- ✚ Communication SKILLS are essential for each one of us and in particular for those in public domain. Veerendra Jaitly explains the process of COMMUNICATION in his latest BLOG released on Aug 31, 2014. Visit the LINK - <http://excellenceguru.blogspot.in/>
- ✚ Like the perfect sandwich, a perfectly engineered thin FILM for ELECTRONICS requires not only the right ingredients, but also just the right thickness of each ingredient in the desired order, down to individual layers of atoms. CORNELL UNIVERSITY, Ithaca, N.Y., researchers discovered that sometimes, layer-by-layer atomic assembly—a powerful technology capable of making new materials for electronics—requires some unconventional "sandwich making" techniques. The LINK http://www.asminternational.org/news/industry/-/journal_content/56/10180/20671421/news will take you to “Making the Perfect Atom Sandwich” article. Source: ASM International Newsletter of August 07, 2014
- ✚ Total Materia is a source of KNOWLEDGE for Metals. Click at the LINK to Read Properties of Steel <http://www.totalmateria.com/page.aspx?ID=SteelProperties&LN=EN> The site has section on Technical Articles also.
- ✚ **Company PROFILES** published in this newsletter are based on inputs from respective company WEBSITES. Ispat Bharti Foundation will upload all these profiles and many more in days to come at <http://ibf.org.in> . You are welcome to REGISTER at the site to ACCESS these. The brief company profiles are aimed at promoting awareness of MANUFACTURING industry among Students of ENGINEERING.
- ✚ **BDS – the first on-line HINDI quarterly dedicated to Metals, Materials and Manufacturing practices shall be uploaded at IBF site on September 14 to mark the Day.**

DISCLAIMER: All content published in this newsletter has been duly acknowledged for its source and is not meant for commercial or business use.

FEED BACK

“UDYOG SANCHETANA” - appears relevant for engineering aspirants and current students as well. I will share it among friends - **Mohit Kumar Jolly**, PhD Scholar - Bioengineering at Rice University, Houston (Tx), USA; IIT-Kanpur Alumni; worked with National Centre for Biological Sciences and Johns Hopkins University [Comment received through LinkedIn]

An Engineer working with Leica Geosystems, Switzerland writes - ...As an Engineer, I struggled to find the right information regarding fields of Engineering, Institutions and Job prospects during my school days . I strongly believe that if I had the exact information as available in "Dream IIT", I would have been able to multiply the opportunities. I would highly recommend "Dream IIT" to all aspiring students, their parents and school teachers. ... this book should be a part of the school curriculum. - See full comment at: <http://pothi.com/pothi/book/prof-virendra-grover-dream-iit#reviews>

Editorial Advisory Group- Dr Amitabh Verma, Atul V & Abhishek Vyas; **Mg Editor:** Prof Virendra Grover