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SNIPPETS

FOR THE PAPER INDUSTRY

Vol.19 / Issue-11

NOVEMBER 2015

www.wirefabrik.com/snippets

IS PAPER GREEN ?

The papermaking process is said to have been developed in China during the early 2nd century AD. The word "paper" is etymologically derived from Latin papyrus, which comes from the Greek -papuros, the word for the Cyperus papyrus plant. It is a versatile material in contact with us through our day with many uses, including writing, printing, packaging, cleaning, banknotes and a number of industrial and construction processes. Even though it is an integral part of our lives, we still happen to be ill informed about paper in many ways.

Environmental and deforestation issues related to paper are a source of many misconceptions that need to be addressed by the members of the industry. As per UN FAO Global Forest Resources Report 2010, about one-third of the world's land (4 billion hectares) is forested, with a net deforestation rate of 0.3%/year. About 53% of the total wood extracted from forests is used for energy production and these forests are not normally replanted. Further 28% of the extracted wood is used by sawmills and just around 11% is directly used by the paper industry. Obviously deforestation is being addressed by a sustainable forest management strategy aimed at maintaining or improving forest carbon stocks, while delivering the required timber, fibre or energy from forests.

A study conducted by the Forest Survey of India that was recently published points out that in national survey 'moderately dense' forest has decreased by 1,991 sq km while 'open forests' have increased by 7,891 sq km, putting the overall increase at 5,871 sq km. West Bengal accounts for nearly 64 per cent of this rise - 3,810 sq km, which is followed by Odisha where increase in forest cover has been 1,444 km and Kerala where the increase has been about 622 sq km. Sourcing wood from farm forestry is a win-win situation for both wood-starved paper mills and farmers. The Indian paper industry players have launched an agro-forestry initiative under which they have established a close relationship with the farming community in rural India for planting trees. Also captive plantation programs are being established. Companies like - BILT, ITC, JK Paper Ltd, IPAPPM Ltd, West Coast Paper Mills Ltd, TNPL and many more have taken solid

sustainability steps to move forward and are leading development efforts. The mills follow the principle of planting two trees for each tree felled. *Is this now green enough ?*

Recycling plays an important role in the sustainability of the paper cycle. In Europe, 70.4% of paper in use is collected for recycling. Nine out of ten corrugated boxes are made from recycled fibre and nine out of ten news papers feature on recycled paper. The cellulose fibre deteriorates with every cycle and can be reused four to eight times on average. The best contribution every person can make is by separating used paper from other residues and suitably passing same for recycling. In India around 47% of paper production is from waste paper / recycled fibre, 31% from wood/bamboo and 22% from agro residue. Currently in India, the waste paper recovery levels are around 27% only and need to grow dramatically to around 50%. The production of paper, paper board and newsprint from RCF/WP based furnish by 2025 would be around 11.7 million tons and to achieve this additional raw material requirement of RCF/ WP would be around 9.3 million tons. Thus, in the coming times waste paper recovery would substantially increase in India. *Are these indicators of the intensity of green effort ?*

The energy, water and environmental performance depend on the practices and the technologies employed. Various awards constituted by IMPA, CII and other institutions are testimonials towards promoting improvement and excellence. 'Benchmarking' is the approach adopted by the good or progressive units. They try to identify the best unit in its class, and plan to match themselves their performance in line with the best unit identified. For economical and environmental reasons, paper industry continuously targets being more self sufficient. The mix of fuel it uses has continued to evolve, with most mills producing much of their electricity and most of their heat on site. It is now clearly understood that using wood for paper first and energy last creates more value.

Every paper mill has a unique water profile based upon its location and the origin of its water, the destination of its effluent and the origin of its fibrous and non-fibrous raw materials.

INDUSTRY NEWS

With pre-laminated particleboard and MDF becoming increasingly profitable new capacity is being added in India. Reports suggest that in 2014 capacity in the wood based panel sector expanded at around 700 cubic metre per day. Wood Plastic Combination boards are also becoming popular as they are considered strong, waterproof and easy to work and finish.

30 years back, producing one ton of pulp required 250 m³ of water - now it takes only 5-40 m³. In last 10 years the paper machines have been able to reduce water consumption by one third due to better and efficient water circulation. Now the paper industry has become an active partner in the development of water stewardship. The National Productivity Council (NPC)'s Report on 'Proposed Standard for Pulp and Paper Industries in India' recommends a benchmark standard of 50 KL/Tonne of specific treated effluent discharge for the integrated pulp and paper industry. Similarly, the NPC Report suggests a benchmark standard of 15 m³/Tonne for wastepaper-based pulp and paper mills. Some mills in India have demonstrated achieving zero effluent discharge through treating and recycling of all wastewater. KPIs and benchmarks exist in the industry for steam consumption, power consumption, fibre recovery % and productivity-TPA/person. Leaders in India benchmark the international best practices and the other in India follow the trend for cost competitiveness and survival.

Electronic communication must be acknowledged as delivering efficiency but not necessarily delivering more sustainability. All monthly 'google searches' are equivalent to 260000 Kg CO₂, which could power 4239 average homes for one month. E-waste is an ever increasing environmental problem and online activities are a major contributor to global warming. Informal recycling markets in China, India, Pakistan, Vietnam, and the Philippines handle big chunk of e-waste, often shredding, burning, and dismantling the products in "backyards." Emissions from these recycling practices are

damaging human health and the environment. *Do we see people turning red here and asking how green is that ?*



Growth Opportunity

The global paper packaging market was \$215 billion in 2014 and is estimated to reach \$305 billion by 2020 growing at a CAGR of 6%. Of the paper packaging market, paperboard is estimated to be the fastest growing market with a forecasted growth rate of 7.5% during the period 2014-2020. APAC leads the market with a share of 32% and is expected to be the fastest growing market as well. Developing economies like India and China will drive the market for paper packaging segment, with applications across industries like healthcare, personal care, homecare, and retail. Paper based packaging is 100% recyclable and completely biodegradable. Paper packaging continues to be consumer's first choice today.

Conclusion

Paper is made from renewable raw material and is an indispensable part of our civilization. Paper industry directly uses only 11% of the wood extracted from forests, is not mainly responsible for forest depletion and to a good extent compensates through social forestry measures. Paper is a sustainable product and paper industry has majorly reduced its environmental impact especially in the last decade. Recycled fibre and wood fibre from well managed forests are both essential to sustain the paper life cycle. Paper continues to evolve and continuously innovate to respond to ever changing needs and meeting the requirements of society.

From the cradle to the grave, paper making process supports environment and is sustainable. PAPER IS GREEN!

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| QUOTABLE QUOTE | What Gunpowder did for War, the Printing Press has done for the Mind. - Wendell Phillips | | |
| SCRABBLE email answers by 20 th Nov'15 | Rearrange the letters for two new words relating to the paper industry. (Hint: <i>Protect</i>) RED HIZ SAD First correct answer will win a Parker Vector Roller Pen (Maximum two prizes for one person in a year). | | |
| WINNER OCT'15 | Mr. KBR Sankaram, Manager- Safety, ITC Limited - PSPD Answer : GPPS is GENERAL PURPOSE POLY STYRENE | | |
| ?QUIZ email answers by 20 th Nov '15 | Quiz: What greenhouse gas is emitted by paper in landfills? A) Pulp B) Carbon dioxide C) Methane D) Water vapor | | |
| WINNER OCT'15 | Mr. Ajay V Deshpande, Senior Executive- Paper & Textile - M/s Sudarshan Chemical Industries Limited, Pune Quiz: Optical brightening agents generates 'which' light that is added to the reflected light? Answer : Blue Light | | |
|  Prizes | 1. Best / first correct answer received will win one-year subscription to IPPTA Journal (Maximum one prize for one person in a year). 2. Best of the 12 monthly winners in a year will win one-year subscription to Paper 360° Magazine, USA. | | |
|  GYM | The Gym is like praying. Everybody thinks that by doing one hour, one day, they'll erase what they did during the week. | | |
| Published by >> | Wires & Fabriks (S.A.) Ltd. JAIPUR-302012, India. | Phone: +91-141-2341722 Fax: +91-141-2340689 Email: snippets@wirefabrik.com | Only For Private Circulation |

Website: www.wirefabrik.com

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