Vol 3, January/March. 2002, No. 1

Eco-Echoes

ICPE NEWSLETTER

Quarterly Publication of Indian Centre for Plastics in the Environment

STAY COOL WITH PLASTICS

Bin Culture

Plastic bins being handed over to (L) the Principal, Kendriya Vidyalaya Arjan Garh, New Delhi and (R) the Principal, Kendriya Vidyalaya,NTPC Badarpur
(ref. Eco-Echoes Vol-2 Oct./Dec. 2001 No. 4, p-12)

Vol. 3 January/March 2002 No. 1

IN THIS ISSUE

Cover: Environment Friendly Plastic Packaging plays useful role in serving range of items during summer season

(Material assistance derived from Mother Dairy, News Line Indian Express, The Hindustan Times, Department of Environment Govt. of NCT Delhi, UNEP, British Plastics Fedration, Dainik Jagran, Dainik Bhasker, Navbharat Times, and Mr. Vijay Merchant is gratefully acknowledged)

Readers are invited to send their contributions in the form of short notes/news items, new products development, case studies relating to Plastics and the environment, recycling technology, waste management, etc. for Publication in the Newsletter.
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STAY COOL WITH PLASTICS

Come summer and you look for cool comfort both at home, office and while travelling from place to place. Cold water, soft drinks and ice creams are much in demand during summer season. At home, possession of a refrigerator is a must for every household to keep cool your daily requirements like milk, water, vegetable and fruits.

The indoor environment has to be kept cool using a cooler or an Air-conditioner. And while on picnic with children you cannot miss the sight of ice creams whether as bars or in cups. One wonders where all plastics play a role in keeping you cool during summer.

Packaged drinking water and soft drinks of your choice appropriately chilled in PET bottles, flavored milk and lassi packaged in polypacks using polyethylene and the traditional Dahi in polystyrene cups all these keep the summer heat at bay.

The usefulness of plastics as a group of materials we can appreciate, if we look at its content, which goes in for designing a typical refrigerator. Among the range of plastics, which find applications in a refrigerator, include polystyrene (general purpose), High Density polyethylene (HDPE), High Impact polystyrene (HIPS), PVC and filled PVC, the combined total weight of these amounts to 7.45 kg.

A typical Desert Cooler uses 10 kg. of plastics, which include 8.00 kg. ABS (for the body) and 2 kg. PP filled (bottom tank), on the other hand for a window Cooler around 8.5 kg. of plastics materials find applications and these include PP filled for top cover, side grills, motor stand, pillar set, bottom tank and ABS for front grill.

For the Window Air-Conditioner, plastics content constitutes around 6 kg. (ABS, HIPS, PP Filled) for components like front grill, knobs, horizontal reflector, vertical

reflector, filter, evaporator, condenser fan, exhaust door, screen exhaust etc.

Marketing of traditional items like Dahi and Mishti Doi suitably packaged in Polystyrene cups, flavored milk and lassi in polypacks have altogether changed the user requirements and habits. Served chilled, you enjoy the pleasure of satisfying your cool and the concept of fast-food for traditional items.

Gone are the days when housewives preferred to make curd at home. With this style of living, the consumer prefers the readily available packaged Dahi in the market. There are a number of players in these traditional items, Mother Dairy being the leader followed by Amul and Nestle. Packaged Dahi introduced by Mother Dairy during summer of 2000 (500 kg/day) has now found acceptance in practically every other household with daily production of 15 tonnes for Delhi and National Capital region. This packaged Dahi in polystyrene cups is available in 100, 200 and 400 gms. Mishti Doi (50 gms pack) finds a place of pride not only in Bengali homes but all over Northern India.

Ice creams, which are in demand through out the year but more so during summer seasons have diversified in production and flavours in tune with the consumer requirements. Here again the Mother Dairy is the leader having introduced ice creams some times during mid 90's. The daily production of ice creams by Mother Dairy is 40,000 Litr. And the presentation includes in bars appropriately wrapped in multi-layer plastic films (polyester/ polyethylene). Ice cream is also marketed in polystyrene cups. The other players in ice cream market include

Kwality Walls, Amul and Freakon. There are a number of manufacturers of ice creams, who market these through ice cream parlours using polystyrene cups for packing and serving, and amongst these Nirulas are the pioneers in Delhi, followed by Haldiram and Vadilal.

In Delhi and Mumbai, ice-candy/Barf-ka-Gola - Chuski conveniently served in polypropylene/polystyrene/cups, is the most favourite with local population, and is seen formed and marketed on the spot.

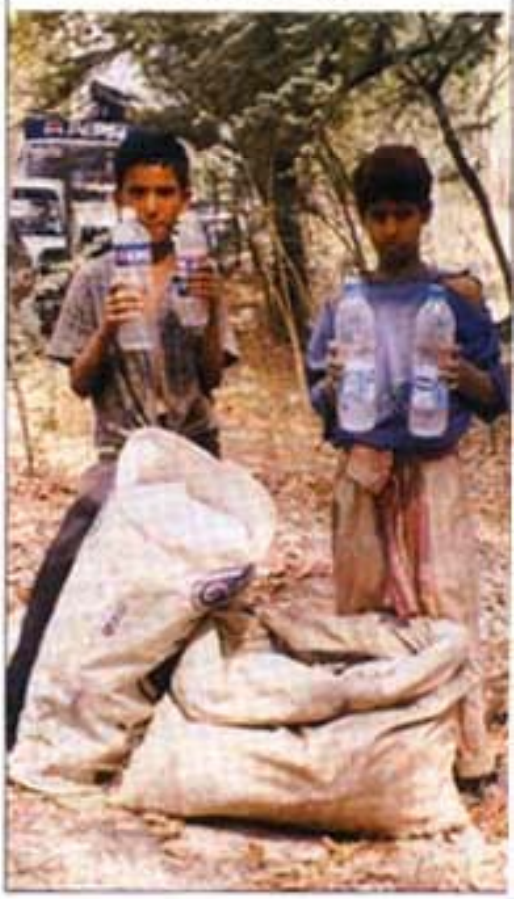
So, you cannot think of keeping cool during summer without enjoying packaged Dahi, Mishti Doi, Flavoured Milk, Lassi and Ice creams. Each one of these using plastics as packaging medium besides cold water and soft drinks in PET bottles are available in the market. Refrigerator at home to make available 24 hours requirement of cold water, and Room Cooler or Air-conditioner to keep your home cool and comfortable during summer season, have become household needs.

Plastics used to keep our cool, are environment friendly and recyclable when they form part of the waste stream.

If you wish to stay cool during summer season, can you imagine life without plastics

— O. P. RATRA

Used PET bottles, as seen collected by the ragpickers, are traded for recycing



(Oh) Mission (Poly) Bags

Through out the year 2001 the campaign against polybags seen littered around in cities and towns, continued both in the media and at seminars and conferences. So damaging has been the campaign that there has been a demand for banning the use of poly bags. Alternatives suggested like, paper, jute and cloth have been brought in the market but their mass consumer acceptability has yet to establish itself.

The Government of NCT Delhi has been organizing a systematic campaign against polybags as a result of implementation of ***"Delhi Plastic Bag (Manufacture, Sales & Usage) and Non-Biodegradable Garbage (Control) Act 2000 (Delhi Act No. 6 2001)"***. Except for the littering issue because of our garbage culture, the plastic bags are found convenient and handy while going shopping. Though plastic bags are reused several times before they become part of the waste stream, their littering in public places continues to worry the local authorities and environmentalists. The used plastic bags are also collected by the rag pickers for recycling as a regular feature. The Department of Environment,

Government of NCT Delhi has been promoting the implementation of Delhi Act as also undertaking awareness programmes through school students. One such programme the Department organized in association with 2000 school students drawn from 190 schools in New Delhi during February 2002. The Mission was **"Extinct Plastic Bags".** Around 5000 kgs, of plastic bags were collected by the students. **A Dinosaur** was fabricated from the bags thus collected and put on the display. This Mission was initiated by the Department during January 2002 and continued through February 2002. The basic objective was to get rid of plastic bags in the city. There were 120 students from 12 schools, who topped the list for plastic bag collection. The Department also put up an exhibition of various schools to highlight this campaign and efforts of the students and teachers were displayed there.

The Dinosaur.....

Mrs. Prema Sharma, the Eco teacher responsible for designing The Dinosaur-Maharaja Agrasen Model School, Pitampura, New Delhi

A view of the exhibition

These campaigns are a welcome step, if these form part of anti-littering drive, to reform our garbage culture. But directing such campaigns against one particular product like plastics, which are useful and convenient besides durable in managing, packing and carrying of our daily needs, does not help promote the cause of environment.
Plastics are environment-friendly and recyclable. Consumers at large have to decide their preference for the product on merits whether these be plastic bags or the like.

By forcing certain decision on the consumers against a particular product, which has established its consumer utillity, certainly does not carry forward the positive environment campaign.

नवभारत टाइम्स,
नई दिल्ली
17 मार्च, 2002

WORKSHOP ON URBAN WASTE MANAGEMENT

Human Settlement Management Institute (HSMI) of HUDCO organized one-week workshop on ***"Urban Waste Management: Issues in Waste Recyling and Recovery"*** sponsored by CPHEEO at New Delhi during March 18th - 22nd 2002. HSMI has been organizing these workshops every year for the benefit of officials of local authorities drawn from all over India. This workshop was attended by 52 participants, who included Deputy Mayor of Chandernagore Municipal Corporation, Sanitary Inspectors, Executive Engineers, Assistant Engineers, Health Officers, Medical Officers, Administrators, Executive Officers from Municipal Council Port Blair, Haryana Police Housing Corporation, Panihati Municipal Corporation, Tiruchirapally City Corporation, Health Department Nagar Nigam, Jabalpur, Jammu Municipal Corporation, Municipal Corporation Gwalior (MP), Nagar Nigam, Bareilly (U.P.), Bhubaneswar Municipal Corporation, Municipal Corporation of Chennai, Srinagar Municipality etc.

Mr. O.P. Ratra, Member ICPE Executive Committee, Addressed the participants on Plastics Waste Management and distributed copies of ICPE Newsletter.

Top: Mr. O.P.Ratra making his presentation to the participants

INTERNATIONAL CONFERENCE

Mr. Bipin Shah addressing the conference (Mumbai) also seen in the picture are (R) Mr. S. K. Kadakia, Chairman Indian Plastics Institute and Mr. Sujit Banerji (3rd from right) Sr. Vice President, Polymers, Reliance Industries Limited

A two-day International Conference was organized by Indian Plastics Institute on ***"Meeting Newer Challenges through Innovative Technologies"*** at Mumbai on February 14th - 15th 2002 followed by one-day Executive Conference at Chennai on February 18th 2002. This was the 3rd Annual International Conference by the Indian Plastics Institute. The conference at Mumbai was attended by over 200 delegates drawn from Industry experts, Senior Executives, Technologists, Consultants, Academicians etc. The conference was addressed amongst others by experts from Austria, France, Germany, Italy, North America, Netherlands and U.K.

Amongst the speakers at the Inaugural function included Mr. S. V. Kabra, Chairman - Kabra Group, and NEC Plastindia 2003; Dr. Swaminathan Sivaram, Deputy Director, National Chemical Laboratory, Pune and Dr. Mauro Andreoli, Managing Director, Polytech SpA, Italy. The Guests of Honour at the Chennai Conference included Mr. R. Parasu Raman, Managing Director, M/s. M. K. Electric (India) Ltd., Dr. Sushil K. Verma, Director General, CIPET, Chennai.

Dr. N. Sriram addressing the conference, also seen in the picture (R) is Dr. S. Sivaram, Deputy Director, NCL, Pune

In this keynote address, Mr. Sujit Banerji, Sr. Vice President - Polymers, Reliance Industries Ltd., urged the Plastics Industry to broaden its business horizons in order to meet the future demand through innovations like Designer polymers, Micro-reactors, Molecular switches, Biocompatible materials etc. He stressed on the competitive advantage that India has over countries like China in being the world's largest end-user of Polymers, its vast intellectual knowledge base, strong legal framework, and better familiarity with the English language used for all business purposes. He emphasized on the significance of Brand Building, Intellectual Property right (IPR) and Supply chain Management for the Indian Plastics & Polymer Industry.

There have been enormous developments and technological advances throughout the world leading to better economies of production, newer products to meet the ever increasing demands and new applications and introduction of many new innovative products.

Some of these advances and technological innovations could provide solutions to many challenges that the Indian industry is currently facing.

The subjects covered at the conference, included:

- **Market Niche - with Commodity Plastics** by Dr. Y. B. Vasudeo, Reliance Industries Ltd., India.
- **BETAFOAM Foam - Body Structure Treatment** by Dr. Luis Lorenzo & Laxman Katakkar, Dow Automotive, North America.
- Machinery & Technology Stytems for corrugators & Multi Layer pipe extru-

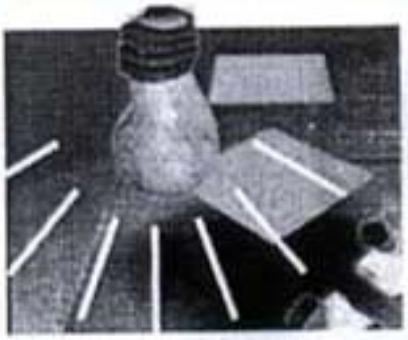
Dr. N. Sriram addressing the conference (Chennai), also seen in the picture (second from right) is Dr. Sushil Kumar, Director General, CIPET

sion lines" by Mr. Niko Bendel, Unicor GmbH, Germany.

- Electric Injection Moulding Technology 2001" by Mr. Thomas Schwarzer, Ferromatik Milacron, USA.
- High Performance Thin Shrink Films: Global Report" by Mr. Thomas Schwarzer, Ferromatic Milacron, USA.
- Current Advances in Cast Film Extrusion Technology" by Mr. Paul Bullock, Reifenhauser GmbH, Germany.
- Innovative technologies for economical production of High quality Plastic Films" by Mr. Rakesh shah, Windmoller & Holscher India Pvt. Ltd.
- New Technology Drivers for PET Packaging" by Mr. Henri ATTIAS, Sidel, S.A, France.
- Innovative ancillaries for Plastics Processing" by Mr. Bernhard Stipsits, FASTI, Austria.
- Developments in the European Pipe Industry" by Mr. Rob Spekreijse, Rollepaal, B. V., The Netherlands.
- Enhancing the Moulding Shop Efficiency with High Productive Molding Machines & Auxiliary Equipment" by Mr. P. S. Kumar, Larsen & Toubro India Ltd.

नया प्लास्टिक चुंबक तैयार किया

कोलंबस, 10 फरवरी (एजेंसी)। ओहियो स्टेट यूनिवर्सिटी के शोधकर्ताओं ने दुनिया का पहला प्रकाश संचालित 'प्लास्टिक' चुंबक विकसित कर लिया है। यह प्लास्टिक चुंबक नीले प्रकाश में सामान्य चुंबक से 1.5 गुना अधिक चुंबकीय होता है। हरे प्रकाश में इसका प्रभाव आंशिक रूप से उत्क्रमणीय होता है। आने वाले समय में प्लास्टिक चुंबक की यह तकनीक एक मैग्नेटो ऑप्टिकल तंत्र से भी बेहतर रूप में लिखने और कम्प्यूटर हार्ड ड्राइव्स से डाटा मिटाने के काम आएगी। यह प्लास्टिक चुंबक 75 केल्विन (करीब-200 डिग्री सेंटीग्रेट या -325 डिग्री फेरनहाइट) तापमान पर कार्य करता है।



यह तापमान जो आज के 'उच्च तापमान' वाले सुपरकंडक्टर्स के बराबर है, इस तकनीकी के व्यावहारिक उपयोग को संभव बनाने के लिए की-फेक्टर की तरह है। यह चुंबक टेट्रासाइनोइथिलीन (टीसीएनई) से बने एक बहुलक और मैग्नीज ऋणायनों,मैग्नीज धातु के परमाणुओं में से इलैक्ट्रॉन निकालकर बनाया गया है। इसे ओहियो स्टेट के सेंटर फॉर मटेरियल रिसर्च के निदेशक एवं भौतिकी व रसायन शास्त्र के प्रोफेसर आर्थर जे.एप्सटीन व साथियों ने विकसित किया है। एप्सटीन और उनके साथियों ने एमएनटीसीएनई पाउडर को एक पतली फिल्म पर जमा करके पहले इस पदार्थ को नीले लेजर प्रकाश से 'आवेशित' किया। उन्होंने देखा कि चुंबक ने एक उच्च डिग्री का चुंबकत्व प्राप्त कर लिया,यहां तक कि अंधेरे में इसका चुंबकत्व सामान्य स्तर से 150 प्रतिशत अधिक था। एप्सटीन का कहना है 'एक दिन हम इसे इतना विकसित कर लेंगे कि यह कमरे के तापमान पर कार्य करेगा।' हरा लेजर प्रकाश देने पर इसका प्रभाव उत्क्रमणीय होता है। यह प्रकाश इस चुंबक का चुंबकत्व इसके सामान्य स्तर से 60 प्रतिशत घटा देता है। शोधकर्ताओं का मानना है कि हरे व नीले प्रकाश की तरंगदैर्ध्य अलग-अलग होती है, जो टीसीएनई अणुओं के आकार को अलग-अलग तरह से बदल देती है। एप्सटीन कहते हैं कि एक बार जब चुंबक में एक अणु अलग आकार ले लेता है तो उसका चुंबकत्व भी बदल जाता है,और यह अपने पड़ोसी अणु को भी अपना आकार बदलने के लिए प्रेरित करता है।

■ दैनिक भास्कर
फरीदाबाद 11, फरवरी 2002

AWARENESS PROGRAMMES

Alembic Vidyalaya : Mrs. Savitaben seen speaking

IPCL Gujarati Medium School-Students

Vadodara:

ICPE continued its activity of organizing Awareness Programmes for the benefit of school students. In association with Indian Petrochemicals Corporation Ltd. (IPCL) during February 14th - 15th 2002, ICPE organized an awareness programme in IPCL Gujarati Medium School under the guidance of its Vice Principal Smt. Sudhaben Barot. Dr. Smt. Rajni Mirchandani, Principal, Vidya Vihar School, organized an interactive session with the students. The theme of the presentation in both schools was "Plastic Waste Management". ICPE literature explaining importance of plastic waste recycling and management, in Hindi, Gujarati and English was distributed along with two plastic bins. Presentations were also made to students of IPCL English Medium School. Smt. Bharati Sharma, Vice Principal and Mr. Jethwas, Asstt. Head Master highlighted the role of ICPE and explained the relevance of plastics waste management.

ICPE presentations were made by Mr. R. B. Naik, Director ICPE and Mr. N. N. Veer, Member - Executive Committee, ICPE.

Alembic Vidyalaya, Vadodara, was visited and presentations on plastics waste management were made by ICPE.

Hyderabad :

Andhra Pradesh Plastics Manufacturer's Association organized Inter School Essay Writing on "PLASTICS BANE OR BOON" on March 1st 2002 Birla Science Centre, Hyderabad. This programme was organized in association with Mr. V. V. Maheswar Rao, President Human World Organization, Hyderabad. The essays were selected and 1st, IInd, IIIrd and two consolation prizes were awarded to the winning students.

"PLASTICS DO NOT LITTER, BUT PEOPLE DO! Reduce plastic dump, Reuse Plastic, Recycle Plastic
Reduce, Reuse, Recycle.
And save Mother Nature from this dirt called plastic dump (not Plastic). But whatever may be, anything depends on the use of it by man. GOOD THOUGHTS SAVE NATURE, SAVE YOU! USE EVERYTHING CAREFULLY!

1st prize winner, R. V. Sasank Shankar, Class : IX - B, Sri Aurobindo, International School

"Plastic is undoubtly one on the creations of science. Right from the beginning of the early morning from the milk packs to fast food packing, plastic serves a lot. Without plastic in our daily routine is impossible. Combs, bristles, packing are made up of plastic in. Ceilings, floor coverings, fiber packing are made up of plastic."

"The recent ban on plastic is not totally true. A knife is a boon if use to cut a fruit but is a bane if used to chop the head of a person. " ELECTRICITY" is produced when water flows in a particular path and from certain height and same waster we use cannot do so. These two examples in our practical life show that any resource if used in a proper planning in a Boon. In the same way, if plastics are used in a proper manner, it is boon."....

IInd prize winner, K. Pavan Kumar, Class : XIII A, Sri Aurobindo International School

If we removed everything from our home made of plastics, I think then there would no more articles in the house. Our foam mattresses, cups, fibre glass, spectacles, knife holders, decorative patters would be not there. And think of other plastic materials like riot shields, credit cards etc. Plastics are used in every walk of life. The toys and sports goods have flooded the markets everywhere. The household articles are mostly made of plastic. The polythene bags used for packaging are the most important ones. They are all made of plastics.

IIIrd prize winner, N. Archana, Class: IX A, Sri Aurobindo International School

STUDENTS FOR STRICTER PLASTIC DISPOSAL LAWS

A student making his presentation

Dr. A N Bhat, Director General ICPE addressing the students

IS banning plastics the only solution to save the environment? This was deliberated upon at an inter-college debate organized by Indian Institute of Technology (IIT) Delhi and sponsored by Indian Centre for Plastics in the Environment (ICPE) on March 3rd 2002 as part of its annual technology fest.

Students from several institute all over the country participated in the fest. The participants supported their arguments with facts, figures and scientific studies. They spoke about the need of educating the common man on proper disposal of plastic as opposed to banning plastic totally.

The motion of the debate went in favour of plastics. The debate cleared a lot of misconceptions about plastics and their uses. The participants pleaded for stricter laws to ensure safe disposal of plastics.

Speaking on the occasion, Indian Centre for Plastics in the Environment, Director General, Dr. A. N. Bhat said : "I was delighted to find that today's youth is well aware of the facts regarding plastics."

The Prize Winners

The three winners, R. Nikhil, Aditya Jhulkha and Gautam Tamble, were IIT Delh
Two Consolation prizes went to Shipra Gosain (Vaish College of Engineering) ar
Harsh Dhan (IIT Delhi)

(Courtesy : Express Newsline, New Delhi, March 15, 2002)

TECHNICAL GUIDELINES FOR ENVIRONMENTALLY SOUND MANAGEMENT OF PLASTIC WASTE

The Technical Group of the Basel Convention of UNEP at its Nineteenth session meeting held at Geneva during January 14th - 15th 2002, finalized the "Technical Guidelines for the Identification and Environmentally sound Management of Plastic Wastes and for their Disposal".

"The use of plastics can make a significant contribution to conserving natural resources, reducing energy consumption and to minimizing the generation of wastes. Many uses of plastics have a long working lifetime and end-of-life plastics can often be recycled into a second life application. Nevertheless, the production, processing and use of plastics do generate wastes. It is essential that these wastes are properly and safely managed to protect human health and the environment.

All plastic wastes can be recycled under environmentally sound conditions. However, a certain number of problems appear for the recycling of plastic wastes :

- ***many types of plastics are used***
- ***plastics are containing a wide range of additives***
- ***many objects contain plastics and other materials***
- ***sorting of plastics may be technically difficult or expensive***

The final disposal of plastic waste is a concern as for any waste generated nationally. If plastic wastes cannot be recycled, they can be landfilled or incinerated under certain conditions. The incineration of plastics, with or without energy recovery, under high temperature and the appropriate abatement techniques for flue gases can be performed under environmentally sound conditions. Incineration under environmentally sound conditions with energy recovery should be the preferred option compared to landfilling or incineration without energy recovery".

(Source :UNEP)

DO YOU KNOW

PS & ABS to be Reclaimed from Electronic Goods-Extended Producer Responsibility Initiatives

Kansai Recycling systems (Osaka Pfefecture), a company engaged in home electric appliance recycling operations established by Sharp, Mitsubishi Materials and other, is planning to include two new materials, polystyrene (PS) and ABS, in its list of materials to be recycled. Basic technology to crush and pelletize has been established and a project plan in which Sharp is to utilize them as a raw material for TV set production, etc. has emerged.

Most of the resin used in home electric appliances has been disposed of by means of landfill to date. Following the enforcement of the **Home Electric appliance Recycling Law,** however, their recycling will become obligatory in the near future and technological development is being promoted for the establishment of technology to obtain high-purity pellets.

Since more than one kind of resin will be brought into a home electric appliance recycling plant, the sorting of resin before crushing will become important in obtaining high-purity pellets, which is posing a problem to recycling operations. Kansai Recycling systems has solved this problem by introducing sorted collection technology from Mitsubishi Materials, its shareholder.

Last Year, it succeeded in establishing recycling technology for polypropylene a material used for the washing machine as the first example of an application o the introduced technology.

Expansion of the scope to include PS and ABS is the next step following this success and the company has gained confidence in achieving satisfactory leve in various properties as comparable t those of virgin resin with the use of prop erty improvers for special treatment t reinforce resin strength.

Get Serious About EPR-Revamp Entire Recycling By Setting Tough Goals

Japan PVC Pipe and Fittings Association announced that it will thoroughly revamp the PVC pipe and fittings recycling syste instituted in 1998.

The revamp, aimed at collecting more waste PVC pipe and fittings and attaining a higher rate of recycling, will be achieved b setting up 29 intermediate stations for collecting waste items for transfer to recycling facilities.

The system presently operates with 15 recycling firms at 18 locations, to which used PVC products are directly sent.

By the end of September this year, each of the country's 47 prefectures will have its own intermediate station or recycling plan which, to achieve a higher rate of collection, will pay for reusable PVC wastes, In addition, the association's member firms w cooperate by promoting the sale of recycled products, such as PVC pipe, nationwide.

Through these measures, the Association aims to raise the current material recycling rate from about 40% to 80% by the en of March 2006. It is believed that the upgraded system will be unparalleled in the world for its extensive market coverage an high rate of material recycling.

Under the present system, some PVC waste producers are inconvenienced by a long haul to recycling plants, giving rise t calls for the establishment of intermediate collection points. Also, sales of recycled products have failed to show adequa growth, because only recycling firms have made efforts to promote the sale of recycled PVC products.

New Dioxin Inhibiting Additive for Safe Plastic Waste Incineration

Miyoshi Oil & Fat will launch full-scale marketing efforts next year for a plastic additive that will effectively inhibit waste plasti from forming dioxins when incinerated. The additive achieves this effect at a approximate rate of 3% of the weight of the res The firm is reportedly in the final stage of commercializing the additive, trade-named "Diocut R-30".

Diocut R-30 has been developed as a sister version of Diocut A-10, which the Tokyo-based firm is marketing as an agent f decomposing dioxins contained in incinerator fly ash. PVC and other resins containing Diocut R-30 are said to maintain th original transparency.

Miyoshi intends to market the latest version as an additive that renders plastics eco-friendly when treated as wastes or utilized as refuse-derived fuel (RDF).

(Source: Vijay Merchant, Mumbai)

Pichkaari Perfect from China

The Chinese are adding colour to Holi with their *Pichkaaris* (spray guns), which have been flooding the market since 1997. Today there are 800 varieties to choose from and the most expensive one (laser type) comes for Rs. 500.

"The Chinese *Pichkaaris* have a 10 per cent share in the Rs. 50 crore *pichkaari* market. They dominate in the high-priced range (higher than Rs. 30)", said Vijay Gupta of Bharat Sales Corporation , distributor and manufacture of *pichkaaris*. "If you compare price with quality, Chinese goods are more reasonable", said Gupta.

As far as funky function go, these *pichkaaris* vary from Aaj Tak mikes which drench people on pressing the 'on' button, open-mouthed snakes which spew water out of their fangs, blow dryers which wet your hair to AK 47s.

"I like *pichkaaris* which have a large capacity and range. And it should be like a big gun, very attractive and large", said Varun Goyal, a 14-year-old.

As far as cost is concerned, most retailers don't feel that it makes much of a difference. It is of course cheaper when it comes to the larger segment of *pichkaaris*.

There are a few vendors who are not satisfied by the Chinese *pichkaaris*. "They have various technical snags and leak a lot. This could be due to duplication," said Dinesh Gupta, a salesman.

But most buyers are nonchalant about the snazzy spray guns, "it doesn't make any difference to me whether the pichkaari is from China or not. I just want it to last one day for my young daughter", said father of a four-year-old, Rishi Kant Srivastava.

(Courtesy: Hindustan Times, New Delhi, March 29, 2002)

Litterbugs face Mop-up Penalty in Singapore

Singapore is being spruced up in a public humiliation exercise involving a conscripted "yellow" army of cleaners.

These are no ordinary cleaners – they come from the ranks of Singapore's litter felons ordered to sweep the streets as punishment for illegally discarding scrape of rubbish. In the city-state obsessed with cleanliness, businessman S. Singh was sentenced to several hours labour for dropping a tissue out of a car window.

"It flew out as I was using it," he told reporters as he joined more than 120 litterbugs dispatched to clean up duty in the past week, including sweeping the inner-city shopping belt of Orchard and Scotts Roads.

To add to their humiliation, the litter criminals must wear distinctive bright yellow jackets with "Corrective Work Order" (CWO) stamped across the back, and the local news media are invited to record their clean-up efforts. Armed with a broom, dustpan and plastic gloves, they can be ordered to spend up to 12 hours cleaning side-walks, lawns, car parks and public areas, although in most instances it is a three-hour tour of duty.

In the tiny republic which stresses the need for law and order and emphasises deterrent sentencing, a hard-line on litter is not surprising.

Singapore still has hanging and caning for serious crimes, and dishes out fines for lesser offences such a jaywalking, feeding birds in public places, chewing gum and failing to flush the toilet.

The prospect of public humiliation, along with anti-litter count-selling and pollution tours has had a profound effect on Singaporeans and made the citystate one of the cleanest countries in the world.

Taxi driver Tay thought his throwing a plastic bag from the window of vehicle had gone undetected until he received a corrective work order in the mail.

"They got my address by checking up on the license plate of my taxi", he said, adding remorsefully: "I have to face the consequences of my inconsiderate act."

First-time offenders who drop what the environment ministry calls "minor" litter–a cigarette butt, bus ticket, sweet wrapper or match stick–face a fine of up to 1,000 Singapore dollars ($545 U.S.) and litter counseling. Repeat minor offenders, and all major offenders–those who illegally discard a soft drink can and anything else not on the minor list-are find $ 2,000 and slapped with CWO.

"If you throw a major litter, it is classified as a serious offence and warrants a CWO", an Environment Ministry spokesperson said. "We have also introduced what we call an 'educational element", she said, explaining the pollution tours for litterbugs on the way to carrying out their corrective work order.

"People going for CWO are taken to rivers to see the rubbish that has accumulated at the float booms. It serves as a reminder of the consequences of their action."

PVCTOYS.com

An information resource on the safety and benefits of PVC toys

Facts that every parent, legislator and politician should know

Without plasticisers, unique PVC products such as electrical cables, synthetic leather and many life-saving medical devices, would not exist today.

A plasticiser is a substance which when added to a material, usually a plastic, makes it flexible, resilient and easier to handle. Early examples of plasticisers include water to soften clay and oils to plasticise pitch for waterproofing ancient boats. Today, modern plasticisers are man-made organic chemicals; ester, such as adipates and phthalates.

Importantly, they are not just additives (like pigments or fillers), they are major components that determine the physical properties of polymer products.

Phthalates

The most commonly used plasticisers are phthalates. They are colourless, odourless liquids produced by a simple chemical reaction, whereby molecules of water are eliminated from commercially produced petrochemical products.

Many different plasticisers are produced by less than 100 are in commercial use. In Western Europe approximately one million tonnes of phthalates are used each year, predominantly to plasticise PVC (polyvinyl chloride) to make flexible PVC products. The most common phthalates are di-2-ethyl hexyl phthalate (DEHP, also sometimes called DOP), disodecyl phthalate (DIDP) and diisononyl phthalate (DINP).

We use many PVC products everyday but tend to take them for granted. They include everything from lifesaving medical devices such as medical tubing and blood bags, to footwear, electrical cables; packaging, stationery, and toys. In addition, phthalates are used in other non-PVC applications such as paints, rubber products, adhesive and some cosmetics.

MIGRATION LIMITS

Why are they needed if phthalates are safe?

Almost everything that we come into contact with in our daily lives can be toxic if we consume too much including water.

As a result, many of the items we use freely and without a second thought are now governed by migration limits.

In the case of food packaging for example, there are regulations governing the amount of printing ink that can migrate from boxes into the food, which is placed in them.

This does not mean they are unsafe or that necessarily only a small amount of them should be used. It simply ensures that people are not unwittingly exposed to levels, which might cause them harm over a period of time.

Importantly it reassures consumers that they will never even come close to being exposed to what might be a dangerous level because migration limits always have huge margins of safety built into them.

It is this same reassurance that phthalate manufacturers believe has to be given to consumers in order for their confidence to be restored in softened PVC.

Industry also recognizes and understands that the public and politicians favour higher margins of safety when children are involved.

PVC–The Choice of Toy Makers

Toy makers around the world have been using PVC for more than 40 years to make some of the best known and most popular toys and children's products. Why? Because PVC makes good, safe toys that are durable, easy to clean and are fun for kids of all ages!

In addition to its safety record, toy makers also use PVC because of its versatility; it can be easily formulated to be flexible or rigid, or to be virtually any colour of the rainbow. PVC's durability helps toys to withstand even the most rugged play, and parents can appreciate the fact that it can be easily cleaned, helping to keep children safe from germs.

(Source: PVCTOYS.com is an initiative of the European Council for Plasticisers and Intermediates (ECPI)

PVC-A good environmental option

Independent Third Party Assessments

John Emsley, Science Writer in Residence, Department of Chemistry, Cambridge University, concluded in a chapter on PVC in his book, the Consumer's Good Chemicals Guide (1994); "As far as I am aware, no member of the public has ever been harmed by PVC, and many pepole own their lives to it. It is time we learned to live in peace with a rather wonderful plastic."

The findings of a study commissioned by the Swedish Government and carried out by Naturvardsverket, the Swedish national Environment Portection Board (June 1956), which concluded "both the manufacture and use of PVC products are acceptable.."

A report published by Australia's influential Commonwealth Scientific and Industrial Research Organization (in September 1996, and subsequently updated in Summer 198), which concluded that, "the balance of evidence suggests that there is no alternative material to PVC in its major product application that has less overall effect on the environment."

The German Council of Environmental Advisors (SRU), which reports to the German Federal Government, included a new evaluation of PVC in its latest environmental report (1998). The SRU concluded that PVC related "risks" to health and the environment are not significant enough to justify a ban or wide restrictions." The SRU's chairman noted that, "there are no longer reasons to discriminate against PVC." This is a very different view to that expressed by SRU in 1991, and reflects the PVC industry's commitment and ablitiy to successfully address environmental issues.

In a letter written in response to the BPF (October 1997), from the Minister of State for Science Energy and Industry, John Battle MP, the UK Government confirmed its support for PVC when the Minister stated that, "...conerning PVC and the chlorine based industry in general, Min-

isters have made clear that independent evidence, such as that from Professor Rappe, the independent scientific advisor to the EU and the World Health Organization, demonstrates that PVC is a safe material in use and emissions from its manufacture and disposal are controlled by the Environment Agency."

A report produced by the German Council of Environment Advisors (SRU) and submitted to the German Federal Government in 1998. The SRU's Chairman, Professor Rehbinder, commented that developments in production and recycling technologies mean that there are no longer reasons to discriminate against PVC.

(Source : British Plastics Federation (BPF), London)

H-POWER

(HONOLULU PROGRAM OF WASTE ENERGY RECOVERY)

1. Problem

Modern municipal solid waste disposal requires a careful and well-balanced approach. Any disposal program must meet minimum environmental criteria, must be cost-effective, and must provide a service for the community that meets the expectations of its citizens.

Land in Hawaii is expensive. Because of the need to protect Oahu's underground water source form contamination, landfills must be located around the perimeter of the island on what is frequently the most valuable land Consequently, the City has historically used incineration to reduce the volume. of material going into landfills.

2. Solution

Today, Honolulu has one of the most modern waste-to-energy facilities in the world-H-POWER, a 2000-ton-per-day, refuse derived fuel, 50-megawatt, resource recovery plant. In 1997 the H-Power plant converted enough municipal solid waste per day into electricity to power more than 40,000 homes. This facility is equipped with state-of-the-art pollution controls, including acid gas scrubbers, five-field electrostatic precipitators for removal of particulate material from the exhaust gas, and modern instruments to constantly monitor all the exhaust gas parameters necessary to insure proper operation of this equipment. In addition, H-POWER has modern equipment for the removal of ferrous and non-ferrous metals from the refuse and the ash for recycling.

3. Evaluation

In the highly regulated waste-to-energy industry, state-of-the-art pollution controls have insured that H-POWER meets or exceeds all State and Federal requirements for such facilities. The plant burns Oahu's combustible refuse, which comprises 55% of the entire waste stream, reducing it 50% by weight and 90% by volume before landfilling of the ash. Along with recycling and landfilling, the H-POWER waste-to-energy facility has become one of the cornerstones of Honolulu's integrated solid waste management system.

If, as some would argue, conversion of waste to electrical energy is considered a form of recycling, Honolulu recycles between 70% and 80% of its solid waste.

4. Conclusion

H-POWER has completed nine fiscal years of operation. The 1998 report on H-POWER stated that it was the best year yet for the facility, with a total of 638,376 tons of municipal waste received and disposed. In that same year, revenues from H-POWER disposal fees were $30,722,092, while H-POWER electricity sales revenues were $2,946,914.

H-POWER has now processed in excess of 5 million tons of refuse since the plant began operation

(Source : WHO KOBE REPORT-WASTE MANAGEMENT, City and County of Honolulu)

क्या कहेंगे आप

प्लास्टिक स्ट्रॉ शॉल

शॉलों के वर्ग में जामावर को सबसे अहम स्थान प्राप्त है। हालांकि बदलते समय के साथ साथ महिलाएं अलग अलग ऊन व रेशों से बनी शॉलें इस्तेमाल में लायी जाने लगी हैं। ऐसे में कोई भी सोच भी नहीं सकता कि संपूर्ण विश्व में जब प्लास्टिक के खिलाफ एक सशक्त जनमत उभर रहा हो तब कोई शख्स प्लास्टिक की शॉल भी फैशन के चलन के तौर पर पेश कर सकता है। वह भी कोई ऐसा वैसा डिजायनर नहीं, बल्कि जिआर्जियों अर्मानी सरीखा अंतरराष्ट्रीय स्तर का, जिन्होंने फॉल विण्टर 2002/2003 संग्रह में काले पैंटसूट के साथ प्लास्टिक स्ट्रॉ से बनी शॉल पेश कर प्रयोगधर्मिता की सारी सीमाएं ध्वस्त कर दी। मिलान में पेश किए गए इस नवेले अंदाज को लोगों ने पसंद तो किया, लेकिन उनके जेहन में प्लास्टिक स्ट्रॉ शॉल बार बार कौंधती रही।

दैनिक जागरण 16 मार्च, 2002

my delhi I Care

Bhagidari

Don't let your garbage outlive you.

Learn to segregate your household waste

In 125 colonies of Delhi, the MCD, the NDMC and the Delhi Cantonment Board, have put up separate receptacles for non-biodegradable garbage and bio-degradable garbage. Ensure that you use the right receptacles.

The type of litter we generate and the approximate time it takes to degenerate :

Type of litter	Approximate time it takes to degenerate the litter
Organic waste such as vegetable and fruit peels, leftover foodstuff, etc.	a week or two
Paper	10 – 30 days
Cotton Cloth	2 – 5 months
Wood	1 – 15 years
Tin, Aluminium and other metal items such as cans	more than 100 years
Plastic bags	one million years ?

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PLASTICS

Make it Possible

PLASTICS ARE ENVIRONMENT FRIENDLY AND RECYCLABLE

प्लास्टिक पर्यावरण अनुकूल तथा पुनः चक्रण योग्य है