Mel Ettenson's GLOBAL PLASTICS LETTER

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"A World of Plastics Information"

MAY 2008

Dear Colleague:

Dreaded deceleration driving downturn…reports received reflect recession. At this point in the business cycle many global economies are facing negative growth, despite inflation in many commodities such as the feedstocks for our industry. We expect this to continue throughout 2008 and into 2009, certainly slowing sales growth considerably, and even more critically, will act as a deflator of profits. What our industry needs, and is struggling to achieve, are new product and application innovations. Typically, when a recession sets in, manufacturers are loath to commit capital to R&D budgets, thus dampening efforts to develop new products for new markets, with new applications. Without that stream of innovation, market development stops and organic growth is stultified, thus creating a self-fulfilling slowdown…a scenario we are now seeing beginning to play out and holding out actual year over year unit sales increases. The recession that seems to have just gotten underway should be mild and short-lived, if all economic indicators and stock markets, which predict the future, are correct. Inflation in our industry has jumped to 13.2% for 1Q 2008 year over year compared to 1Q 2007, with no relief in sight.

With the price of oil reaching record highs almost every week this year, over a 350% increase since 2002… and no relief in sight, its effect on feedstock prices such as benzene, ethylene and methanol is unprecedented in our industry's history. Although some experts are predicting a 30% drop in commodities such as crude oil by this summer, supplies are tight and speculators abound. This will undoubtedly auger a sustained bubble which places most of our industry in uncharted territory - plan to live with these inflated price levels, many of which cannot be passed along to customer-users. Watching unit sales not currency sales only, for distributors as well as manufacturers will be the only monitoring tool to assess the past and forecast the future.

The slow economy spells distress for truckers, deals for shippers…between soaring costs of diesel and lower demand for hauls, such as happened in 2000-2001, shipping companies will hold down base rates until 2009 at least. Even package delivery services are negotiating seemingly higher, fuel driven, rates in order to protect market share. Thus the business cycle nadir offers some benefits if approached intelligently, and the other "R" word (rebound) is beginning to be heard. On the other hand, business spending is dropping and undoubtedly will remain so, dampening this years growth prospects for our industry.
Export opportunities abound especially to China, as its Yuan escalates faster against the dollar, although it will exacerbate inflation in many countries such as the U.S. as China exports inflation.

TRENDS: Web versions of ERP (enterprise resource planning), which manages bookkeeping, personnel files, order backlogs, sales and forecasts and much more are now available to firms with 50-500 workers – check out SAP's *Business ByDesign*, which costs $149 per user per month. It can be customized and kept secure from hackers – up to now only much larger companies have adapted this, including some of the largest distributors in our industry.

Thermoformed sheet sales were $8.61 billion in 2007, with 17.6% going into the industrial market and 82.4% into packaging applications…this is an important market for our industry.
Starch-based sheet by Plantic Technologies is thermoformable and compostable.
BPA, as a component of several thermoplastics, especially PC, banned in Canada – the movement is spreading and may be a boon to PETG.

OUTLOOK ASIA…by **Mal Binnie**, our Special Correspondent, embedded in the Pacific Rim
DSM Engineering Plastics announced recently in Shanghai a new range of products to meet customers demand for green products (recyclable) and to aid customer's production and reduce costs. China is seeing rising costs squeeze profit margins. For example Guangzhou reported that 347 foreign owned companies closed their doors in 2007, not all in the plastics/chemical industry. Many of these moved to less expensive Regions in China. Even though the economy of China continues to boom the costs of doing business continues to rise.

At a recent conference Brian Gladden President and CEO of Sabic Innovative Plastics (SIP) and a long time GE Plastics veteran was quoted as saying "in 2009 Chinas labour costs will be 35 percent higher than in 2006". Alan Leung, who previously ran the GE Plastics Asian operations has stated that SIP will continue its expansion with growth of production, research and development facilities in China. Leung is currently Asian Pacific President for SIP.

Taiwan under the Presidency of Ma Ying-jeou is moving towards improved relationships with mainland China. Continued normalization of economic and trade factors are at the top of the agenda. Chi Mei Corp continues its growth in ABS with the acquisition of Grand Pacific Petrochemical Corps ABS plant in Zhenjiang. Australia is being affected by the financial markets although this is not yet reflected in the plastics market. A meeting of Federal and State Ministers could not reach agreement on banning plastic bag use but South Australia will continue with its plans whilst other States are considering their options.

EPlas Pty Ltd has seen a change in its NSW team with Andre Skoubiev leaving to join the Trident Plastics team. At Designex held last month in Sydney - attended by a number of plastics distributors/manufacturers including Mulford Plastics, who launched new Kleerdex products, and EGR Plastics who introduced their new product ZENOLITE. The product is an optical polymer high gloss multipurpose panel with a wide range of domestic and commercial applications.

Vietnam continues to show strong growth with Siam Cement Thailand planning to take a majority stake with Vietnam National Chemical Corp in a 1.6 million MT/Yr petrochemical plant. Recent comments by Sabic Innovative Plastics' CEO has placed Vietnam as seeing dramatic demand growth. It is still not too late to visit the Vietnam Plastics Fair 2008 held 13-16 May in Ho Chi Minh City.

The Indian Government continues to strongly support the growth of the plastics industry and their support includes sponsoring special zones that offer tax incentives and also development of plastic technology parks. In recently announcing Plastindia 2009 Arvind Mehta President of Plastindia Foundation reaffirmed the expectation of per capita consumption to double to 10kg by 2010. The industry is growing at 15% and exports at 21%. Plastindia is held over 6 days 4-9 February 2009 with 1500 exhibitors expected from 35 countries and 72,000 sq m of space.

OUTLOOK EUROPE: by **Chris Parry**, our Special Correspondent, embedded in the U.K.
The general business climate remains fraught, with credit becoming difficult to obtain, (almost at any price), and business failures increasing. For the first time since the early 90's, house prices in the UK are showing a year-on-year decline, and mortgages are virtually impossible to get without at least 10%, and in many cases 25% deposit. The global hike in the price of oil is not only pushing up plastics raw material prices for our industry, but is hitting everyone personally both indirectly, (in product and trucking costs),

and directly with the price of fuel at the pumps. In the UK, petrol, (gas), prices have hit an all time high, (but are forecast to go even higher), with regular lead-free petrol currently averaging £1.12/litre, ($8.70/US gallon), and diesel £1.20/litre, ($9.30/US gallon).

Within the plastics sector there have been a few trade shows during the month. The PDM show, (Plastics Design and Moulding), was reasonably well attended although geared almost totally to resins, and injection and other molding techniques rather than extrusion and semi-finished products. The Sign and Digital Show, (incorporating Screenprint), appeared to have been very well attended and continued to reinforce the technology changes that have been developing over the past few years. I only found a handful of booths on which there was any reference to screenprinting. For conventional sign and display printing, solvent and UV digital print, (equipment and materials), formed the core of the show. There also appears to be a move from filament and fluorescent to LED lighting. A notable feature was a growing emphasis on digital signage, (LCD, Plasma). As this develops it will reduce the market for high performance sign and display print substrates and the volume opportunities will be in highly specialised sheet and film materials that are used in digital screens. On a European level, FESPA Digital in Geneva, Switzerland reflected the same emphasis.

TRK Group, (Thyssen Röhm Kunststoffe), is continuing the re-structuring of its European semi-finished plastics distribution businesses. Last year Plexi SA and Cadillac Plastic Spain were merged into a single business entity, ThyssenKrupp Plastics Iberića. Despite the corporate identity change, both businesses are continuing to operate as separate divisions as the former Cadillac Plastic business is a specialty film converter/distributor. From May 1, the Otto Wolff and Cadillac Plastic Germany businesses will also be merged into a single entity, (Kunststoffe Service Partner, KSP).

Daimler subsidiary, Evobus will launch a new version of its successful Citaro bus in the summer that will incorporate a 2m x 0.5m compression molded polycarbonate roof-light panel. Previously glass, the newly designed roofing panels have moved to plastics primarily because of the weight saving compared to a three dimensional, formed glass panel, and PC specifically because of its impact resistance. The PC rooflights will be coated with a UV resistant hard coating using a vertical flood coating process.

A new 65,000 tpa polycarbonate resin plant will be commissioned in June 2008 in Kazan, Tatarstan. The plant will be operated by OJSC Kazanorgsintez, a part of the giant Gazprom organization. Look out Sabic and Bayer????

Forthcoming events In May include the Airline Purchasing Show at Olympia, London, and the In-Store Show at Earls Court in London.

PRICING: Some prices, especially polyolefin's backed off in April, due to lower demand; however a surge in feedstock prices (see Trends above) may reverse that trend and auger even higher prices for most commodities and even specialty resins. DuPont led the way in April with increases for nylon, PBT, PET, as well as Hytrel – range of hikes is 0.10-0.12 per pound.

MANUFACTURER/DISTRIBUTOR BRIEFS: Altuglas introduces Tuffak XL PC sheet, said to offer better light diffusion and weathering properties…targeted as sign industry. DuPont and BASF expand production of bioplastic resins – the march to this distant drummer goes on.
ZL Engineering Plastics names Engineered Material Sales (Jim Harrington) as Midwest Rep.
Gehr Plastics presents workshop on bio polymers; adds Harker & Assoc as rep. Sabic Innovative Plastics (SIP) debuts first non-halogenated FR film – EFR 735 aims at Electronics market. Also shows new PC anti-fog freezer film called Lexan HPFDF, with an adhesive backing. Replex wins grant for solar collectors, using acrylic mirror material. Ticona introduces new generation of acetal copolymer (POM) with improved impact resistance. Quadrant reports record 2007 profits.

Sheffield's VIVAK PETG sheet now available with non-glare satin finish. ThyssenKrupp to distribute Vespel shapes in Canada for DuPont.

MERGERS, ACQUISITIONS, ALLIANCES, DIVESTITURES AND EXPANSIONS:
Aristech Acrylics sold by Mitsubishi to N.Y. based private equity group SK Capital.
Octal's APET sheet plant in Oman features new direct to sheet technology. Teleflex hose operations sold to Kongsberg of Norway. Honeywell expands its Aclar film production by 23%.
Thomas & Betts puts its PVC and HDPE pipe business up for sale – just bought from Lamson.

INDUSTRY INTERVIEWS: **Pat Foose**, Chief Operating Officer, Harvel Plastics Inc., Easton, PA. Pat, with Harvel for 27 years, will be named later this year to be the first President of IAPD in 52 years to come from the manufacturing sector and is a recipient of the IAPD Pacesetter award. Pat lives in Bethlehem, PA with his wife Shari and two children, Pat 16 and Lauren 11. We interviewed Pat in person at IAPD Tucson and by email from his office in Easton, Pennsylvania.

Q. How is business this year so far? How does it compare with 2007?
A. Our budget projections for 2008 accounted for growth but not as aggressive as in previous years due to economic indicators. We are on budget and very pleased with our performance year to date.

Q. How has the Harvel product line changed, if at all, since the turn of the century?
A. We have broadened our product line to include larger diameter CPVC piping products up to 24" diameter and market specific products like Harvel LXT for Ultra Pure Water Applications, along with products to address flame and smoke requirements in national building codes.

Q. What percent is PVC versus CPVC and other resins?
A. We are currently running about 60% PVC, 35% CPVC, and 5% other materials.

Q. What are the key products for the balance of this decade?
A. Since we are primarily a PVC and CPVC piping manufacturer and stay extremely focused on what we do best, we see fairly significant growth potential for both these products into the foreseeable future. These materials cover a wide range of applications based on their physical properties such as temperature and chemical resistance, to name a few. New technological advances with compound formulations coupled with Harvel's innovation in manufacturing expertise will broaden the physical properties even further. In turn, this will provide an even wider array of applications and markets for these products for the remaining decade.

Q. What are the key markets and applications you see for the future?
A. Anything related to energy and renewable energy. With energy prices at all time highs, and no let up in sight, significant resources will need to be allocated towards researching and developing alternative sources of energy. Plastic products will play a big part in those initiatives.

Q. How much of your product line is sold thru distribution? What are the different types of distributors who sell your products?
A. Practically everything we sell goes through distribution with the exception of products that are sold to other Pipe, Fitting and Valve Manufacturers. The various types of distribution we use to go to market are Industrial, Plumbing, Fire Protection and Plastic Sheet, Rod and Tube.

…to be continued in the June 2008 issue.

MEL ETTENSON'S GLOBAL PLASTICS LETTER™
is published monthly by Lucitron Corporation,
P.O. Box 250235, Franklin, Michigan 48025,
USA. Postage paid at Royal Oak, Michigan. $175 for 12 issues.

Subscription or Editorial Information: 248/258-5657
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