Mel Ettenson's
GLOBAL PLASTICS LETTER
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"A World of Plastics Information"

MAY 2010

Dear Colleague:

Atypical April altruism has just ended as May begins - cautiously but not cynically pessimistic seems to be the industry's tone halfway into 2Q 2010. Some recovery in sales is tempered with pernicious product price increases from resin and shapes suppliers across the board. Undeniably, forecasts for 2010-2011 global growth based on recent indicators, Euro zone debt notwithstanding, are single digit positive as follows: (Source: International Monetary Fund's estimate of percentage increase in GDP)

	2010	2011
Euro zone	1.0 %	1.5 %
Brazil	5.5	4.1
China	10.0	9.9
India	8.8	8.4
Japan	1.9	2.0
U.K.	1.3	2.5
U.S.	3.1	2.6

Europe's rescue package seems to be forestalling a Greek debt default for now, but uncertainty reigns thus adding to a slower global recovery – the Euro will continue to be devalued. Meanwhile China will probably begin to let its currency rise against the dollar by mid 2010…albeit only within a small single digit range, helping U.S. manufacturers marginally. In the U.K. with a possible change in government (causing a hung Parliament) looming this month, almost certainly driving down the pound sterling. This could cause the U.K. to enter a double dip recession with no recovery in sight.

Businesses, globally, are sitting on a cash hoard, which should help fuel economic gains in the upcoming months… new capital equipment purchases and worker hiring should ensue. Banks in most countries are sitting on liquid assets and selectively lending - lack of confidence and higher standards are holding back the opening of loan spigots. Auto sales are recovering (includes electric car sales this year and next) but gasoline price relief has taken a back seat with the oil drilling rig disaster…auguring high energy costs for the beginning of the decade…the drumbeat of higher energy costs goes on!

Economic growth in the U.S. appears to be in the 5% annual rate average for the next decade.

TRENDS: IPhone "apps" are finding their way into business procurement…Digi-Key, electronics distributor, allows buyers and engineers to collaborate (collective engineering) on writing specs and specifying sources – watch for this in our plastics industry later in this decade. The automotive industry, beginning to use more non gasoline fuels, is developing ethanol tolerant elastomers for use as fuel line tubing (Brazil has done this already) – watch for new materials to also be used in other industries.

PC automotive glazing spreading to Japan with Bayer MaterialScience and Mitsubishi cooperating technically in this effort. *Purchasing Magazine* joins *Industrial Distribution* in shutting down operations…the end of two long- time, influential, and knowledgeable business publications. Gesture technology is newest tech initiative - waving your fingers at computers, mobile phones and other devices will eliminate your mouse, remote and other computer controls…expected to be commercially operational by 2015. Profile extrusion markets in North America are expected to grow 6% annually to US$13 billion by 2014 (source: Plastics Custom Research Services), which will equal its 2005 high…resumption in growth of building and construction industry is key. Meanwhile European profile extruders used 1.8 million tons of mostly PVC resin in 2009, with window profiles dominating and Germany accounting for 46%.
India's olefins output is expected to increase 140% from 2009 to 2014…becomes the globe's third largest plastics consumer after the U.S. and China. Natureworks announces plan to market polymer grade lactides, from lactic acid…to produce biobased and 100% renewable polymers.
Metabolix has genetically engineered a microbe that eats sugar from corn and generates a plastic-like molecule called PHA which decomposes in water or soil – about to ship its Mirel pellets to produce biodegradable pens and other products.

OUTLOOK ASIA: **by Mal Binnie, our Pacific Rim correspondent located in Australia**
The Pacific area has been reasonably quiet for the month. However the Shanghai Expo opened with a bang on May Day and is well worth a visit. Chinaplas 2010 closed on April 22 with a record attendance increase of 17.5% over last year, with 2100 companies exhibiting. The "green" theme was highlighted by the machinery manufacturers. Bayer Material Science returned to the Show with a focus on new materials to ensure coverage of the market trends in the Region. The Chinese Governments stimulus package, following last years GFC, was reflected by the growth plans of many exhibitors.

The Chinese Government has signaled that increasing wage compensation for workers will be one of its primary policy goals in 2010/11. One action will be raising minimum wage standards. Also companies must compensate employees for any work related inventions they create. Details are given in the Patent Regulations. Investment continues to return to Asia. Klockner Pentaplast is investing in PVC film and shrink label film capacity in Rayong, Thailand. Dupont resumed planning for its Shenzhen, China expansion and Kraton Performance Plastics expanded its offices in Shanghai and is again exploring investment in a thermoplastic elastomers plant. Scott Rooke, ex Eastman Chemical, has been appointed VP of plastics for Ascend Performance Materials, who also exhibited at Chinaplas. Ascend reports its core focus continues to be on Nylon6.6 products.

Taiwan and mainland China continue to strengthen economic ties and this facilitates direct transportation. Recently direct resin shipments from Taiwan to Shantou, Guangdong have enabled price reductions due to the lower freight costs.

Australia and NZ report steadily improving business conditions but price pressures continue. Execs from ANZ visted Chinaplas but reported disappointment in the small number of exhibitors in the semi finished sheet, rod, tube and film products. Supply pressures are being felt in the acrylic and polycarbonate markets as inventories are rebuilt and demand recovers in USA and Europe. Mulford Plastics have become Silver sponsors of the Visual Image Sign awards and have introduced the Gilman range of Foamboards to the market. It is reported that in India domestic producers of PP and PE have been able to reduce resin prices. Condolences were echoed in the Indian plastics industry on the passing of Shri. NK Patel the founder of World Class Injection machines. Associate Editor S Rangarajan of Popular Plastics in an article on the Aging of Petrochemical plants observes that there will be a shift of the industry to the axis between the Middle East and China in the future. 8th Plastivision 2011 will be held at Mumbai Exhibition Centre 20 - 24 January 2011.

OUTLOOK NORTH AMERICA: **by Bill Shields, our correspondent in the U.S.**. The US Plastics Industry continues to race along at a great pace and many in our industry reported strong sales for the month of April. Due to the unexpected high demand by the Semiconductor Industry the resin supplies of PVDF are tightening so don't be surprised if a price increase comes along for that product as well over the next month or so. Bloomsburg, PA based **Kydex** states that their full product line is now GREENGUARD certified by GREENGUARD Children & Schools SM Certification Program. **Primex** announced a ABS price increase of $0.14 lbs. due to continued shortages in raw materials.

PRICING: PC, PP and nylon prices rose sharply in April and are continuing to increase along with PE. Benzene, propylene, ethylene, caprolactum and phenol feedstocks are in short supply thus putting pressure on most thermoplastic polymers – PC is expected to go up double digits in May. HIPS and PVC are exhibiting continual monthly single digit hikes and the outlook is a minimum 6% annually for most resins. Of course oil prices are at seasonal highs and expected to remain so throughout this year as they approach record highs set in the last decade.

MANUFACTURER/DISTRIBUTOR BRIEFS: Evonik launches PMMA multi-skin sheet called Plexiglas Resist® AAA – features anti-algae properties achieved with a nanotech based design.
SABIC introduces Lexan EFR PC film which delivers non-brominated, non-chlorinated flame retardance at thinner gauges than competing products and is targeted for notebook computer applications. Curbell Plastics minimizes waste by engaging in concentrated recycling efforts improving its sustainability profile. Nylacast/Global EPP, former UK based TP extruder, now in bankruptcy, has four of its directors/employees charged with financial fraud in UK courts.
Cereplast, Inc. to distribute bioplastic resins in China through its Vulcan Plastics Technology unit. Also in China, Ascend Performance Materials sets up to offer new nylon 6/6 product line.
Biome Bioplastics introduces bioplastics film…said to be strong, flexible and biodegradable.
Axion Polymers shows its Axfoil recycled extruded TP sheet in wide range of colors.
A.M Castle's Total Plastics unit reports 10% increase in 1Q year over year sales of US$ 23.3 million. Modern Plastics, CT, adds medical grade implantable PEEK to its inventory – distributes and stocks for Westlake Plastics. H & F Manufacturing, PA based U.S. extruder newest to offer PC multi-wall sheets. Braskem of Brazil consolidates its position as Latin America's largest petrochemical producer and accelerates it international growth plan – already leading UHMW resin supplier globally. (Editors note: Look for an Industry Interview in an upcoming issue with a Braskem executive). JM Eagle offers 50 year warranty on its PVC and PE water and sewer pipe – comes in wake of possible litigation alleging failure in municipal installations. King Plastic named Keith Watterson as marketing manager. Ticona launches Vectra halogen-free LCP.

MERGERS, ACQUISITIONS, ALLIANCES, EXPANSIONS AND DIVESTITURES:
Germany's Konrad Hornschuch AG has purchased O'Sullivan Films, formerly owned by Poly One Corp. – price and terms not announced. Eastman Chemical seeks buyer for its PET (PETG) business, its flagship business for over 30 years…divestiture also an option. Sales growing but not at acceptable profits is the reason given for the announcement made in late April. Ensinger expands in Eastern Europe with new plant in Slovakia…already has two plants in Poland.

<u>INDUSTRY INTERVIEWS</u>: **Ellis Paine, President, EHPCO, Inc.** Ellis, 71, had been at Moldex prior to starting EHPCO in 1986. Born and raised in CT (U.S.), he graduated Technical School and went into the strip extrusion business 46 years ago. Ellis and his wife Sandra have 2 children and 2 grandchildren. We interviewed him by phone and email at his offices in Putnam, CT.

Q. *You are the GOMOP...the Grand Old Man of Plastics - how long have you been in our industry?*
A. Since 1960.

Q. *How and where did you start out...and when?*
A. Began as a tool, die and mold maker for Moldex, Inc. in Wauregan, Connecticut in 1960 which had an injection molding and extrusion division.

Q. *How did EHPCO get started? When?*
A. In 1986 I purchased the extrusion portion of Moldex from Moldex, Inc.

Q. *How would you describe EHPCO's business model?*
A. EHPCO, Inc. business model is basically very simple as our goal is to sell to the marketplace product of the highest quality at a fair price. This allows our customers to sell the products produced by EHPCO, Inc. at the highest value not the lowest price.

Q. *How big is your thermoplastics coil market compared to flat sheet?*
A. The major portion of that which we produce is sold as coil stock verses flat sheet. The proportions are approximately 80% coil stock and 20% flat sheet or cut to size items.

Q. *What were some of your first products?*
A. Our first products were basically nylons and acetals. This situation remains the same.

Q. *In addition to nylons and acetals, which were some of the first resins you extruded, what are some of the fastest growing new products?*
A. Aside from nylons and acetals we offer many other thermoplastics such as Glass Filled Nylons and Acetals, Polyethylene, Polypropylene, Polyesters, etc. The most significant growth area of late has been in a modified nylon which I am not at liberty to discuss.

Q. *Where do you see the product mix in the second decade of this century?*
A. This is difficult to answer as at the moment it is our intent to supply the traditional product produced by us based on value. However, we will continue to take part in other areas and be present in the areas where we can bring value to our customers.

Q. *What are some of the biggest markets/applications for your coil products now? How about in the future?*
A. As we basically sell to the distribution network, we are not in the position to know where our products will ultimately be utilized. Unless we change our strategy or some unforeseen opportunity presents itself, I feel we will continue to conduct business the same as we have in the past, that being to sell based on value.

...to be continued in the June 2010 issue.

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