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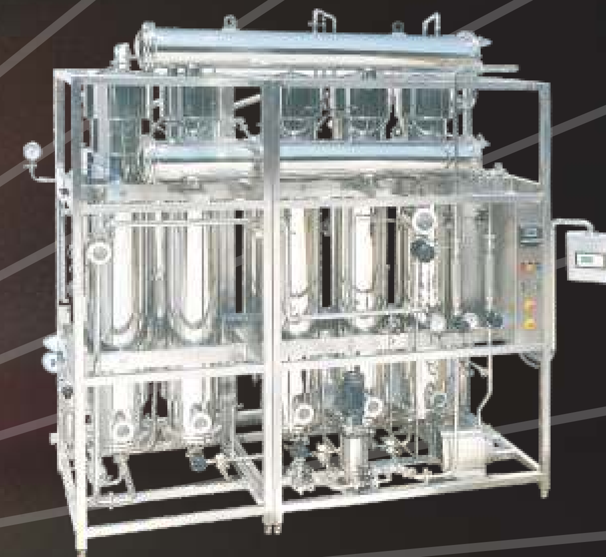

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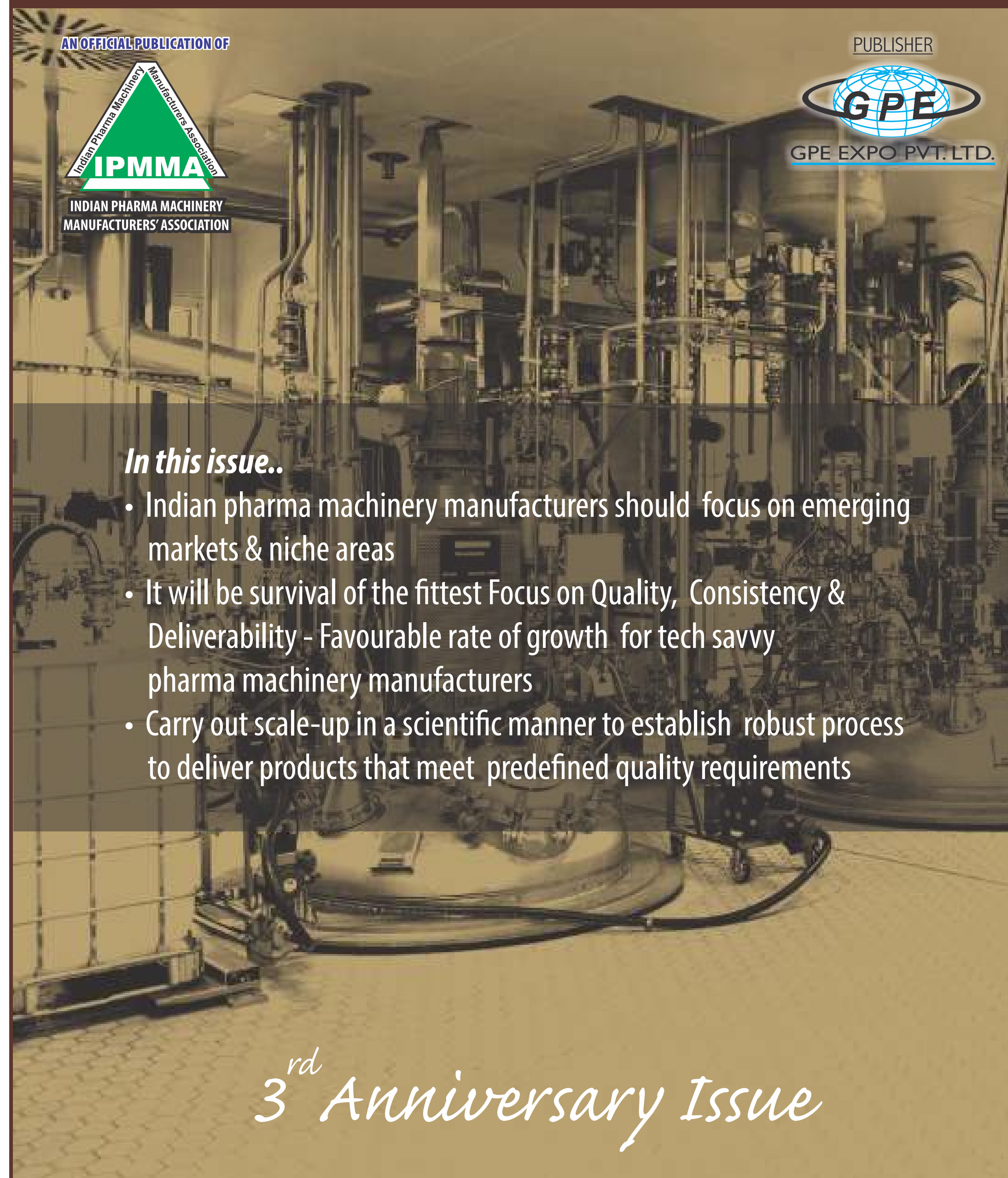
Vol: 3 Issue: 4 Oct. - Dec. 2013

PHARMA PRO&PACK

An official Publication of Indian Pharma Machinery Manufacturers' Association (IPMMA)

Focus Country **JORDAN**



AN OFFICIAL PUBLICATION OF
IPMMA
INDIAN PHARMA MACHINERY MANUFACTURERS' ASSOCIATION

PUBLISHER
GPE
GPE EXPO PVT. LTD.

In this issue..

- Indian pharma machinery manufacturers should focus on emerging markets & niche areas
- It will be survival of the fittest Focus on Quality, Consistency & Deliverability - Favourable rate of growth for tech savvy pharma machinery manufacturers
- Carry out scale-up in a scientific manner to establish robust process to deliver products that meet predefined quality requirements

3rd Anniversary Issue

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Editorial

Rajesh Shah
Editor-in-Chief
PHARMA Pro&Pack

It will almost be the end of 2013 when this Third Anniversary reaches in your hands. It is with great happiness and pride that I take this opportunity to announce that in the past three years, Pharma Pro&Pack has successfully carved out a niche for itself and is growing from strength to strength. Pharma Pro&Pack is covering one milestone after the other in the rapidly expanding pharma and pharma machinery industry of not only India but across the world..! In this success story of Pharma Pro&Pack, credit goes to all the stakeholders and most importantly to all the industry patrons and readers like you who have posed fullest confidence in a new journal and responded so very well to this mouthpiece of the Indian Pharma Machinery Manufacturers Association (IPMMA).

In the past three years, Pharma Pro&Pack has tried to live up to its name. Pharma Pro&Pack has given a voice and that too a forceful and effective voice to the problems and challenges faced by the Indian pharma industry in general and the Indian Pharma Machinery Manufacturers Association (IPMMA) in particular. To find answers to problems being faced by the industry, Pharma Pro&Pack has looked both within and outside.

Also it has been an eventful existence for Pharma Pro&Pack. The IPMMA mouthpiece has tried to do justification by proving to be a true voice of all the challenges, problems and odds staring the industry at large and trying to find solutions to these challenges. I am also happy to note that in the past two years, the response from the industry, the government both the state and the central, different agencies and all of you has been extraordinary. I sincerely hope this warmth will continue in the years to come as Pharma Pro&Pack continues to serve the pharma industry at large with a spirit of selflessness.

I also take this opportunity to remind all of you about the forthcoming PHARMA Pro&Pack Expo 2014 (PPPE 2014), a three day international exhibition on the entire spectrum of pharma machineries and allied industries to be held at the Mumbai Exhibition Centre, Mumbai, India in the month of April. The Exhibition will be an unparalleled trade platform to explore more business opportunities while exhibiting at PHARMA Pro&Pack Expo 2014, Mumbai Exhibition. Email to: contact@PharmaProPack.com for more information and assistance on how to exhibit.

After the successful inaugural edition in 2013, this would be the second such exhibition. Note down the dates (April 24 – 26, 2014) in your diaries and pack your bags well in advance. Get registered online at: www.PharmaProPack.com to avoid any last minute rust at the Exhibition Venue.

Also wishing you a very Happy & Prosperous New Year..!

From the Desk of the Publisher

Paresh Jhurmurwala
Publisher

GPE EXPO PVT. LTD.

Noted explorer and mountaineer of New Zealand Sir Edmund Hillary the first man atop Mount Everest along with Sherpa Tensing Norgay had this to say after his conquest of the Himalayas. "It is not the mountain we conquer but ourselves." How very true was Sir Hillary because his deeply philosophical statement covers almost all the endeavors we undertake in our day to day life. For the success of any small work, a big enterprise or a bigger venture we indeed have to conquer ourselves.

As Pharma Pro&Pack completes three successful years of its existence and enters into its fourth year, more responsibilities await this official journal of IPMMA. Because of the ground breaking work undertaken by Pharma Pro&Pack in its first three years, expectations from all quarters run very high. And the entire team of Pharma Pro&Pack is ready to shoulder these responsibilities. As someone has rightly said, "Do not limit your challenges... Challenge your limits."

I also take this opportunity to extend my sincere and heartfelt congratulations to one and all who have contributed in making a true success of Pharma Pro&Pack. I also hope that this cooperation towards Pharma Pro&Pack will continue in the days, month and years to come. Surely Pharma Pro&Pack will continue to lead the way as the torchbearer. In this Third Anniversary issue we have as usual tried to bring before you a bouquet of different stories. From industry updates, to country profiles, from post-show reports to technical reports – we have tried to capture different flavours.

As rightly stated by the Editor-in-Chief Mr. Rajesh Shah, one of the most important events coming up is the PHARMA Pro&Pack Expo 2014 (PPPE 2014). The exhibition having a special focus on promoting 'Brand INDIA' to both the Indian and world pharma industry is being jointly organised by the Indian Pharma Machinery Manufacturers' Association (IPMMA) and GPE Expo Pvt. Ltd.
So see you in Mumbai! Till then wishing all of you a Very Happy Dipawali and a Very Happy and Prosperous New Year..! Also please do write to us with your valuable feedback. We will be more than happy to know what you feel about Pharma Pro & Pack.

Happy & Inspired Reading of this latest issue of Pharma Pro & Pack to All of You!

EVENT

PHARMA Pro&Pack Expo 2014...
All set to go to set a new milestone

The Second edition of IPMMA initiative PHARMA Pro&Pack Expo 2014 is all set to go and it is going to be a milestone event. PHARMA Pro&Pack Expo 2014 is being supported by more than 14 national and international associations. Since the first edition of PHARMA Pro&Pack expo 2013 received a mind boggling response, expectation of whole PHARMA industry is very high on this second edition and it is being highly awaited and most promising PHARMA manufacturing exhibition. More than 72 % of the total space has been booked all ready by the industries prominent giants. There are more than 480 PHARMA manufacturing companies are expected from 18 countries at PHARMA Pro&Pack Expo 2014 and iPHEX 2014. One of the most fascinating feature of PHARMA Pro&Pack Expo

PHARMA PRO&PACK EXPO 2014

24,25,26 April 2014. Mumbai India

2014 is there are more than 20,000 potential buyers including more than 1,400 buyers from 62 countries will mark their presence in both the twin exhibitions which is truly outstanding as far as business and investment in exhibition is concern.

Moreover, one of the most eminent developments has taken place at PHARMA Pro&Pack Expo 2014, Mumbai Exhibition with allocation of a special Pavilion of PharmaLAB Expo 2014 - EXCLUSIVELY for the Analytical Instruments Companies, especially the Member Companies of the Indian Analytical Instrument Association (IAIA), also one of the Supporting Association of the Exhibition.

Some of the exhibiting PHARMA manufacturing companies as stated below have penetrated the revolutionized technologies and markets:

Ace Technologies as engineering company has already penetrated the Indian Pharma & Biotech Industry successfully. Ace continues to acquire and develop core technologies through continuous alliances with renowned partners and suppliers globally.

Established in 1980, Anchor Mark Pvt. Ltd. has manufacturing set-up with production lines at two different locations in the metropolis of Mumbai. Equipments manufactured are compliant to cGMP norms and various regulatory requirements.

XTS the extended transport system developed by the Backhoff automation Pvt Ltd can be used in many different ways in the most diverse industries.

For Over 30 years now Newtronic Lifecare has established itself as one of the leading brands in the space of Laboratory Equipments. Their product range includes; Humidity Chambers, Walk-in Humidity Chambers, Photo Stability Chambers, Freeze Thaw Chambers Cooling Chambers, etc.

Brite Proofing has emerged as synonym for quality and excellence in industrial Flooring arena. Brite Proofing is the oldest and undisputed industry leader in India.

Amuly Industries specialised in Tablet-Granulation, bulk drugs, Powder Processing machines. Today Amulya provides with latest machines in Fluidizing Technology which includes Fluid bed dryer, Fluid bed Granulator with top spray system, Fluid bed Multi processor with Top Spray Granulation & Bottom spray wruster type coating system for pellets.

Fabtech is Turnkey Solutions providers, to the pharma industry with in house design, engineering, construction and manufacturing of critical and vital elements like modular in house partition, HVAC, clean room equipments, Isolators, Granulators and external construction.

PharmaLab expo 2014

mumbai exhibition center
mumbai india - april 24 to 26, 2013

Electronics Devices Worldwide Pvt Ltd (Formerly Electronics Devices), commenced its operation in 1974 with the committed objective to introduce cost effective high frequency heating solution.

Airtech's Double Skin Air Handling Units, Modular Clean Room Partitions & Clean-Room Equipments are one of the most versatile and premium products. Air Handling Units play an important role in overall performance of HVAC system.

Pharmaceutical water developed by space age Equipment Pvt Ltd. is perhaps the most important of all pharmaceutical utilities. It is used as an excipient in many pharmaceutical formulations, as a cleaning agent, and as a separately packaged product diluent.

Ishida's X-ray Inspection system Features are Inspection capability not available in Metal Detectors or Vision Systems, Contamination Inspection for: Metal, Glass, Stone, Hi-Density Rubber and PVC Plastics Final inspection of product in sealed foil, plastic and card containers.

The Super Seal- PLC Touch is the newest addition to the Enercon's air-cooled, Super Seal induction sealer series. In addition to creating a hermetic seal for tamper evidence, product freshness and preventing leaks this powerful new system features a microprocessor, a PLC and touchscreen control. Packagers can take advantage of it's ability for program management and sync it with their network control.

An ISO 9001- 2008 Certified Company. Chitra Machineries Pvt. Ltd., is an India based plant & machinery manufacturing company caters its services to the different fields like Pharmaceuticals, Chemicals, Bulk Drugs, Cosmetics & Food Industries. Our firm is located at Ahmedabad, an industrial capital of Gujarat. in India.

Cosmeticpack (india) Private Limited is a premier marketing organization dedicated to supply Plastic & Glass products to the Pharma, Neutraceutical, FMCG & Cosmetic Industries.

Ace Technologies is a young, progressive and a dynamic company founded in 2000 by a group of professionals who had many years of experience in the field of Pharmaceutical, Food and Beverage industry. Ace Technologies shares a set of five core values VizIntegrity, Understanding, Excellence, Unity and Responsibility. They are one of the leading machine manufacturers with a state of art production facility at the outskirts of Mumbai.

The machine of CAPTECH ENGINEERS is Filling Machine Model CT-150 is fully Automatic Capsule filling and Closing Machine, suitable for filling powder / pellets in hard gelatine Capsule. It adopts intermittent motion and multi position tamping method to complete capsule orientation, separation, filling closing and ejection etc. With different size parts the machine is suitable for # 00, 1, 2, 3 & 4 of empty capsule.

The liquid syrup of Bombay Engineering works untouched by human hands consisting of Vacuum Transfer system for sugar Sugar Melting Vessel Manufacturing Vessel Storage vessel Sugar syrup filteration system Zero Hold Up filter press Integrated control panel with PLC, vfds etc. Interconnecting pipeline Working Platform Capacities from 50 Ltrs to 25000 Ltrs / batch.

Jicon Industries was established in the year 1984 for manufacturing of Pharmaceutical Processing and Packaging Machines. Over this period of almost 30 years we have sold hundreds of machines in more than 30 countries across all continents.

Bright Pharma Engineering Pvt. Ltd. manufacturers of process equipments for pharma / cosmetics / biotech industries. We are mfg. CIP skid for cleaning of process equipments & SIP skid for sterilization of large/ small volume/ bio reactor vessels. Also we mfg. Bio pharma reactor/ Holding vessels as per ASME BPE Guideline, Filtration system available for sterile products with online CIP/ SIP able.

Pharmatech sterile product preparation vats, storage vats and distribution piping have highly polished surfaces with finish up to 0.3 RA achieved through Electro Polishing; a technology adopted from M/s. Deutsche Derustit, GmbH. The range covers capacities from 5 to 30,000 Ltrs.

"GMP" is a leading manufacturer and a major exporter of liquid packaging machineries in the pharmaceuticals and allied industry.

HMPL has announced launching of ADVANCE PFS FILLING & STOPPERING SYSTEM for aqueous / viscous substances with GMP recommended SIP system. Our PFS filling systems are customized to the requirement and available to fill volume ranging from 0.2 ml onward up to 5 ml with 0.5 % accuracy. Please contact us to know more on indigenous Automatic PFS System.

PACIFIC TOOLS PVT. LTD are one of the leading Tablet Tooling Manufacturers in India with two state of the art manufacturing facilities.We are the largest supplier of Tablet Tooling in the Domestic market and are also exporting to more than 15 countries Worldwide. Apart from Tablet Tooling we also manufacture Research & Development Tablet Press with complete instrumentation and Tablet Tooling Accessories like polishing kit , inspection kit etc.

Target Innovations, manufacture and exports quality metal detection and separation systems for Pharmaceutical tablets and Capsules inspection.

SUNTEC TEKNOPAK, Promoted and managed by Professionals with experience of over 30 years in the relevant field and supported by well trained engineers & technicians for design, installation, commissioning, validation and documentation. We have fully equipped design and production capability to manufacture equipment meeting international standards and cGMP requisites.

Bharat Rubber - a Synonym of quality in Pharma Packaging. Established in 1978, the Mumbai-based Bharat Rubber Works Pvt. Ltd. The company is number 1 manufacturer in Asia for Plastic / Glass Dropper Assembly in various colour combination of RUBBER TEATS, CAPS in all sizes & Volumes.

ASPIRE INDIA's Product range includes Hight Adjustable Ladder, Storage Tank, Pressure Vessel, Cross Over Bench (With Shoe Rack), Inclined Packing Conveyor (4 + 8 Feet), Pneumatic Stirrer, Mopping Trolley 8. Work Table & Work Benches, SS Oil Can (Pumping Type), Change Room Lockers, Multipurpose Trolley, Packing Chair, Stirrer (GMP Model), etc.

AL-CAN EXPORTS PVT. LTD. Was established in 1985 AD and promoted by a technocrat Mr. Vijay K. Parikh has emerged as one of the leading manufacturers and exporters of seamless Aluminium Bottles & Containers for Industries like for aromatic chemicals, essential oils, perfumery compounds, pharmaceutical products, health care products, beverages, chemical / pesticide industries etc.

Mark Vi Trac Systems, located in Mumbai deals in the complete range of Weber Gmbh thermal inkjet printers and its related consumables and accessories, which are widely used in pharmaceuticals and printing industry.

"Punch Die & Storage Cabinet (PDC)" Punches & Dies are considered to be the heart of Tableting. Tooling must be stored carefully to prevent corrosion. Among the several storage methods available and practiced, storing of tooling in Cabinets is most preferred and recommended. ALLIED is a leader in the manufacturing of precision engineered Tablet compressed Tool Storage System also known as Punch & Die Storage Cabinet.

For more information on PHARMA Pro&Pack Expo 2014 scheduled during April 24 to 26, 2014 at Mumbai Exhibition Center, Mumbai, India, please email: contact@pharmapropack.com or CALL: +91.80004.81114 / +91.79.4000.8233 / 53 or visit the website: www.PharmaProPack.com PPP

PHARMA PRO&PACK EXPO 2014

24,25,26 April 2014. Mumbai India

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- N. K. P. Pharma Pvt. Ltd. - India
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- Erweka India Pvt. Ltd. - India
- Pankaj Industries - India
- Anish Pharma Equip Pvt.ltd. - India
- Parth Engineers & Consultant - India
- Prism Pharma Machinery - India
- Laxmi Pharma Machines - India
- Promptech Pharma Industries - India
- Rahul Ferromet - India
- Veego Instruments Corporation - India
- Saan Engineers Pvt. Ltd. - India
- Fabtech Technologies International Ltd. - India
- Sspm Systems & Engineers - India
- Thermolab Scintific Equipments Pvt. Ltd. - India
- Konark Machine Tools - India
- Compromec - India
- Spc Group - France
- Gf S.p.a. - Italy
- M&o Perry - Usa
- Amulya Industries - India
- Medi Pharma Pro-equip Manufacuring Co - India
- Electronics Devices World Wide Pvt Ltd - India
- Sanitt Equipment & Machines Pvt. Ltd. - India
- A. H. Pharmamech Pvt. Ltd - India
- Airtech Systems (india) Pvt Ltd - India
- Rapid Pack Engineering Pvt. Ltd. - India
- Anvay Pharma Systems Pvt. Ltd - India
- Fluidpack - India
- Ppi Pumps Pvt. Ltd. - India
- Sandilyam Automation Systems Pvt. Ltd - India
- Space Age Aquatechs - India
- Ambica Pharma Machines Pvt. Ltd. - India
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- Kaizen International - India
- Pharma Chem Machineries - India
- Jicon Industries - India
- Newtronic Lifecare Equipment Pvt.ltd - India
- Autocal Solutions Pvt. Ltd - India
- Mark Vi Trac Systems - India
- Plasto Craft - India
- Allied - India
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- Kamal (e) Industries - India
- Ambica Engineering Works - India
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- Enercon Asia Pacific Systems Pvt Ltd. - India
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Bright future awaits Indian pharma machinery sector as it readies to play 'growth pill' role for pharma industry

By Pharma Pro&Pack Special Correspondent

With the countdown to 2014 having started in the right earnest, the world and its huge population of billions of human beings live in whirlpool of industries. Almost all these industries from basic infrastructure to oil and gas to information technology, steel, transport or agriculture revolve around human beings. And the one industry that keeps the human being fit enough to work around this vortex of life is the pharmaceutical industry. This is perhaps the reason why the pharmaceutical industry occupies one of the highest pedestals in the world. At the end of the day, it is the pharmaceutical industry which is responsible for the survival and growth of the human race at large. As the question is rightly posed, can one imagine a modern world without the pharmaceutical industry or can the modern world really survive without the pharmaceutical industry?

The second pertinent question is that besides demand for medicines across the world, it would be the pharma machinery segment which would propel the growth of the pharma industry by supplying modern and automated machines, equipments and gadgets to meet the ever increasing demand for machinery.

World over as pharmaceuticals companies scan for new growth opportunities over the next decade, they have realised that some of the most promising areas will be found in the world's emerging economies like India. In recent times, the pharmaceuticals industry has shown high interest in India due to its sustained economic growth, healthcare reforms and patent-related legislation, a report by McKinsey & Company says. The market potential in India is based on the impact of five fundamental growth drivers: income demographics, medical infrastructure build-up, health insurance penetration, incidence of diseases and likely competitive intensity. Alongwith this, six trends – the key drivers -- will influence the growth of the Indian pharmaceuticals market over the next decade: doubling of disposable incomes and the number of middle-class households, expansion of medical infrastructure, greater penetration of health insurance, rising prevalence of chronic diseases, adoption of product patents, and aggressive market penetration driven by the relatively smaller companies.

The global pharmaceutical market was estimated at USD 700 billion in 2007 and is expected to grow at 6% CAGR to reach USD 937 billion in 2012-13. The Generic drugs market constituted USD 92 billion of global pharmaceutical sales and is expected to grow at 11% CAGR to reach USD 155 billion in 2012. The Indian pharmaceutical industry is ranked 4th in the world in terms of production volume and 13th in terms of domestic consumption value. The Indian pharmaceutical market is expected to grow from USD 13 billion in FY 2007 to USD 34 billion in FY 2012. From a market size of US$6.3 billion in 2005, the Indian pharmaceuticals market will grow to about US$20 billion by 2015. This implies a compounded annual growth rate of 12.3 per cent. This growth will be materially higher than the annual growth rate of 9 per cent witnessed during 2000 to 2005. In terms of scale, the Indian pharmaceutical market is ranked 14th in the world. By 2015, it will rank among the top 10 in the world, overtaking Brazil, Mexico, South Korea and Turkey. More importantly, the incremental market growth of US$14 billion over the next decade is likely to be the third largest among all markets. The US and China are expected to add US$200 billion and US$23 billion respectively. India, Japan, Canada and the UK are expected to be the next in line, with growth expectations in the range of US$13–14 billion during this timeframe.

The focus of the world is on Asia in general and on India in particular. And India has the capacity and capability to be the leader of the pack. Investors worldwide are watching the evolution of India's pharmaceutical industry with great interest. Rising standards and a developing regulatory infrastructure are creating new opportunities, while the well-established bulk manufacturing market is benefiting from more investment in R&D and clinical trials. Indian pharmaceutical industry as on today is worth US$8billion (Rs.400Billion approx). It ranks globally third in terms of volume, 14th in terms of value, 4th in terms of generic production and 17th in terms of export value. Almost 70% of the bulk drugs produced in India is exported. After agriculture, the pharmaceutical industry is largest contributor to the country's GDP.

India's pharmaceutical industry is without doubt one of the great success stories of recent years, delivering economic benefits, improvements in quality and significant growth. Driven by the many producers, both large and small, in the bulk drug market, this success has moved India towards a position of self-sufficiency in terms of national healthcare provision. The Indian industry has to prepare itself for a much larger role in the days to come. In India, approximately 270 research-based pharmaceutical companies and 8,000 small generic companies make up a highly competitive market that produces high quality medicines at costs lower than any other country. There are about 119 US Food and Drug Administration

(FDA) approved and 84 UK Medicines and Healthcare products Regulatory Agency (MHRA) approved plants.

Today, India has the highest number of Abbreviated New Drug Application (ANDA) filings and accounts for one-third of Drug Master Files (DMFs) in the United States of America. Studies reveal that the Indian pharmaceutical off shoring industry is set to become a US$2.5 billion opportunity by 2012-13.

Underpinning the market projection of US$20 billion is the assumption that the growth drivers will change significantly by 2015. Real GDP will grow at the compounded annual rate of 7.3 per cent. Per capita disposable income will rise from US$463 in 2005 to US$765 in 2015. Twenty-seven million households currently in the low-income category will move up. The middle-income category will witness the steepest rise, with the addition of 59 million households. Driven largely through private investments, the number of hospital beds and physicians in the country is expected to double by 2015. Corporate hospital chains will play a leading role in transforming the quality of secondary and tertiary care. Health insurance penetration is expected to double by 2015 to cover 220 million people. Traditional premium-based insurers will drive nearly 90 per cent of this growth in health insurance coverage. A close examination of the growth drivers indicates that rising disposable incomes and an upward shift in income demographics will be the dominant growth factor and will account for nearly 40 per cent of the projected market growth. Improvements in medical infrastructure come next, accounting for 20 per cent. Greater health insurance penetration will account for nearly 15 per cent of the growth. A gradual shift in disease profile will account for another 10 per cent of the growth. Finally, population growth and other factors will make up the remaining 15 per cent.

If the underlying growth drivers move more rapidly than envisaged in the base- case scenario, then the compounded annual growth rate could reach 14 per cent. In this scenario, the momentum will be steeper in medical infrastructure build-up, health insurance penetration and patent approvals, enabling the market to reach a size of US$24 billion by 2015. Conversely, if progress is slower than anticipated, then the market could remain limited to US$16 billion. This would imply a compounded annual growth rate of 10 per cent, no different from the growth rate observed over the past six years. Interestingly on the back of aggressive marketing initiatives, the pharma companies witnessed rural market sales doubling. India's rural drug market grew by 18.8 per cent in the 12 months period ended April 2011 as compared with 10.9 per cent in the previous year.

In order to increase their share in the globally important market - in India, the international drug-makers have introduced generic or low-priced version of popular medicines and have also decreased prices of their existing products. Global firms who traditionally banked on sales of their original high-priced medicines have now come into direct competition with Indian drug-makers. The Indian-makers business model is built around selling large volume of cheap generic medicines at lower margins in the country, to add to twin purpose of affordability and popularity. The industry posting healthy growth consecutively for the second year reflects the inherent strengths of the industry and improving healthcare standards in the country... demand for drugs and pharmaceuticals is on the rise, and is likely to continue next year as well. The nutraceutical segment will continue to have better-than-average growth with people getting more conscious of their general health and well-being.

But in an emerging economy like India, observers say there is a need to have a relook at the industry as a whole. Today the pharmaceutical industry in India has advanced into a stage of making quality medicines at less cost. But the need of the hour is to reengineer the pharmacy industry and bring it to a level where pharmacy professionals respond by not only providing quality medicine but also pharmaceutical care to the people. The pharmaceutical industry of India has to think globally and act locally. The Indian industry has to adopt new strategies in a changing world. And many Indian companies have realised that to make inroads into these markets of the changing world they will have to scale up their marketing strengths as well as their production capacity.

The industry think tank is sitting up and looking into the needs of the industry – from technology, technological innovations, research and development; to human resources with an emphasis on pharmacy education both present and future, current global trends in pharmacy education, curriculum design, quality improvement, up-gradation & challenges, impetus required for industrial growth, challenges posed by regulatory affairs and Intellectual Property Rights (IPR) and its impact on the India pharma industry.

In the days to come, it will become imperative for companies to exercise better control over their costs so that they are able to retain their profitability and growth in a scenario where markets become more and more competitive and existing patents of innovator drugs are set to expire their patent period. Global macro trends in the pharmaceutical industry are leading to consolidation and restructuring initiatives within the industry. A host of developments and trends like increasing costs of research and development - dried up pipelines, low productivity, poor and weakened bottom lines, greater demand from an aging population, integrated supply chain, topped up by increased losses in revenues on account of patent expiry have all led to the emergence of opportunities in the form of migration, aggregation and creation of remote contract research and manufacturing facilities in destinations like India in general and Asia at large.

Spending on healthcare will continue to be robust. According to a recently published report by the McKinsey Global Institute, the 'Bird of Gold': The Rise of India's Consumer Markets; spending on healthcare will witness the highest growth rate among all spending categories over the next two decades. Healthcare grew from 4 per cent of average household income in 1995 to 7 per cent in 2005, and is expected to grow to 13 per cent by 2025.

This view of the healthcare sector has resulted in growing interest among business leaders and policy makers in the pharmaceuticals industry. Yet much remains unknown about the long-term potential and evolution of the Indian pharmaceuticals market. How is the market likely to grow? To what extent will increasing incomes and spending power drive this growth? What role will health insurance and medical infrastructure play? How is the spending on pharmaceutical products likely to differ between urban and rural regions? What share of the market is likely to be captured by patent-protected products? What are the implications for domestic players, multinational companies and policy makers?

Analysts say that if the Indian economy continues on its current high growth path, then the Indian pharmaceuticals market will undergo a major transformation in the next decade. The market will triple to US$20 billion by 2015 and move into the world's top-10 pharmaceuticals markets. The absolute growth of US$14 billion will be next to the growth potential of the US and China, and in the same league as the growth in Japan, Canada and the UK. While the therapy mix will gradually move in favour of specialty and super-specialty therapies, mass therapies such as anti-infective and gastro-intestinal drugs will continue to comprise half of the market by 2015. Generics will continue to dominate, while patent-protected products are likely to constitute 10 per cent of the market within this timeframe. Leveraging the strong distribution infrastructure in the Tier 1 markets, i.e., metros, Class I and Class IA towns.

Fortunately Indian companies were quick to realize opportunities in the global pharmaceutical manufacturing market and have undertaken significant investment in the last decade in creating capacities of global standards to serve highly attractive regulated markets. Investment in creating capacities that meet stringent global quality parameters such as US FDA and UK MHRA is imperative for Indian players to serve high-value regulated markets.

But the decisive move to either upgrade the existing facilities or create a Greenfield facility is dependent on a host of factors such as the target market, capacity required, technology employed and category of products, tax and fiscal incentives in a special economic zone (SEZ) and dedicated pharma zones.

With big pharma companies continuing to wrestle with the challenge to maintain growth and contain costs, outsourcing is likely to become more of a compulsion than a strategic choice. With its manufacturing prowess and inherent advantage of talent, cost competitiveness and the ability to maintain global quality parameters among others, India is well positioned to be at the forefront. The recent outsourcing deal between global pharma majors and Indian pharma companies for supply of generic drugs is an indication of the same. The positive outlook justifies the investment by Indian players as they prepare themselves to emerge as partners of choice for global pharma companies.

The current period can be regarded as the nurturing and expansion phase for Indian companies as they are investing significant capital in creating world-class capacities. The next five to six years would witness Indian players reach an inflexion point as the scale of manufacturing is likely to increase manifold. The companies would invest in creating visibility and showcasing their strengths globally.

Over the last three decades the Indian pharmaceutical industry has transformed into a world leader in the production of high quality generic drugs. Indian pharmaceutical products are exported to more than 200 countries around the globe including highly regulated markets of USA, Europe, Japan and Australia. A new chapter began for the Indian pharmaceutical industry with the General Agreement on Tariffs and Trade (GATT), which became binding in January 2005. After the introduction of product patents in India, the domestic industry has witnessed a fresh spell of new product launches.

The future outlook for the pharmaceutical sector seems to be extremely positive. A number of acquisitions by the Indian pharmaceutical companies outside, particularly in the US and Europe, are helping Indian players to make their mark at the global level. The Indian drug companies account for over 25 per cent of the total generic drug applications made to the FDA of USA. Indian pharmaceutical companies are vying for the branded generic drug space to register their global presence and are expected to grow by around 15% in the near future.

India is also fast emerging as the global hub for contract research and manufacturing services (CRAMs). As compared to Western countries, India offers a huge cost advantage in the clinical trials domain. Factors such as reverse-engineering expertise, abundant investment in research facilities and availability of skilled manpower are likely to help the Indian pharmaceutical market to reach US$20 billion by 2015. Fortunately, the days when the Indian pharmaceutical industry was synonymous with cheap generic drug production are passing. While generics continue to play a major part in the industry's success, many companies have started down the long road of drug discovery, novel product development and pharma services. With high-quality research, low-cost manufacturing facilities and educated personnel, the Indian pharmaceutical industry presents both a competitive threat and partnering opportunities.

Also the Indian pharmaceutical companies are no strangers to competition. The Indian market is highly competitive with more than 300 organised players and branded promotional costs associated with every product, yet the industry is able to offer low-priced products and remain profitable in India. However, whether the Indian industry will be able to maintain the pace of expansion across the world is questionable in the current economic climate. But for the Indian Pharma Industry the time has come to look beyond generics.

The Indian pharmaceutical industry has a long history of reverse-engineering and its ability to produce and distribute globally generic copies of pharmaceutical products is well proven. Post TRIPs, the R&D focus of Indian companies has shifted towards novel drug delivery systems or discovery research. But the global launch of innovative new products is still some way off, so what are the options for companies going forward? In-licensing and custom manufacturing are alternative strategies to generics. Building upon its strengths in chemical synthesis and process engineering, the availability of highly-skilled labour and a low-cost manufacturing base, some companies have elected to pursue alternative business strategies.

Global competition for contract manufacturing is certainly intensifying, particularly with the emergence of China. However, India's capacity still gives it the edge, and more multinational pharma companies are expanding operations there. International collaborations may also ease India's transition towards R&D by providing greater access to advanced technologies and tie-ups with global leaders. The emerging trend is for pharma multinationals to increase the level of clinical research they carry out in India, attracted by lower costs, a genetically diverse population, profusion of service providers and, following the passing of patent laws, a developed regulatory infrastructure. Speaking about global opportunities, China is emerging as a competitor in the bulk manufacturing sector and its entry into the WTO has affected many of India's export markets, including textiles, it may also prove an important new market for India's pharma industry.

As India's capacity to export grows, significant demand in China makes it a likely destination. In fact, China is now one of India top five export destinations across all sectors. At a time of greater opportunities and fiercer competition, a lot will depend on the ability of Indian pharma companies to maintain and improve the standards they have achieved. This will be crucial if global partnerships are to be successful in opening up new export markets.

It is for this reason that many companies are openly debating issues such as safety and marketing. Greater regulatory scrutiny, as well as increasing demands for greater disclosure of financial and non-financial data, will present a serious challenge, but it will also be an opportunity for the Indian pharma industry to use standards of integrity and transparency as differentiators in its fight against global competition. Worried that the trend of multinational companies taking over Indian pharmaceutical firms will undermine the government's efforts at making the generic version of drugs available at affordable prices, the Health Ministry wants safeguards to be built into the Foreign Direct Investment process. India today allows 100 per cent FDI in the pharmaceutical sector, but the policy is being reviewed in the wake of fears about the impact of 'Brownfield' investments — whereby foreign companies merely take over an already existing Indian company — on the future of the Indian drug industry.

At the global level also, countries have been looking at India's fast growing pharmaceutical industry in a different light – as an increasingly integral part of the global supply chain in an environment of intensifying pressure on prices. The quest for low-cost production and research and development facilities – coupled with an eye to India's own fast-growing domestic drugs market – has led to a flurry of foreign takeovers in the past few years. But other types of partnerships – including product licensing deals, and research and development collaboration – are also growing.

India is now the world's third-biggest manufacturer of pharmaceutical products – including active pharmaceutical ingredients, and finished dosage formulations – by volume, and numerous plants have received the approval from the US Federal Drug Administration that is required for exporting to the US.

Without question, what impresses the most is the big bet the Indian pharmaceutical industry is making on the opportunity presented by patent expirations. Most generic-drug companies have 20–30 products in development for which they anticipate filing abbreviated drug applications in the next several years. The US and European markets are major targets for their generic products, but these companies ship products all over the world and also have significant sales in Africa, Latin America, and other Asian countries.

The generic-drug companies are in high-gear and are investing in large state-of-the-art manufacturing and development facilities to meet the anticipated demand. There is an anticipation of three-fold increase in unit volumes for generic APIs and formulations. The new manufacturing facilities that these generic-drug companies are building are impressive; facilities of 200,000 feet or more with state-of-the-art design and equipment are typical. In addition to the new facilities around Hyderabad, the traditional center of the Indian pharmaceutical industry, large, new pharmaceutical clusters are being developed in areas, such as Vizag, a coastal city in Andhra Pradesh state and Ahmedabad, in Gujarat. State governments are setting up special economic zones with subsidies and tax incentives to attract development.

One of the most interesting characteristics of these facilities is the predominance of equipment made within India; the displays of the Indian equipment manufacturers at exhibitions and shows are truly impressive. The availability of high-quality locally made equipment is an important source of cost advantage for Indian manufacturers as it lowers their capital-investment requirements.

Even the Department of Pharmaceuticals has prepared a "Pharma Vision 2020" for making India one of the leading destinations for end-to-end drug discovery and innovation and for that purpose provides requisite support by way of world class infrastructure, internationally competitive scientific manpower for pharma research and development (R&D), venture fund for research in the public and private domain and such other measures.

'GROWTH PILL' ROLE OF INDIAN PHARMA MACHINERY MANUFACTURERS

Nobody can deny the fact that the Indian pharma machinery industry has indeed come a very long way and many milestones were covered in this successful and long journey without much of any external help. The Indian pharma machinery manufacturers have played a deciding role in the growth of Indian pharma companies and have in a way played the role of a catalyst in allowing the Indian pharma industry to capture a sizable portion of the global pharma market. From being an import-dependent sector in the sixties and seventies, the Indian industry today is an industry with an annual growth rate of over 20 per cent. The pharma machinery manufacturing industry had its rocky moments in the seventies. But hurdles and difficulties like heavy import duties, non-availability of foreign exchange and restrictive import licensing policies in fact turned out to be a blessing in disguise for the Indian pharma machinery sector. These stumbling blocks gave an opportunity to local engineering talent to showcase their skills. The restrictions forced pharma companies to turn to local engineers, and motivate them to innovate, come up with indigenous solutions and manufacture machines to suit their needs. Soon India's very own engineering minds came to the forefront and plunged into the business of manufacturing pharma machinery at highly cost effective rates. These difficulties threatened to break the pharma industry, but these ironically turned out to be a huge opportunity for the pharma machinery segment.

During the 70s, the Indian government imposed heavy import duties and restrictive import licensing policies due to the shortage of foreign exchange. These restrictions meant that pharma companies could not import machineries and hence could not expand.

In terms of value, the pharma industry still imports more machines from abroad then what the Indian pharma machinery manufacturers export s. But in terms of total machines in quantity, Indian pharma machinery manufacturers export more machines then what the number of machines which come in. A primary reason for this phenomenon is that imported machines are very expensive. Perhaps an imported machine may be seen, eight or ten times more expensive than an Indian machine of a similar make. Also Indian pharma machinery manufacturers need to focus and zero in on machines needing high end and critical technology alongwith equipment and gadgets used in general laboratories and R&D labs. Indian pharma machinery manufacturers have to make their presence felt in this fast growing niche market of specialised machines. Many Indian pharma companies exporting their products across the world buy high end technology machines from abroad as such machines are just not available in India.

One of the major strengths of the Indian pharma machinery manufacturers is the value for money they provide. Indian machineries are extremely competitive and have a good price: performance ratio. Indian machinery manufacturers also score on the flexibility front as they are flexible in terms of deliveries and contractual terms and do not strictly adhere to contracts. This results in the Indian pharma machinery manufacturers giving good after sales service going way beyond the AMCs (Annual Maintenance Contracts). On the other hand global pharma machinery companies strictly adhere to the contracts signed and do not go out of their way to provide such support to the pharma industry.

GLOBAL COMPETITION

Till about ten years back countries like Italy, Germany and South Korea were main competitors of the Indian pharma machinery manufacturers. But the way and the manner in which China has come up is indeed a cause of worry. The Indian industry does not seem to have an answer to the sheer size and the economies of scale deployed by the Chinese pharma machinery manufacturers. Chinese machines are penetrating the world markets and even markets where Indian pharma machinery manufacturers have an established presence. China leverages its strengths of having a mass manufacturing capacity where 300 to 400 machines can be manufactured in one go. Indian manufacturers are miles behind. Also both labour and raw materials the two critical components are cheaper in China and. China may still not have perfected the art and science of critical custom made machines but China is a source of worry. The global pharma industry will still not take a chance with Chinese machinery is categories like distillation plants required for sterile products.

ADVICE

Experts say the only piece of advice to the Indian pharma machinery manufactures is that they have to deal with R&D on a war footing. This is one of the biggest issues confronting the Indian industry. Machinery manufacturers still do not give R&D its due importance and this is reflected in the low investments in R&D. The overall pharma machinery industry is also divided and fragmented into many small scale units. Time has come for the industry to join hands and scale up economically and invest in R&D in a bigger way. If not on any other front at least on the R&D front, the machinery manufacturers need to put in joint efforts. Indeed some of the big players in the segment have focused on research spend and technological development capabilities. They have successfully met these challenges by developing in-house research capabilities and investing heavily in technology development. What is also crucial is a fine understanding of the global marketplace and insight into the needs of customers around the world. Manufacturers must have the knowledge and should develop the ability to meet the regulatory and safety requirements of various countries. Company management should be able to spot future trends for the industry.

One of the other critical issues confronting the industry is the growing gap between demand and supply of trained manpower. With each passing year this seems to be a problem which is growing at a fast pace and should be a cause of worry for everyone. To attract and retain trained and skilled manpower, the pharma machinery manufacturers need to pay good and competitive salaries but the level at which the small scale manufacturers operate makes it very difficult for them to do so.

GLOBAL OUTLOOK

Indian pharma machinery manufacturers need to attract international manufacturers for high value, high tech products and should also work in the direction of forging joint ventures and work for technology transfers. To make this a success we need to polish the brand image of our products and our industry. Fortunately there are Indian companies which have understood this in the right perspective and have started working on this front because if successful this move is going to prove a win-win move for all stakeholders involved.

The government both at the central and the state levels should also give the due importance which the pharma machinery manufacturing industry deserves. A push from the government in the form of incentives on the R&D front can go a long way. The industry also needs the fullest support from the government on the exports front and the government should also play a role of a catalyst in encouraging technology transfers and tie ups.

Over the years the industry has seen a lot of capacity expansion. The Indian pharma machinery manufacturers have to keep pace with rapidly changing technology on the international scene. For that Indian machinery manufacturers have to invest in R&D, focus on brand building and should also enter into technology transfers. The Indian pharma machinery manufacturers need to have marketing tie-ups internationally so that India can increase its volumes and scale up. These efforts are on, but the industry needs to do much more. The Indian industry needs to upgrade to newer technologies, increase levels of automation and improve documentation. The Indian pharma machinery manufacturers should also understand the developments taking place at the world level in the right perspective. What is crucial is a fine understanding of the global marketplace and insight into the needs of customers around the world. Manufacturers must have the knowledge and should develop the ability to meet the regulatory and safety requirements of various countries.

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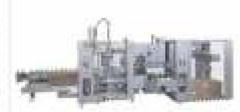

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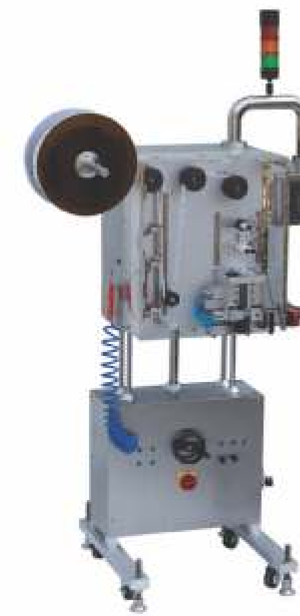

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COVER STORY

Indian pharma machinery manufacturers should focus on emerging markets & niche areas

Mr. Anjani Kumar, Vice President
CIPLA LTD.

Pharma industry is growing across the world and as we enter into the year 2014 the Indian pharma machinery manufacturers should leverage on their strengths and focus on emerging markets in different parts of the world. Alongwith the emerging markets, the Indian pharma machinery manufacturers should also focus on specialised machines and equipment mainly used for niche formulations and products. The biggest advantage is Value for Money. One can get better process, technology and acceptability. Also being one of the biggest markets for producing variety of formulations and APIs one can have every requirement fulfilled under one roof. These are the advantages on offer from India and the Indian industry should capitalise on its inherent strengths.

If I were to list out the tests, the challenges & the threats that the pharma machinery manufacturers should prepare for themselves in 2014 then I would rate reproducibility and traceability are the biggest challenges. Amongst the biggest threats that face the Indian pharma machinery industry is the fact that there is lack of investments in invention of new technologies and upgradation. Also people do talk a lot about the threat from Chinese pharma machinery manufacturers. But I do not see any such threat in the foreseeable future. There is no such threat from the Chinese machineries, except for those which are low end machines. There is nothing to worry as such immediately.

To gear up for meeting the global challenges, the Indian pharma machinery manufacturers should understand that they should have a three pronged approach. Firstly the Indian pharma machinery manufacturers should have proper representation at the national and global levels. Secondly they should revamp and improve the infrastructure in different facilities and the third is that they should adapt themselves to the changes taking place at a fast pace at the local, national and global levels. Also there has to be continuous updations and strong research based inventions. The Indian pharma machinery manufacturers have indeed succeeded in developing a global prospective and in fact it's proved, by the number of machineries being exported every year even to the developed nations. The Indian industry should also remember that technology is changing at a fast pace and they need to bring in the swiftness and the temp to match this changing technology. The coming days belong to new technology and this new technology will play a dominant role in the manufacturing industry. Unfortunately we need to take up the levels of research which at present is very low and most of the time whatever research takes place is more pertaining to updations rather than innovation.

Focus would lead to growth and the Indian pharma machinery manufacturers can see a lot of growth in the next six years till 2020 if they focus on the emerging markets. The growth will be steady as it has been locally, but could be more provided its being properly tapped especially in the emerging markets. I am always hopeful and optimistic and I do foresee a ray of new hope in 2014 for the Indian pharma machinery manufacturers. Hope has always been there with an expectation to continuously improve upon the existing standards and introduction of new technologies. Already a few of the Indian manufacturers have started manufacturing machines with high end technology and equipment needed for research and development labs. This is being done in collaboration with their global partners. And these manufacturers have got a very good response. Now keeping in view the cGMP (current Good Manufacturing Practices) requirements and QBD (Quality by Design) approach hope many more will join this list.

The Indian pharma machinery manufacturers should also take steps to attract international manufacturers for high value; high end high tech products and also for technology transfer because with the change in the industry demand and the ability to invest in high end technology, importantly the local manufacturers need to improve their infrastructure to adapt to new technologies. Also the Indian industry needs a deep insight about appropriate representation of the new techniques and its advantage to them. There has to be more transparency in the deals and areas of representation, for better technology transfer.

Indian pharma machinery manufacturers should also take steps to work on their brand image and value and industry associations like the IPMMA can play a vital role in this. There has to be more participation in the international trade exhibitions. Also there has to be more professionalism involved in the business ethics as mostly the manufacturers are family owned business with little approach for professionalism. Again IPMMA has a very big role to play as they can act as a liaison, a link and a bridge between the demand centres and the supply centre.

The industry at large and IPMMA also need to focus on how to bring all the stakeholders on a common platform. E.g. the contribution of the academic world to the Indian pharma machinery manufacturing industry and the industry's contribution to the world of academics should be in the robust mode for mutual benefit. While there has been good contribution from the premium institutes to the industry, there has been nothing vice versa. Much more needs to be done to improve this scenario. The present linkage is very weak if one looks at the continuous changing scenarios and demands of the industry. It has been observed that the academic world is still way behind except for a few premium institutes.

On the regulatory front, the scenario is pretty accommodating with more focus required in improving the basic infrastructure and inculcating professionalism. Standardisation and validation are the two weaker areas for the local manufacturers. With many players going into joint ventures or collaborations, there has been substantial improvement in these aspects. However, still lot of work is required to be done to bring it to the global level. The level of support from the government at large has been good with many specific zones created, with an intention to benefit both the manufacturer and the locality. Also there have been good benefits for those who export. Direct investments, increased stakes, single window hassle free clearances and improved infrastructure are few steps required to increase the support to the industries.

It will be survival of the fittest

Focus on Quality, Consistency & Deliverability - Favourable rate of growth for tech savvy pharma machinery manufacturers

Mr. Mahesh Shah, Director – Technical
Emcure Pharmaceuticals Ltd.

PHARMA PRO&PACK: As the world enters into the year 2014, what according to you are the strengths the Indian pharma machinery manufacturing industry should leverage on? Also what are the advantages that India pharma machinery manufacturers enjoy over their counterparts in other parts of the world?

Mahesh Shah: The focus should be more on user-friendliness, cleaning-accessibility and aesthetics of the machine. There should be design consistency and the Indian pharma machinery manufacturers should follow strict quality manufacturing guidelines. Advantages are response to feedback when it comes to sales/after sales service and the price is much lower as compared to European manufacturers.

PHARMA PRO&PACK: Can you also please list out the tests, the challenges & the threats the pharma machinery manufacturers should prepare for themselves in 2014.

Mahesh Shah: Unlike olden times, pharma companies have adopted the concept of technica buying. To meet this challenge, Indian pharmaceutical machine manufacturers should work towards design consistency and should adopt new technology to upgrade their products. Penetration of European market into India with their much more technically sound machines are definitely a challenge and threat by itself. Also moving with rapidly growing pharmaceutica industry and catering to their requirement is a great challenge.

PHARMA PRO&PACK: How should the Indian pharma machinery industry gear up to meet global challenges? Do they have a global perspective?

Mahesh Shah: To gear up for global challenges three aspects such as Quality, Consistency and Deliverability play a major role. Indian pharma machinery industry should work towards these goals. There is a strong need for many more Indian manufacturers to have a global perspective. Having a global perspective means to have a prestigious presence in technologically competent markets apart from markets that are price conscious. Indian pharmaceutical machine manufacturers are definitely moving towards a global perspective which is evident from increasing requirements from international markets but understanding and catering to each market requirement is the key challenge.

PHARMA PRO&PACK: Will new technology play an important and dominant role in the pharma machinery manufacturing industry? What according to you is the level of research, development and innovation in technology taking place at present in the Indian pharmaceutical machinery manufacturing industry?

Mahesh Shah: Technology will definitely play a very important role. We should invest more on R&D which as of now is done only by a handful of players. The level of R&D and innovation is very low as we are more oriented in supplying low cost machines rather than supplying high quality machines.

PHARMA PRO&PACK: What sort of growth do you see for the Indian pharma machinery manufactures in the next six years till 2020?

Mahesh Shah: "Survival of the fittest" is the law of nature. Indian pharmaceutical machine manufacturers will definitely strive towards building a state-of-the-art product with latest technology and hence with this concept it is bound to grow at a favorable rate in next six years.

PHARMA PRO&PACK: Do you foresee a ray of new hope in 2014 for the Indian pharma machinery manufacturers?

Mahesh Shah: Hope is a subjective matter. Indian pharmaceutical machine manufacturers will have an upward trend if they concentrate more towards Quality, Consistency & Deliverability of machines. As the pharma industry in whole is growing at a rapid pace and has also proven to be strongly immune to the global volatilities, there is definitely a good hope for growth.

PHARMA PRO&PACK: When will Indian manufacturers start manufacturing machines with high end technology and equipment needed for research and development labs?

Mahesh Shah: This will be possible only when our vision and perception changes from low-cost machines to high-quality machines. This can be achieved through collaborations and technology transfers.

PHARMA PRO&PACK: What steps do you suggest the industry should take to attract international manufacturers for high value; high end high tech products and also what steps should the industry take for technology transfer?

Mahesh Shah: Mergers and Acquisitions can definitely play a major role in addition to trading of imported machines. Technical collaborations coupled with manufacturing capability will help in efficient technology transfer. Industry should create forums to facilitate effective interactions with international manufacturers so as to create synergy to give customers a combination of high quality at affordable price.

PHARMA PRO&PACK: At the global level and at the local level, how do you foresee the threat from Chinese pharma machinery manufacturers? Do the Indian pharma machinery manufacturers need to take China seriously? Is China going to be a source of worry in 2014?

Mahesh Shah: Any emerging competitor has to be taken seriously because if we don't take them seriously we will give birth to competitors. Chinese machines penetrate markets with much lesser price which can be a point of great concern. We have to change our approach towards technology; else, China can turn out to be our worry in 2014. However, Indian manufacturers are also well equipped to handle the Chinese threat mainly because they are more responsive to customers, can better assist customers to comply with various norms such as USFDA etc and also are more long term oriented in terms of consistency in design (no radical changes), better service support and better machine quality.

PHARMA PRO&PACK: What steps should the Indian pharma machinery manufacturers take to improve their brand image and value? How do you foresee the role of an industry association like the IPMMA?

Mahesh Shah: Aggressive marketing backed up by strong support of production to achieve delivery targets with increased focus on technology and automation can do wonders. Strong efforts should be made not just to reduce cost but also to create products that increase revenue for customers. More quality checks improve the performance of machines and in turn the machines do not need a push to sell but these machines just sell – all by themselves. Companies should adopt QMS and put it into habitual working, which in turn becomes a discipline giving an upper edge in the global market. IPMMA should conduct audits at periodic intervals based on standards formulated by them in reference to various international standards. This will facilitate in uniform quality all over the country.

PHARMA PRO&PACK: Also please give us your comments/views on the regulatory scene prevailing in India for the industry and also on issues like standardization and validation?

Mahesh Shah: In India, majority of the companies are targeting regulatory markets and hence their processes and equipment have to meet the desired and prescribed requirements. Based on a primitive concept of low-cost selling, majority of the companies are not looking forward to standardization as equipments are manufactured by focusing on cost rather than quality, except for few manufacturers who have engraved their brand in the market. Once we work towards standardization and establishing a quality then we can compete in global markets and then we can claim for consistency which can indeed fetch better price at the global level. Validation though is a very serious subject but it is not given respect to the level it deserves by pharma machine manufacturers. It is just considered as another process and is executed for the sake of doing. Validation (process and product) needs to be seriously understood and every possible effort should be put for compliance, in a realistic manner. Indian pharmaceutical machine manufacturers should also have thorough knowledge about process and product validation including Qualification Protocols and its on-site execution. Down the line it should be made mandatory for all pharma machine manufacturers to have at least ONE process technologist in their organization who can give a PHARMA-TOUCH to the equipments. IPMMA should make it mandatory down the line to have at least ONE process technologist employed in those companies who are members and it should be made an eligibility criterion for enrolment.

PHARMA PRO&PACK: What are your views and comments on the levels of support the industry gets from the government? Should the government increase its support to the industry in the coming days? If yes --then in what ways?

Mahesh Shah: With a fairly good and handsome contribution to the Indian export basket the support from the Government to the Indian pharma machinery manufacturers needs to be improved further in terms of incentives. The government should help Indian pharmaceutical machine manufacturers by guiding them for JV's and mergers with foreign manufacturers who are willing for tie-ups with Indian companies.

PHARMA PRO&PACK: How is the academic world contributing towards the Indian pharma machinery manufacturing industry? Does the industry as a whole needs to do more by investing more in academics? Are the present linkages between the academic world and the industry adequate or more efforts are needed to be put in?

Mahesh Shah: Various institutions and societies such as ISPE have contributed to a great extent to the industry by conducting various seminars, lectures and workshop. Indian pharmaceutical machine manufacturers should proactively deploy their team members for various seminars and workshop to upgrade their knowledge on the prevailing technology. Indian pharmaceutical machine manufacturers should arrange sessions at their individual levels with various colleges and institutes to impart the knowledge of machines to the upcoming pharmacists which will help them to understand the developments in machine technology.

PPP

Carry out scale-up in a scientific manner to establish robust process to deliver products that meet predefined quality requirements

Mr. BVRK Srinivas, Vice President (Manufacturing)
Granules India Ltd.

PHARMA PRO&PACK: Has the Indian pharma machinery sector opened up to the importance of scale up?
Srinivas BVRK: Indian pharma machinery and pharmaceutical manufacturing sector have opened up to regulatory markets and the Indian industry needs to provide assurance of quality for pharmaceutical finished products based on scientific principles and quality risk management, where choice of scale-up is necessary.

How does scale-up helps the Indian pharma machinery manufacturing industry?
Srinivas BVRK: Scale-up requires performing rigorous studies on process starts from development to pilot-scale. Immense studies made on a small scale aids in minimizing failure of products during commercialization. Equipment manufacturers, who specialize in both lab scale machine design as well as commercial equipment, support the industry with technical/scalability/statistical aspects for scale-up.

What sort of an approach should be followed in scale-up?
Srinivas BVRK: Scale-up batches should be manufactured prior to pivotal batches to identify the problems associated when scaling up the batch size and optimization of the process parameters and thorough understanding of these process variables and control during development trials will ensure quality of the product during scale-up.

What processes should be followed for a scale-up?
Srinivas BVRK: Manufacturing of scale-up batches to assess the process parameters, results should be comparable and evaluated to measure the intensity of those parameters on the Critical Quality Attributes. One should remember that the selection of batch size for scale-up batch is important and should be as close to exhibit or commercial batch size as possible. Machine design and principle used for scale-up batches should be equivalent to machines used in commercial batches.

Is scale up limited to a particular segment or can be implemented across the board?
Srinivas BVRK: Scale up is not limited to any particular segment and is applicable for all dosage forms and at each stage of manufacturing process which requires technical expertise and exposure to wide range of dosage forms.

What are the combinations one has to keep in mind while opting for scale-up of any pharmaceutical machinery manufacturing process?
Srinivas BVRK: Factors one must keep in mind during scale-up are Physiochemical Properties of Raw Materials, Machine Design and Working Principle, Occupancy, Critical Process Parameters, Process time, Safety and Cost. These factors are also interlinked with each other in scale-up.

Do you think traditional methods of process scale up in the Indian pharma machinery sector have given way to newer tools and methods for scale-up?
Srinivas BVRK: The process controls will assure and enhance confidence to meet predefined quality of the product. PAT tools will aid in for online and offline monitoring and evaluation of process. Exposure to regulated markets globally changed the pharmaceutical industry aware of the technology to be implemented for a proper scale-up.

What according to you are the most effective methods and tools for a scale-up?
Srinivas BVRK: Quality by Design, Design of Experiments (DOE), Quality risk assessment and Process Analytical Technology (PAT) are the most effective tools helpful in proper scale-up.

What are the factors which determine the success of a scale up in Indian pharma machinery manufacturing process?
Srinivas BVRK: Rigorous understanding of product, process and control, risk assessment as well as thorough knowledge on machine will aids in the success of scale up.

What are the costs involved in scale-up?
Srinivas BVRK: Cost of materials, equipments & processing, utilities and manpower. In addition to that costs of rework or recalls which results from lack of ample studies during development.

What are the problems a unit may face while opting for a scale up?
Srinivas BVRK: The problems may arise during scale up are deficiency in the linearity of equipments used in development to commercialization, significant time required for scale-up studies, cost of materials, infrastructure, proficient manpower.

How important are aspects of engineering support and maintenance for proper scale-up of any process?
Srinivas BVRK: Machine design and working principle are the two important aspects in successful scale up activities. Equipment specifications and utility consumptions play a vital role in scale-up and inaccuracy in these aspects will result in significant product failures.

How important are plant design and machinery maintenance issues?
Srinivas BVRK: Plant design has concerns with processing, cross contamination, utilities, environmental controls, cleaning and man-material flow. Safety & maintenance can have impact on these activities.

What are the regulatory aspects of scale-up and what are the post approval changes that need to be addressed?
Srinivas BVRK: Regulatory guidelines for validation batches required to generate adequate data to define critical process parameters and acceptable limits and can be used to support post approval changes if it is beyond the manufacturing specifications but within the established design space.

Would a proper scale-up help the Indian pharma machinery industry gain a competitive and efficient edge in the years to come?
Srinivas BVRK: Scaling up can reduce development cost and time and one can easily understand process variables. As the global pharmaceutical market is looking for cost-effective pharmaceutical products, scale-up significantly plays a vital role. Scale-up aids in design of a robust product and minimizes unnecessary costs and delivers cost effective products.

What would your message be to the industry for a proper scale-up?
Srinivas BVRK: Carrying out scale-up in a scientific manner will be helpful in establishing robust process that delivers products to the customer that meet predefined quality requirements.

PPP

COVER STORY

Indian pharma machinery manufacturers need to be initiators & inventors

Mr. Aasif Khan, Managing Director
Fabtech Technologies International Ltd.

As the world gets ready to enter into the year 2014 and as I alongwith several of my colleagues and peers in the industry look back, I can only say that the Indian pharma machinery manufacturing facility has over the years' gained only one strength i.e. reverse engineering. We have never been initiators, never been inventors. We have so far been mere followers. However, the ability to manufacture equipment to global standards and the ability to provide turnkey solutions under one roof at prices; that are very competitive compared to the west, is indeed an advantage.

Listing out the tests, the challenges & the threats the pharma machinery manufacturers should prepare for themselves in 2014 I can say that the pharma machinery manufacturers should focus on R&D. There are provisions in the Income Tax on R& D which the Indian pharma machinery manufacturers, I guess, just do not know about and hence not many companies spend money in development or innovation. You have good reverse engineering now happening in China and that too, on a very large scale, in addition to that the government support to their local industry. In India, we face a real threat because of the fragmented structure and approach of our industry.

The Indian pharma machinery industry should gear up to meet global challenges and should also develop a global perspective. Any development, any growth is possible only if you have effective management, good cash flow and the ability to raise funds. This only comes with volumes with margins. Either you grow big organically which will take a lot of time or you consolidate which means a couple of like minded players, come together, become professionally managed, build up a size and corporate brand to attract funding. The family management mindset has to give way to a global perspective. People should start talking valuation and build sustainable strength.

In the coming days, new technology will play an important and dominant role in the pharma machinery manufacturing industry. Keeping this in view the levels of research should be taken up. Technology and innovation are the only two things which will play an important role in the industry today. As I said, research, development, innovation is a big zero in our industry in India. This may sound ironic and this may even sound strange that people who wish to do it, who have the vision to do it, don't have the resources and those who have the resources have too narrow a vision.

The next six years till the year 2020 are going to be important for the Indian pharma machinery manufacturers. The machinery growth would mirror the capex cycle. With the pharma sector expected to grow at 15-18 % Year on Year, we expect machinery sector to grow at 15 %.

I think and I feel that the new year of 2014 comes in with a lot of hope. Different geographies offer abundant hope for Indian pharma machinery manufacturers. But it is only for the willing to identify and work towards it.

Meanwhile, many people from the industry and even from outside the industry always pose the question when will Indian manufacturers start manufacturing machines with high end technology and equipment needed for research and development labs? My answer to this oft repeated query is that by itself, this may be a long way off. The shift will happen only, I repeat, with availability of financial resources, with hiring of development engineers and global talent or acquiring suitable companies internationally and imbibing their technologies.

To attract international manufacturers for high value; high end high tech products and for transfer of technology I would suggest the government needs to provide the fullest safety as regards intellectual property. All international manufacturers here are doing well by setting up manufacturing shops on their own. But they are too uncomfortable and wary to go in for technology transfer. Their high technology does not have the requisite protection in India. There are no regulations which can safeguard their interests. There must be some real solid law to prevent the unorganized copies of technology if you want to attract great players operating out of India.

At the global level and at the local level as I said China is definitely a source of worry, may be not in 2014, but in years to come, with their high volume advantage. Like India, China has thousands of manufacturers of machineries, but only a handful of them are good and worth their salt in the international market and they are not cheap. The Indian rupee plunging and hopefully the RMB appreciating can work a good counter for China though.

Besides working at individual level even at the collective level we have to achieve a lot. Industry bodies like IPMMA have their role cut out and have a lot of work to do. Units first need to protect their cash flows, than work on improving margins and then stop emulating each other senselessly on price and payment terms. The pharma machinery manufacturers also need to stop the 'man-eat-man' tactic. You can get the world with money power, which if built will result in improving the brand image and value of Indian pharma machinery manufacturers. It is a huge challenge. But the good news is that IPMMA is being managed by very able people who have made a name for themselves and who can really change the way the world perceives India as a source of high tech pharma equipment and turnkey facility solutions.

Amongst few things needed to be done is coaching the local manufacturers and entrepreneurs effectively, addressing the need of the developing world by proper machinery manufacturing, quality assurance and documentation. More and more international exposure will prepare the Indian manufacturers to create better products with global references, imbibe a systematic communications strategy in order to improve their brand image and value.

Training is also needed to broaden the vision of the entrepreneurs and local manufacturers so that they take steps to come together, align, merge, improve and cooperate on governance, CSR and use the tax provisions and take benefits for development and innovation. IPMMA can also chip in bringing in and making available international designers, development engineers and documentation experts on the IPMMA platform.

China's growth is because of the government and India's is despite the government. Indians take great initiative. If we sincerely have the government's support we can do really well for ourselves. Low cost funds for development, research, innovation should be made available to the Indian industry. The government has to recognize that the Indian pharma industry owes a lot to the domestic low cost equipment production, without which the cost of setting up manufacturing plants, both formulations and API, and in turn providing affordable medicine to the masses would not have been possible. This has indeed given the Indian pharma industry a head start. I think it should be the Indian pharma industry's CSR goal too to support the Indian pharma machinery manufacturers too, by giving amiable terms and pricing to Indian equipment just like they do for international products. Remember that a weak Indian pharma machinery industry will have a telling effect on the pharma industry sooner or later.

PPP

Challenge will be to come up with low cost innovation without compromising on quality

Plug & Play Products cutting after sales cost will be the key...

Mr. Mahendra R Mehta
CEO – Parle Global Technologies Pvt. Ltd.

As the world enters into the year 2014, the Indian pharma machinery manufacturing industry should remember that the first major hurdle confronting the industry is global recession with big & small countries fighting their own economic crisis. India has been much better in terms of economy as we have a more savings based economy rather than spending. Hence we can leverage our strength and expand our manufacturing capacities. We need not focus only on low cost equipment but our priority should be value addition to products with aggressive pricing to build references across the globe. Our country badly needs foreign exchange and hence we need to create a market outside India and take the benefits. I suppose the Indian pharma machinery manufacturing industry should leverage on its unique strengths and advantages it enjoys over its counterparts in other parts of the world.

The pharma machinery manufacturing segment is likely to face several tests, challenges and threats and the industry at large should prepare itself for all sorts of eventualities. The major risk I foresee is the demand which is going to be low. Quality cannot be compromised in pharmaceutical sector as it is directly linked with human lives. Also the financial conditions for companies and countries are unstable and we need to secure our receivables. I feel that the challenge will be to come up with low cost innovation without compromising on quality. Plug and play products which minimises after sales cost will be the key to prevail & succeed in global markets.

To meet the challenges at the world level and to develop a global perspective, Indian pharma machinery industry will need to run that extra mile. Today the Indian pharma machinery industry is giving a tough competition to global players. Thanks to Internet, global trade and industry exhibitions, the Indian industry is able to showcase its strength to the world. MNCs in India are demanding global standards and the Indian multinationals are supporting our industry to cope with the demand rather than just depending on imports. Because of all the tireless efforts put in by the industry, imports of machinery used by Indian pharma industry are limited to some niche technology areas only.

But Indian pharma machinery manufacturers need to understand that new technology will play an important and dominant role in the coming days. In fact technology always plays a major role in any industry. Pharma machinery customers want to excel in their set norms and also want to introduce new products and packaging all the time. If we want to match the demands of our customers, we have to embrace new technology at our end as well. High end machining equipments, new process developments, simpler and easier design of equipments, software to design and operate the equipments, data capturing and fault finding modules etc are now not an option but a basic need of a machine. The industry is still gearing up in these areas as we have been traditionally working on low cost equipment rather than high value features. Now that the customers have also realized that it is better to have local suppliers as import substitutes, R&D activities are growing at a much faster rate thanks to partnering of relations with the industry at large.

Times are changing and all of us have to get attuned to the changing times. Demands are crystal clear from end machinery users who have matured in understanding and fine tuned their demands. These customers are regular visitors to many global trade shows and also go through scores of international reference books on latest developments in machinery with experience of both European and Japanese technologies. These customers are very clear in what they want, so the process of supporting these clients and their demands has already begun. Indian machinery manufacturers are coming up with good R&D; in fact few of our equipments in the R&D segments has been compared either to be equal or better compared to European equipments. I can only say the era of Indian machinery manufacturers starting manufacture of machines with high end technology and equipment needed for research and development labs has kicked off in the right earnest.

Also Indian pharma machinery manufacturers should take positive steps to attract international manufacturers for high value, high end tech products and technology transfer. India is a good market and a good manufacturing hub for pharma products. Hence international majors will definitely come to Indian manufacturers with manufacturing plans and bring their high end technology as well. As we already see in automobile industry and electronics; similarly other industries are following suit. In pharma also you see a lot of joint ventures and licensing agreements getting signed. The legal network in India is good enough to protect the Intellectual Property Rights (IPR) of any company and hence they are comfortable to transfer to their Indian counterparts. I feel as an industry, we need to have more professionalism and impart more training to our team so that we come up to the expectations of our partners quickly.

Shifting my focus on to China both at the global level and at the local level I don't think China is a major worry in pharma industry. China is good at manufacturing 'use & throw' consumer goods. Things are different in the pharma sector. The pharma industry looks in too many aspects when it invests money in machinery viz. quality of the machine, life of the machine and consistency of the machine are three basic parameters. This is the reason that Europeans and Japanese command and hold sway in critical machineries. Other important thing is that the machinery cost is negligible in the total project cost. So to save some money none of the pharma company would like to risk their plant for non compliances in regulatory requirements.

Time is also ripe for the Indian machinery manufacturers to take steps to improve its brand image and it is here that trade, business and industry associations like IPMMA play an important role. IPMMA spearheads a movement in bringing the industry together, identifying the problems and also tries to bring about a solution for the betterment of all. Please note that all of us are sailing in the same boat and we all face similar problems. Hence as an association we try to exchange experience and share wisdom of a few with the others. Also we come united for common problems and have a better strength to fight against the same. We did this in terms of Trade Embargos, Duty Drawbacks etc. IPMMA also conducts various programs on branding, export marketing, logistics, insurance etc which is needed for the industry from time to time.

I also feel that there should be more help and support from the government towards the pharma machinery industry. The pharma machinery segment is still not a major recognized sector as far as the government is concerned. Fortunately, we are able to get good support from the government and guidance on how we can gather the required strength. The support has been increasing and I hope this support will increase in the coming days as the pharma machinery manufacturers prepare to face global challenges and earn foreign exchange for the country. The government can also provide backing in organising buyer-seller meets as, attracting good buyers would really help small companies who may not have the resource to reach to the global markets.

Also we need to have more strong bonds amongst different stakeholders. There should be more contribution from the academic world towards the Indian pharma machinery manufacturing industry and on its part the industry as a whole needs to do more by investing more in academics. I have a feeling that the complete partnering chain between the pharma industry, the pharma machinery manufacturers and the academic world still needs to be fine tuned. Indeed we do need more collaboration between all these three stake holders if we nurture a vision to be a global leader. Take the example of Europe and you will see how they are benefiting from such partnerships. We need to take a long term view and we need to consider students as the future entrepreneurs of the industry and invest in them. Also the teachers and professors who impart knowledge and education to the students need to have more interaction with the industry so that they also get trained and become more cued in to the every changing technology.

In the end I will only say that expectations and anticipations will rule the roost as the year 2014 dawns on us. This is an interesting time for the Indian pharma machinery manufacturers. Necessity is the mother of all inventions and I am sure that the Indian manufacturers are alert on all upcoming opportunities and will grab it with both hands. We have done it in the past and I am optimistic and hopeful that we will do it in the future also. I feel the next one year is very critical and we need to wait & watch and be very cautious and aggressive at the same time. PPP

Opt for upgradation & automation

Indian pharma machinery manufacturers should leverage their strengths

Mr. Sandeep Shah, Managing Director
Erweka India Pvt. Ltd.

Indian pharma machinery industry has a long and chequered history. Pharma machinery manufacturers have come long way from early 50's - 60's and now 2014 is almost upon us. Over the long period the Indian pharma machinery industry has emerged as strong and reliable supplier of quality machines worldwide. It is now upon us to further strengthen this image by opting for latest upgradation and automation. More and more users are opting for machinery with automation as they require reports to be generated automatically and all possible self-adjustment features based on PAT technology. The important point is that the Indian pharma machinery manufacturers have to be very consistent in each & every supply aspect irrespective of the location of end user. The machinery may be for domestic customer or for export to Europe or to the United States of America or to other parts of the world – the Indian pharma machinery must have the same level of quality – documentations like IQ/OQ/PQ/DQ. Once we have these we can leverage our strengths which include our already established base and in the process Indian companies can enjoy customer support from all over the world.

There are several tests, challenges and threats confronting the Indian pharma machinery manufacturers. But let me focus on something very specific at the ground level. It is must for each and every pharma machinery manufacturer to have proper and detailed documentation at every stage (not simply ISO) so that every stage is monitored properly. Also there is a need to chalk out the plan with committed spending in Research & Development. Of course, now European suppliers are also shifting the base to countries like China to take the advantages of price competitiveness. And also other South Asian countries like Korea – Taiwan have already established base in India and elsewhere. So Indian companies need to work on a pro-active basis to remain ahead in the curve and carve out a niche.

The Indian pharma machinery industry should gear up to meet global challenges and they also need to develop a global perspective. Traditionally Indian companies have been exporting to different destinations in the African continent where they have earned a good name as Indian pharma machinery has been very well received there. But exports to advanced and developed countries were very few. Most of the machinery supplied was restricted to food supplement manufacturers and vitamin producers. Now Indian pharma machinery is making its presence felt or I would say it has established its presence in Eastern Europe and Russia. But dedicated efforts are needed to focus on other regions also. One strategy for all, will not work. Every region has different priorities and Indian companies must identify and plan long term strategy. Something like providing manuals – and all documents IQ / OQ / PQ / DQ etc in the regional languages will make a lot of difference.

Yes new technology will play an important and dominant role in the pharma machinery manufacturing industry. It is MUST for the pharma machinery manufacturers to cope with new regulatory requirements and for this they will have to adopt and embrace latest technology. At the moment investment in research, development & innovation is very less. Normally it has been observed that unless customers insist, Indian companies do not like to provide latest features – up-gradation in the machinery. This attitude needs a overhaul and a change and every year certain amount or percentage of total turnover must be spent on research, development & innovation. If we compare ourselves with global benchmarks then we are way behind in spending money for such activities. We also need to invest heavily in manpower. The entire team from production- QC - to sales-service must be trained on regular basis by providing them the information on latest trends, customer expectations and all important developments. Good service support must be the principle guiding each & every employee of the company.

In the next six years till 2020, I see a robust growth for the Indian pharma machinery manufactures. The trend is healthy and I see double digit growth..! Also I foresee a ray of new hope in 2014 for the Indian pharma machinery manufacturers. There were little ups & downs in 2013. But 2014 promises to be good in domestic market and strong in international market.

Also long overdue is the fact that Indian manufacturers start manufacturing machines with high end technology and equipment needed for research and development labs. So far Indian machineries have been accepted for production, but not for Research & Development purpose. It requires very high level of precision, scale up guarantee and should have the same features as in production machines. Of course it requires huge amount of investment and this is the area of concern.

Several steps are needed to attract international manufacturers for high value; high end high tech products but the most important is the image of Indian companies. Indian industry has so far been viewed and perceived as a copy cat industry. Indian companies might have grown by coping international brands, but now time has come to play level field. We must create the impression and we must create an atmosphere of trust so that more and more international and global players are ready to join hands with us for joint ventures. Long term commitment in terms of money, manpower and also helping the support and ancillary industry is must.

Talking about the Chinese threat let me tell you that so far Chinese machines have not succeeded in the Indian market. Of course Chinese companies are known to be fast learners and Indian companies should not take them lightly. I am of the firm belief that instead of worrying what Chinese companies are doing, we should focus on our strengths and improve on our end quality in each & every aspect. I think, in the long term only such vision will help.

Indian pharma machinery manufacturers should focus on steps needed to be taken to improve their brand image and value which in turn would eventually help in building Brand India at the global levels. Brand building or Image building is a very important aspect. Every person travelling abroad should be conscious that his / her statements, proposals, commitments – for price, delivery, features everything must be honoured in letter and in spirit. Because at the end of the day only small-small things add up to build up an image or a brand which people eventually connect with. Of great importance is to have road shows at periodic intervals and the Indian industry should also have a presence at the international trade shows which would promote Brand India.

And industry associations like IPMMA can play very important role. IPMMA has already kick started its efforts by organising its first ever trade show in April 2013. The show was a resounding success and now each and every machinery manufacturers should extend support to the IPMMA show as their very own show.

On the regulatory front, there has been a great improvement in terms of regulatory policies in India. Also more and more pharmaceutical manufacturers are following global guidelines. This is helping to have standardisation in terms of policies and because of this fulfilment of validation becomes very easy. As each & every instrument, equipment and machine can be validated, the end product will sure be of better quality.

Support from government is also coming in but lot more is needed to be done. As stated earlier, companies need to invest huge amount in Research & Development – such expenses can be subsidised by the government. Additional incentives should be provided to encourage the investment in various areas like investments in new technology, joint ventures, royalty payments, international exhibition compensations -- like MDA scheme amount to be increased due to increase in the overall cost over a period of time.

I also believe that there should be more fruitful interaction between the industry and the academic world. At present I do not see much activities going on between the academic world and the machinery manufactures. It needs to be focused properly. More interaction will lead to benefits for industry only. Lot of investment is required in academics and industry should support them by donations in terms of cash rewards, installing machinery in educational institutions and helping students know what the industry expects from them. All these steps, I believe will be hugely beneficial to all the players. IPMMA can also play vital role in bringing academic & industry closer. Special courses – short or long should start exclusively for machinery manufactures, which can be a combination of engineering & pharmacy knowledge.

PPP

Pharma exports from Jordan set to touch $1bn mark by 2015

Bright future for pharmaceutical industry in Jordan

A bright future awaits the pharmaceutical industry in Jordan, an important Arab country in the Middle East region of the Asian continent. The year 2012 has brought in a lot of cheer for the Jordanian pharma industry and Jordan will continue to provide good opportunities to pharmaceutical manufacturers. In line with the authorities' efforts to expand healthcare insurance coverage, the industry envisages measures aiming to promote the use of cheaper generic medicines, in tandem with price-reduction strategies. Nevertheless, the expansion of government provision and the higher uptake of generic medicines will conspire to keep longer term growth steady, boosted by upward volume changes, with the patented drug market to continue to be supported by rising numbers of medical tourists.

In middle of 2012, an international report on Jordan said the development of Jordan's medical facilities and infrastructure, partly driven by the country's aim to increase its attractiveness for medical tourists from across the globe, will provide solid longer-term commercial opportunities for companies involved in the field. However, makers of innovative medicines will continue to face market access barriers in the shape of unfavourable pricing and intellectual property (IP) regimes, while the authorities' attempt to increase access to medicines is set to result in encouraging the use of cheaper generic medicines. Still, while there are expectations of a decline in the patented drug market's share of the total by value, the absolute value of the segment will increase. Jordan comes at the 9th place out of the 30 markets surveyed in the Middle East and Africa (MEA) region. Nevertheless, Jordan's rewards and risk scores remain relatively evenly balanced. Globally, Jordan is 49th out of the 95 markets surveyed above Ukraine and below Argentina.

The year 2012 ended on a very positive note for Jordan for Jordan's pharmaceutical exports made impressive and healthy gains in the regional and global market. Jordan's pharmaceutical exports rose to $643 million in 2012 from $503 million in 2011 despite adverse regional conditions and other difficulties facing the industry. According to the Jordan Chamber of Industry, the pharmaceuticals' exports rose to $643 million from $503 million in 2011, an increase by $140 million. Should the sector continue to grow, the exports of the pharmaceutical industry would generate $1 billion by the end of 2015. The exports are likely to grow at a healthy rate with the local firms finding markets in 65 countries around the world. However, the industry needs to maintain competitiveness and quality of products to retain this trend.

The exports of the pharmaceutical industry were affected by the Arab Spring because of difficulties to access some markets, the chamber said, pointing out that there were shipping, security and logistic hindrances, beside a drop in currency exchange rates that the industry has managed to deal with and overcome. The regional market offers tremendous potential for sales growth. The six Gulf Cooperation Council (GCC) member states are expected to grow by an average of 7% a year to 2020. As a result, the value of sales will increase from US $5.6 billion in 2010 to US $10.8 billion. The growth will be supported by favorable regulatory policies in the region, which will also attract competition from both multinationals and local companies.

The Jordanian pharma industry has an important contribution to the economy bringing in more than $600 million to the country, thus boosting its foreign reserves. More and more Jordanians now believe that Jordanian medicines are as good as foreign ones. Local drugs constitute more than 30 per cent of the overall spending on medicine. The Pharmaceutical industry is present since the 1960s. The industry accounts for 20% of manufacturing GDP and has had 17.5% manufacturing growth in 2006. Industry output in 2007 reached $500 while exports grew by 17% since 2000. Jordan is the 2nd largest export industry, exporting 80% of production to 60 countries worldwide. Major export markets include Saudi Arabia, Algeria and Iraq. The industry caters to two main markets: Prescription and Over-the-Counter, OTC drugs. Specialties include antibiotics, anti-ulcer drugs, hormones, anti aids/cancer treatments, dosage equipment (patches, injectables). Jordanian pharmaceutical firms own plants around the world, and are venturing into bio-technology. One firm has recently become the first in the region to be listed on the London Stock Exchange.

With the first pharmaceutical plant established in 1962 in Salt, the industry currently provides 5,000 in direct jobs, in addition to 3,000 other jobs in sub and related industries such as packing and packaging, research and studies, training, and promotion. Since the opening of the first plant, the number of local pharmaceutical plants increased to 20 factories at present, at a registered capital of around

JD250 million while their market value exceeds JD1 billion.

Also Jordan is being hailed as the Arab world's startup capital. The Jordanian government and private sectors are both committed to modernising the healthcare system. Jordan has a reputation in the region for its high standards of healthcare services, and both public and private hospitals have been expanding and upgrading in recent years. The continued modernisation of the Jordanian health system will benefit residents, as well as attracting overseas interest in the Jordanian market.

Since its accession to the World Trade Organization (WTO), Jordan has demonstrated its commitment to WTO rules, in particular, the Trade-Related Aspects of Intellectual Property Rights agreement. This is exemplified by the recent improvements to, and enforcement of, intellectual property protection. Often criticised for registering unauthorised copycat drugs made by local manufacturers and applying discriminatory measures towards multinationals in the past, Jordanian authorities are now being criticised by domestic producers over the blocked registration of a number of pharmaceuticals, as they infringe copyright laws.

But now the Jordanian pharmaceutical market is expected to grow by a high CAGR between 2011 and 2016. Jordan has a relatively-strong level of domestic production; however, the majority is exported, resulting in a market still dependent on imports. Jordan imported pharmaceutical products valued at US$0.5 billion in 2010, an increase of 12.0% over 2009; Switzerland and the UK were the leading suppliers. Exports totalled US$0.7 billion in 2010, an increase of 32.7% over 2009. The majority of pharmaceutical exports were destined for other countries in the Middle East & Africa region.

Key Advantages include cost-competitive location for manufacturing and clinical trials. A low cost regional manufacturing and sales hub with access to a regional healthcare and pharmaceuticals market worth over $4.5 billion per annum for Saudi Arabia alone. A centre of excellence for clinical trials: drug trials cost 50% less than in Europe or US at an average of US$20,000 to $30,000. Salaries in the sector 50% lower than GCC and less than one quarter of Ireland & Singapore. Jordan has a large, skilled labour pool of 8,000 direct and indirect employees in the sector and a growing pool of 2,000 students in pharmaceutical and paramedical degree education. Universities with Para-medical subjects, 6 clinical research centres and 101 hospitals. Also the pharma sector spends 4% of sales on R&D of 6 clinical research centers. Amongst the other advantages offered by Jordan are presence of 20 manufacturing companies, with rapid growth in exports, especially to GCC, Opportunity for M&A licensing and joint venture opportunities with local established players, rapidly growing health services market $2 billion healthcare sales, growing 7% pa. A high 10% of GDP is spent on healthcare. Also Jordan is a medical hub for GCC with opportunities for medical services/devices investments. Jordan also boasts of attractive IP protection as it has among the strongest intellectual property rights protection in the region, good access to raw materials. Also there are further opportunities for expansion and leverage of the Dead Sea resources linked to spa therapies, healthcare treatments and mass market cosmetics.

The pharma industry is often referred to as “The right prescription” for Jordan's economy. Also referred to as “a sunrise industry,” pharmaceuticals have now become the ideal prescription to treat the local economy. The industry, which started from modest beginnings some 40 years ago, has developed into a lucrative business. The Jordanian pharmaceutical industry, which currently boasts of 20 factories, 5000 employees and 3,000 jobs indirectly in supply and related industries, has proven to be just what the doctor ordered. Not only does the sector account for 3.5% of the total workforce employed in the country's industrial sector, it is also the second largest export industry after garment manufacturing, with 70% of its sales accruing from serving 60 markets worldwide with earnings of JD198.6 million in 2005. Saudi Arabia (JD60.3 million) is listed as the number one client for Jordanian pharmaceuticals, followed by Algeria (JD26.1 million) and Iraq (JD15.2 million). In the local market, 2005 was a good year for the pharmaceutical sector, which grew by 17.5%. The total value of domestic production in Jordan rose to almost $350 million in 2005, which is up an additional $50 million from 2004, and after slipping in 2003 to $185 million due to loss of the Iraqi market. This translates into a 62% increase in nearly 10 years.

In tandem with international trends, Jordanian pharmaceuticals are growing at a healthy pace, successfully focusing on the production of specific generic brands, and the industry has an even more ambitious agenda to penetrate the less responsive markets of the European Union and the U.S. In fact, the Jordanian government expects that the sector, which is completely private and meets around 50% of the demands of the domestic market, will triple to $1 billion. So far it looks like at least a few local firms have found a winning prescription while others are not sure the industry has what it take to make the leap. With the current capital structure and the relatively small size of investment the $1 billion goal does not seem feasible. Jordan should focus on marketing its products in Africa and former Soviet Union countries, where the profit margin is still high, in addition to the U.S. and the European Union.

But many believe that perhaps one of the biggest challenges faced by the entire region is the application of the patent laws. In the past, Jordan followed 'process patent' guidelines, which means a company could use any formula to produce a patent product. Technically, companies would use slightly different materials to create a patent product, but since a company did not use the exact formula, it wasn't considered pirated production. However, the country now follows “end product patent” regulations meaning a company cannot manufacture the product with different ingredients and must instead use the exact, already patented formula.

In the mid- to late-90s, Jordan's pharmaceutical market was often under scrutiny by multinationals. So much so that some accused the country of representing a significant and growing regional source of pirated pharmaceuticals, and critics warned that it would eventually be crushed by intellectual property obligations. However, the Kingdom's accession to the World Trade Organization (WTO) in 2000, followed by its Free Trade Agreement with the U.S. in 2001, proved its commitment to the protection of intellectual property. Jordan's pharmaceutical industry currently abides by the new Trade Related Aspects of Intellectual Property Rights (TRIPS) patent law, which essentially means that nations' laws must not supersede international copyright obligations. Today, many companies have numerous innovations to protect, such as JPM, a limited private company valued at approximately $17 million, which owns over 52 new patents. Several companies, such as Hikma Pharmaceuticals, have several under license products to lessen the impact of more stringent patent laws.

While initially many believed that such a commitment would harm the industry, especially since quite a few companies were essentially “free riders” on the global patent system, five years later the available evidence indicates otherwise. The local market is much more appealing for research and clinical trails, and companies such as International Pharmaceutical Research Center (IPRC), which is a leading full service regional Contract Research Organization (CRO), and Triumpharma, a company conducting clinical trials on animals and humans as specialized services to pharmaceutical clients, are in business. Also once critical multinationals are now reaching large-scale licensing agreements with Jordanian firms. Under license production also serves to accelerate the adoption of good manufacturing practices at the national level.

Additionally, big multinationals are making co-marketing arrangements with their local counterparts; Pfizer has doubled their number of staff, Aventis and Novartis's size has tripled, and Merck Sharp & Dohme's team has multiplied five times in Jordan.
One tried and tested formula in the industry is that of mergers and acquisitions. This is a growing trend which Jordanian companies have already adopted. The market is open for small, specialized niches but it doesn't make sense to have two local companies producing the exact same thing. A case in point is that of Hikma Pharmaceuticals, Jordan's leading pharmaceutical company and the first to export one of its products to the US, which in June 2006 acquired a 52% of its Saudi Arabian subsidiary Al Jazeera Pharmaceuticals.

Overall, the Saudi Arabian market for Jordanian pharmaceutical products grew by 23.2% in 2005. There is no doubt mergers of such a kind will fortify the position of Jordanian companies when negotiating agreements with international companies and increase economies of scale, eventually enabling local companies to invest in research and development (R&D), a necessity to stay ahead in the game.

Local manufacturing of both branded and non-branded generic and under licensed pharmaceutical products is definitely on the rise. Jordan is the largest manufacturing base in the Middle East and the only country in the region to export more pharmaceuticals than it imports. Furthermore, the sector is expanding its product base.

Some of the leading pharma industries of Jordan are as follows:

Hikma Pharmaceuticals (HIK)
The company, the fourth largest pharmaceutical establishment worldwide, is listed on both the London Stock Exchange and the Dubai Stock Exchange. It announced a gross profit of $13.8 million by the closing of 2005, and boasts a current capital of $1.3 billion. Hikma has factories in Jordan, the U.S. and Europe.

Dar Al-Dawa (DAD)
The pharmaceutical company's capital is currently at JD20 million, with net sales hitting JD28.7 million for 2004. Its group includes NutriDar, a prominent player in health care and food manufacturing; CosmoDar, a provider of high-quality beauty care products; and DADvet, a leading veterinary and agricultural products provider in the region and worldwide.

Jordanian Pharmaceutical Manufacturing Medical Equipment Company (JPM)
JPM is a limited liability company established in 1978 with a paid-up capital of $17.1 million. It is among the first five companies established in Jordan for the production of pharmaceuticals for human use and currently has 52 patent products to its name. The main shareholders of JPM are the Jordan Islamic Bank with 41.80%, and Al Tawfiq Investment Company with 10.60%.

Arab Pharmaceutical Manufacturing Company (APM)
APM is a public, limited shareholding company with a paid capital of $28 million. It was the first Jordanian pharmaceutical company to start business back in 1962. It merged with Advanced Pharmaceutical Industries, also a public shareholding company, in 2004. APM works under licensing agreements with a number of multinational companies including Takeda Chemical Industries in Japan and Roche Pharmaceuticals Switzerland.

United Pharmaceutical Manufacturers (UPM)
UPM is a multi-national pharmaceutical company that is part of the Munir Sukhtian Group. The 15-year-old company's capital stands at $4.2 million and states that 90% of its sales are from exports. It is the first company in the Middle East to obtain European-GMP certificate, and boasts a strategic alliance with U.S. pharmaceutical giant GlaxoSmithKline.

The region is witnessing a revolution as governments are promoting the development of the private healthcare market and are making private health insurance for expatriates mandatory. Evidence of the region's increasing commitment to healthcare can be seen in many areas. In Jordan, three public hospitals were recently constructed, and four more hospitals are underway, as well as 50 healthcare centres. Saudi Arabia is also actively encouraging the expansion of health services in the private sector and has approved loans for the construction of private hospitals and multi-disciplinary health facilities. Besides increased government spending on healthcare, other factors that are boosting the region's pharmaceutical industry include population growth, increasing affluence, a more stable pricing environment, and lower manufacturing costs.

Rating agencies have made an upwards revision to its long-term forecast for Jordan's pharmaceutical market. On the basis of several positive developments since the beginning of the year - including the easing of the pressure on the country' s external position on the back of a recovery in foreign grants, lower global food and oil prices and a modest stabilisation in the Egyptian gas supply, the forecast for 2013 real GDP growth has been raised. Fewer risks in regards to the devaluation of the dinar are expected over the medium term, with forecasts now envisaging stabilization / constant exchange of the dinar against the US dollar over the next decade.

Expenditure Projections
Pharmaceuticals: JOD620mn (US$876mn) in 2012 to JOD683mn (US$962mn) in 2013; +10.0% in local currency terms and +9.8% in US dollar terms.

Healthcare: JOD1.91bn (US$2.70bn) in 2012 to JOD2.07bn (US$2.91bn) in 2013; +8.1% in local currency terms and +7.9% in US dollar terms. Local currency forecast broadly in line with the previous quarter's projection.

Jordanian Association of Pharmaceutical Manufacturers (JAPM)
The Jordanian Association of Pharmaceutical Manufacturers was established in 1996 as a dedicated sector-specific association and is the representative body of the unanimity of the manufacturers of pharmaceuticals which is one of the key sectors of the Jordanian economy. Although membership is voluntary, JAPM has a member base of 13 pharmaceutical companies. The Jordanian pharmaceutical industry which is primarily an export driven industry is at the forefront of providing quality, safe and effective pharmaceuticals at affordable prices for millions of citizens in Jordan and throughout the world.

The mission of JAPM is to support, develop and upgrade the Jordanian pharmaceutical industry to world-class standards through technology transfer, industry integration and the implementation of current Good Manufacturing Practice (GMP). As the official trade association for the pharmaceutical industry, JAPM is regularly involved in the development of pharmaceutical legislation and guidelines and maintains constant dialogue with governmental and non-governmental institutions as well as similar international associations.

JAPM plays an important role in the Jordanian healthcare system. It will continue to work closely with the ministries and Institutions in Jordan and indeed throughout the World, striving to develop affordable solutions for pharmaceutical care and increase Jordan's role in the global pharmaceutical market. Under JAPM's vision, it wants to strive to develop affordable pharmaceutical care solutions and enable Jordanian pharmaceutical companies to be players in the global pharmaceutical market.

It's mission includes dedicated efforts to develop Jordanian pharmaceutical industry into world class competitive standards.

Amongst JAPM's objectives are to continuously develop and upgrade the pharmaceutical industry into world-class standards that implements cGMP, GCP, and GLP standards through technical assistance programs from various international organizations. It also strives to advise and play a consultative role in the Jordanian healthcare system by working closely with the Jordanian Food and Drug administration and the Ministry of Health in Jordan, striving to develop affordable solutions for pharmaceutical care and increase Jordan's role in the global pharmaceutical market.

JAPM also wants to be involved in the development of pharmaceutical legislations and guidelines and maintain constant dialogue with governmental and non-governmental institutions as well as similar international associations and to initiate, facilitate and establish contacts with similar associations with the aim of identifying suitable business partners and subsequently engage our members in business relationships with their counterparts. It also wants to provide the best advice and represent the industry on Intellectual Property Rights issues, and also wants to facilitate the transfer of related technology and know-how and also wants to promote and represent Jordanian pharmaceutical industry nationally, regionally and internationally, through participation in conferences and exhibitions.

Also JAPM strives to establish an information data base, a code of ethical practices and also wants to arbitrate in case of disputes.

JORDAN PROFILE: Jordan, officially the Hashemite Kingdom of Jordan, is an Arab country in Southwest Asia spanning the southern part of the Syrian Desert down to the Gulf of Aqaba. It shares borders with Syria to the north, Iraq to the north-east, the West Bank and Israel to the west, and Saudi Arabia to the east and south. It shares control of the Dead Sea with Israel, and the coastline of the Gulf of Aqaba with Israel, Saudi Arabia, and Egypt. Much of Jordan is covered by desert, particularly the Arabian Desert; however the north-western area, with the Jordan River, is regarded as part of the Fertile Crescent. The capital city of Amman is in the north-west and major cities include Irbid and Zarqa, both in the north, and Karak and Aqaba in the south.

Climate: The climate in Jordan is semidry in summer with average temperature in the mid-30°C (mid-90°F) and relatively cold in winter averaging around the -1.3 °C (30 °F). The country's long summer reaches a peak during August. January is usually the coolest month. Except in the rift depression, frost is fairly common during the winter; it may take the form of snow at the higher elevations of the north western highlands. Usually it snows a couple of times in winter in western Amman.

Demographics: In a July 2008 census, the estimated population of Jordan was 6,198,677. In a previous national census conducted in July 2004, the estimated population was 5,611,202.

95-98 percent of Jordan's population are Arabs, the remaining non-Arabs of the population are mainly Circassians, Chechens, Armenians, Kurds and Gypsies, but have integrated into the Jordanian and Arab cultures in the country.

Language: Arabic is the official language of Jordan. English is widely understood among most Jordanians and considered as a second language among the upper and middle classes. French is understood by some, especially graduates of the handful of French schools in Jordan. Armenian and other Caucasian languages such as Circassian and Chechen are understood and spoken by their respective communities residing in Jordan with minority schools teaching these languages, alongside Arabic and English.

PPP

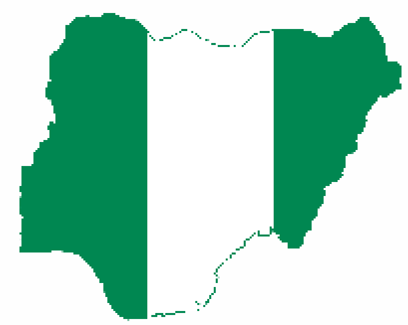
Global trends echo in Central & West Africa

Focus on Speed in Pharma Processing & Packaging

With consistently rising demand and emphasis on international scale quality production of pharmaceutical manufacturing facilities, there has always been a growing emphasis on the speed factor in processing and packaging cycle. Developing new technologies are offering a varied range of solutions with automation and multi-featured machineries and equipments to meet such demands. This was the major attraction during the display of the pharma machinery technologies during the recently held Nigeria Pharma Manufacturers Expo 2013 (NPME 2013) during October 17 to 19, 2013 at Lagos, Nigeria.

A wide range of pharma machinery technologies were on display at the exhibition by more than 145 exhibiting companies from 9 countries who exhibited over 2,400 products/services, which included – Pharma Processing & Packaging Machineries & Materials, Pharma Formulations & Contract Manufacturing Services, API/Bulk Drugs, Analytical Lab Equipments & Services, Environment Control Products & Services, Utility Equipments & Services, Trade Promotion Councils, etc.

Rising awareness levels coupled with growing education in pharmacy faculty about quality manufacturing, various applications of pharma manufacturing, scaling up the overall manufacturing process has remained a top priority in Nigeria pharma industry among the Central & West African pharma markets. International exhibitions like NPME 2013 play a very vital and important role to share the latest information and updates to the regional pharma fraternity. Above 3,500 pharma professionals attended the international exhibition to update the latest technologies in pharmaceutical manufacturing. NPME 2013 attended by Biotechnology Specialists, CEO's Engineers, Technocrats and Scientists, Compliance, Corporate Management, Custom Manufacturing/Marketing Services, Equipment Suppliers & Distributors, Maintenance Engineering, Manufacturing/Production Engineering, Operations Management, Packaging Engineering, Pharmacists, Plant Management, Policy Makers, Diplomats and Foreign Commercial Corp., Process Engineering, Procurement Dept., Purchase, Purchase Officers, Quality Assurance / Quality Control, R&D Professionals, Regulatory Officers, Validation, Vendor Development, etc.



NPME2013 was organized with the aim to promote the local pharma manufacturing products and at the same time to provide a trade platform for pharma machineries & technologies. The major attraction for the pharma trade visitors was to meet the OEMs and get and procure an update on the latest technologies.

The Exhibition - Nigeria Pharma Manufacturers Expo 2013 organized jointly by PMG - MAN and GPE EXPO PVT LTD was inaugurated by Mr. Paul Orhii, Director General, NAFDAC, Federal Republic of Nigeria. NPME 2013 was endorsed by Federal Ministry of Health (Nigeria), National Agency for Food & Drug Administration & Control (NAFDAC - Nigeria), West African Pharmaceutical Manufacturers Association, Economic Community of West African States (ECOWAS), Pharmaceutical Society of Nigeria, and supported by the EEPC India (Govt. of India), Indian Pharma Machinery Manufacturers' Association (IPMMA), Indian Drug Manufacturers Association – Gujarat State Branch (IDMA – GSB) and Bulk Drug Manufacturers Association (India) – [BDMA India]. The only Official Media is PHARMA Pro&Pack magazine and official website of NPME 2013 is www.nigeriapharmaexpo.com.

The exhibition was inaugurated by Mr. Paul Orhii, Director General, NAFDAC, Federal Republic of Nigeria. At Nigeria Pharma Manufacturers Expo 2013 more than 145 exhibiting companies from nine countries exhibited over 2,400 products & services. Above 3,500 pharma professionals attended the international exhibition to update themselves with the latest technologies in pharmaceutical manufacturing.

The NPME2013 was organized with the aim to promote the local pharma manufacturing products and at the same time to provide a trade platform for pharma machineries & technologies. The major attraction for the pharma trade visitors was to meet the OEMs and update the latest technologies on the pharma manufacturing technologies (Pharma Processing & Packaging Machineries & Materials, Pharma Formulations & Contract Manufacturing Services, API/Bulk Drugs, Analytical Lab Equipments & Services, Environment Control Products & Services, Utility Equipments & Services and Trade Promotion Councils), among the Central & West African pharma markets.

At NPME 2013 Exhibition, more than 30 Member Companies of the PMG MAN showcased their high quality formulations for export promotions. An India Pavilion was set up by EEPC India in association with MSME (Department of Commerce, Ministry of Industry, Government of India) where 26 companies exhibited. At the China Pavilion set up by CCCMHPIE (China Chamber of Commerce for Import & Export of Medicines & Health Products) 14 companies displayed their products & services.

At the inauguration of the show, Minister of Health, Prof. Onyebuchi Chukwu has revealed that there are untapped opportunities and areas still in the pharmaceutical sector which if given the necessary attention and enthusiasm, would yield meaningful and worthwhile results.

Speaking in an address read on his behalf by the Director General, National Agency for Food and Drug Administration and Administration and Control (NAFDAC), Dr. Paul Orhii, the minister however noted that while opportunities abound, it was the laid down duty of the members of PMGMAN to identify the opportunities, take advantage of favourable government policies as well as regional and sub-regional efforts to optimise the potentials of the Nigerian pharmaceutical sector.

While identifying the need for members of PMGMAN to demonstrate additional capacity through the acquisition of new and emerging technology and skills, Chukwu stated that the need was more necessary than before, considering the international recognition attained by Nigeria under the present administration of President Goodluck Jonathan as evidenced by his appointment as Co-chair of the WHO programme on improved access to life saving health commodities.

"The benefits of investing in new technology and skills are multidimensional. Firstly, they increase the respective companies' investing gains, additional competence and also trust from the consuming public. Also, companies in other sectors of the economy also adopt measures to meet the need of the resulting production activities which will ultimately translate into an improved economy of our nation," he stated.

On the nation's research centres and the rising demand for herbal medicine, Chukwu added: "I passionately appeal to members of PMGMAN to seriously collaborate with the nation's research centres, not only to tremendously bring benefit to the pharmaceutical sector but also to optimise the potentials of the pharmaceutical industry

"Again, the herbal medicine products market in Nigeria is at the moment virtually dominated by China, India, United States of America and even Ghana with a marginal showing by local companies. So with it I invite the industry into the world of herbal medicine and for them to take their rightful place and make the best out of it because the World Bank estimates the global market value of the herbal industry to stand at about 140 billion UDS by 2013."

While congratulating the exhibitors at the ceremony, the Chairman, PMGMAN, Chief Bunmi Olaopa in his remarks stated that the Nigeria Pharma Manufacturers Expo 2013 creates the ample ground for stakeholders in the health sector to exchange information, products, services and ideas towards achieving the health-related Millennium Development Goals (MDGs) and other development initiatives in Nigeria and West African region.

Further indicating the boundless potentials embodied in the sector, the chairman indicated that with proper harnessing of the market potential, product portfolio and the manufacturing base, the sector is well on its way to ground sliding accomplishments.

"Nigeria is blessed with the biggest pharmaceutical manufacturing base accounting for 65% of local manufacture of medicines and health care products in West Africa. Also it is glaring that the pharmaceutical industry in Nigeria with over 150 manufacturing companies has the potential to become a powerhouse in Africa with capacity to supply regional needs as well as participate in international tenders," he said.

About 14 members of the Pharmaceutical Manufacturers Group of the Manufacturers Association of Nigeria (PMG-MAN) have invested over N70 billion into factory expansion and upgrade in the last four years. Specifically, Evans Medical Plc and Swiss Pharma Nigeria Limited were two of the companies that have fully upgraded their facilities, while Chi Pharma Limited, May & Baker Nigeria Plc and Juhel Nigeria Limited have completed and commissioned new factories within this period. The development is expected to enable the companies' get the World Health Organisation (WHO) pre-qualification, which would enhance the competitiveness of Nigerian made drugs at the international market, Chairman Olaopa said.

According to Olaopa, about nine Nigerian pharmaceutical manufacturing companies are expected to commission their factories before the end of first quarter of next year. "Various studies and analyses by PMGMAN corroborated by other studies by centre for the development of enterprise, between 2000 and 2010 confirmed that competitiveness and patronage will be improved through quality of products and international certifications."

"Hence, Nigerian pharma sector has embarked on processes towards international certifications and WHO prequalification. The WHO prequalification of medicines programmes has initiated the development of products of interest to WHO and other United Nation Agencies in Nigeria and has enriched the formulary."

"We expect as many as five Nigerian manufacturers to have products pre-qualified by the WHO by 2014", he said.

Dwelling on the challenges confronting pharmaceutical manufacturers in Nigeria, Olaopa appealed to the Federal Government to support the industry more by patronizing local manufacturers. He said: "The industry has installed capacity to meet over 60 per cent of Nigerian drug needs including anti-malaria and anti-retroviral medicines; unfortunately, we are currently operating at less than 40 per cent of total installed capacity.

"Despite huge investments by local manufacturers, the poor level of patronage by ministries, departments and agencies of government is unacceptable. Patronage is critical to the survival of the industry, hence, we consistently advocated for patronage of local manufacturers and the implementation of domestic preference policy of the public procurement Act 2007". Olaopa noted that the N200 billion intervention fund which was initiated by National Agency for Drug Administration and Control, (NAFDAC) in collaboration with Central Bank of Nigeria and the Bank of Industry, was yet to be made available for PMGMAN members. He said that the fund was necessary to ameliorate the issue of funding in the country's pharmaceutical industry.

The 2013 conference offered opportunity for stakeholders in the health sector to exchange information, products, services and ideas towards achieving the health related Millennium Development Goals and other developmental initiatives in Nigeria and West African region

The international gathering on technologies display like NPME 2013 remained highly resourceful, informative and meaningful for the entire segment of the pharma trade professionals to acquire vital information required in day to day operations of pharma manufacturing facilities. At NPME 2013 Exhibition, more than 30 Member Companies of the PMG MAN showcased their high quality formulations for export promotions. An India Pavilion was set up by EEPC India in association with MSME (Dept. of Commerce, Ministry of Industry, Government of India) where 26 companies exhibited. The China Pavilion set up by CCCMHPIE (China Chamber of Commerce for Import & Export of Medicines & Health Products) where 14 companies displayed their products / services.

Leading companies from Nigeria, India, and China will be exhibiting their latest products/services and pharma manufacturing technologies at NPME 2013, Lagos exhibition. Some of the exhibiting companies were Pradipkumar Pharma Pvt. Ltd., S S Packaging Industries Pvt. Ltd., Airtel Nigeria Ltd., Rapid Pack Engineering Pvt. Ltd., Captech Engineers, Skye Bank Nigeria Plc, Worldwide Technologies Ltd., NPM Machinery Pvt. Ltd., Promp+Tech Pharma Industries, Karnavati Engineering Ltd., Affy Group of Companies, Contec Airflow (E) Pvt. Ltd., Lovisa Speciality Products Ltd., Sinochem Ningbo Ltd., Pharmaceutical Manufacturing Group of Manufacturers Association of Nigeria PMG – MAN, MD Logistics, Ambica Pharma Machines Pvt. Ltd., GMP Technical Solutions Pvt. Ltd., Anchor Mark Pvt. Ltd., SPR Group (Jagat Industries, Rotofil Industries), Pacific Tools Pvt. Ltd., CMC Machinery / Cadmach Machinery Pvt. Ltd., Bectochem Consultants & Engineers Pvt. Ltd., Strides Vital Nigeria Ltd., Bry Air (Asia) Pvt. Ltd., ACG Worldwide, Adept Engineers, China Chamber of Commerce for Import & Export of Medicines & Health Products (CCCMHPIE), Hekai Chemical & Tekai Chemical & Technogy Co., Ltd., Anqiu Lu'an Pharmaceutical Co. Ltd., Jiangsu Guotai Intl Group Winsun Imp & Exp. Co., Ltd., Jiangsu Sainty Handsome Co., Ltd., Zhuhai Kinhoo Pharmaceutical Co., Ltd., Sinochem Jiangsu Co., Ltd., Shanxi Yanglin Import & Export Trading Co., Ltd., China Resources Zizhu Pharmaceutical Co., Ltd., Mecechem (Wuxi) Co., Ltd., Changzhou Dahua Imp. and Exp. (Group) Corp., Ltd., Hunan China Sun Pharmaceutical Machinery Co., Ltd., Unival Group, Zhejiang Medicines & Health Products, Anhui BBCA Pharmaceutical Co. Ltd., Jawa International Ltd., Neimeth International Pharma Plc., Sam Pharmaceuticals Ltd., Dana Pharmaceutical Ltd., S K Pharma Machinery Pvt. Ltd., TSA Process Equipments Pvt. Ltd., Pharmalab India Pvt. Ltd., Jiangsu Guotai, Shandong Pharma Glass., Austar Ltd., SSPM Systems & Engineers, Parle Global technologies Pvt. Ltd., Parle Elizabeth Tools Pvt. Ltd., Natural Capsules Ltd., Hulian Pharma Machinery., Bentos Pharma Products, Evans Medical Plc., Drugfield Pharma Ltd., SKG-Pharma Ltd., Vitabiotics Nigeria Ltd., Fabtech Technologies Africa Ltd., Maharshi International, Daily Need Industries Ltd., Fidson Healthcare Plc., N. K. P. Pharma Pvt. Ltd., Fluidpack India, Accurate Machines, Impact Labs Pvt. Ltd., Neelam Global Pvt. Ltd., Narendra Packaging Pvt. Ltd., Clean Coats Pvt. Ltd., Emzor Pharma Ind. Ltd., Precikot Pharma Pvt. Ltd., Konark Machine Tools Pvt. Ltd., Anish Pharma Equipments Pvt. Ltd., Parth Engineers, Prism Pharma Machinery, Bharat Rubber Works Pvt. Ltd., Newtronic Lifecare Equipment Pvt. Ltd., Rensa Tubes / Rahul Ferromet & Engineering Pvt. Ltd., Gansons Ltd., Nomagbo Pharmaceuticals Ltd., Topway Pharmaceutical Ltd., West-Coast Pharmaceutical Works Ltd., Orfema Pharmaceuticals Industry Ltd., Airtech Systems (India) Pvt. Ltd., Technofour Electronics Pvt. Ltd., Makcur Laboratories Ltd., Indo German Pharma Engineers Pvt. Ltd., Suntec Teknopak Contamination Control Solutions Pvt. Ltd., Pratham Technologies Pvt. Ltd., GMP Packaging & Machineries., NAFDAC - Nigeria, Son Nigeria, Bank Of Industry - Nigeria, Coral Laboratories Ltd., Healthcaps India Pvt. Ltd., Propack Technologies Pvt. Ltd., CVC Technologies Inc. (Taiwan), Asoj Soft Caps Pvt. Ltd., Juhel Nigeria Ltd., Mopson Pharmaceuticals Ltd., EEPC India, Lexcel Products & Packaging Ltd., BCN PLC, Nomagbon Pharmaceuticals Ltd., etc.

The next Nigeria Pharma Manufacturers Expo will be held during October 2015 at Lagos.

Brief about the Organizers:

Pharmaceutical Manufacturers Group of Manufacturers Association of Nigeria (PMG-MAN):

PMG-MAN is the umbrella body of the local manufacturers of the medicines and healthcare products in Nigeria with over one hundred members having established factories that manufacturing life-saving medicines to support the Healthcare Delivery System. The major target of the PMG-MAN is to realize government objective of making Nigeria self sufficient in essential medicines through local manufacturing of Drugs. The group also focuses on the exports drive of locally manufactured quality medicines to the West African region.

The pharmaceutical manufacturing sector of Nigeria contributes to nation building with aggregate investments in excess of N300 billion, paying taxes and other tariffs and employing over 600,000 persons.

In collaboration with relevant stakeholders, PMG-MAN established the 1st special Exhibition / Expo starting in June 2008 in Abuja, which sensitized and showcased the resources, contributions and breakthrough pharmaceutical products – Proudly Made – in – Nigeria to Nigerian citizenry, policy makers and the international community.

The Nigeria Pharma Manufacturers Expo 2013 offered unparalleled opportunities for stakeholders in the health sector to exchange information, products, services and ideas towards achieving the Health related Millennium Development Goals and other developmental initiatives in Nigeria and West African region.

GPE Expo Pvt. Ltd. (GPE):

Established in 1997, GPE has attained an international recognition worldwide including, India, Malaysia, Syria, Bangladesh, Pakistan, Nepal, and have become specialized in providing event planning and consultation services, event marketing & management for country specific international exhibitions, along with for corporations, associations and individual organizations of pharmaceutical and healthcare sectors.

The core strength is in the logistical details of organizing and executing large events involving multiple players, while integrating diverse services. Based on the experience in the industry, GPE has established an expertise, which enables to produce a top rated event in all areas including decor, food and beverage, entertainment, and timely execution. We pride ourselves on having a professional commitment to each aspect of a client's project.

GPE enjoys the credits of highly successful organization (marketing, management, & execution) of several country specific international exhibitions for pharmaceutical industry, includes; PHARMA Pro&Pack Expo (India), Asia Pharma Expo (Malaysia & Bangladesh), Nigeria Pharma Manufacturers Expo (Nigeria), Kenya Pharma Expo (Kenya), Pak Pharma Expo (Pakistan), Nepal Pharma Expo (Nepal), Global Pharma Expo (India), and many more to emphasize the significance of the local pharma industry on the global platform. GPE is having cordial relationship with various national trade associations of pharma industry, like, India, Nigeria, Kenya, Bangladesh, Pakistan, Malaysia, Nepal, etc.

Besides servicing pharmaceutical industry, GPE has been also associated with Healthcare and Chemical segments, including Association of Surgeons of India, Society of Gastroenterology (India), Society of Gastrointestinal Endoscopy of India, Association of Colon and Rectum Surgeons of India, Research Society for the Study of Diabetes in India, Indian Society of Knee and Hip Surgeons, Association of Physicians of India, Urologist Society of India, etc. For further information, please visit: www.NigeriaPharmaExpo.com or contact at: info@NigeriaPharmaExpo.com PPP

More than 50 foreign companies to participate in India Lab Expo at Hyderabad

INDIA LAB EXPO (ILE) is the biggest exhibition in South East Asia for Laboratory, Analytical, Biotechnology, Life Science, Material Testing, and Laboratory Consumable Products & Instruments. The purpose of this exhibition and conference is to bring suppliers and buyers of focal industries and institutions face-to-face for three days. In this pursuit (ILE) facilitates manufacturers and distributors from all over the world to showcase their latest products and technology to buyers and users at a common platform in India. The exhibition provides an opportunity to the participants to connect with global leaders, learn about cutting edge technology, hear about vital research and appreciate the changes the industry is going to witness in near future. India lab Expo has become the biggest platform within a short span of time and continuously growing at the rate of 25% annually in terms of number of exhibitors and visitors. The purpose of shifting exhibition from Delhi to Hyderabad was mooted to provide better access to life science, pharmaceutical and biotechnology industries, research institutions and educational sector which has witnessed 19 per cent growth in 2013 and is clustered and concentrated in the state of AP and nearby states. Also being launched is Pharma Mac Pac Expo – Focused Exhibition on Pharmaceutical & Packaging Machineries concurrently with India Lab Expo 2013 at the same venue.

It'll be all about laboratory when the fifth India Lab Expo 2013 will be hosted at the Hitex Exhibition Centre, Hyderabad, India from 21-23 November, 2013. The focus of show is on the latest trends and technology in the area of Laboratory and Analytical Instrumentation, Chromatography & Spectroscopy, Biotechnology and Life Sciences, Process Control & Reactors, Medical and Clinical Diagnostics, Clean Room & Sterilization, Quality Control & Environmental, Educational Labs, Measurement and Testing, Liquid Handling & Filtration, Laboratory Consumables & Allied Products, Laboratory Furniture & Construction. It will offer the exhibiting companies to not only present their innovations, products and services but to meet with the key decision makers and find leads and confirmed orders. Attendees will have a unique opportunity to not only have the entire spectrum of the laboratory industry in one place, at one time, providing them total solutions but an ideal platform to learn industry insights, connect with peers and grow professionally.

Hyderabad as hosting city for 5th India Lab Expo provides many obvious advantages. It is Bio-Pharmaceutical Hub, Pharmaceutical Capital, produces 1/3rd of India's total bulk drugs, rank 2nd in producing value added food & beverages, premier technical and research institutions, large number of hospitals and diagnostic labs, etc. Hyderabad has got a vibrant ecosystem for chemical, life science and pharmaceutical industry consisting of large number of companies, institutions, support agencies and services along with a very strong community of professionals serving these industries. This generates regular sourcing of laboratory, analytical & biotechnology equipment and consumables by these labs and creation and dissemination of knowledge and skills specific to the industry. Companies participating in earlier India Lab Expo are satisfied with the business value that they have received and are excited to participate in the 5th edition of the show. The value that they get by participation includes but not limited to showcasing their product and services, new business leads and deals, strengthening relationship with the key decision makers in buying organizations, networking with professional peers and officials of government and regulatory agencies. The organisers wish to continue to be important factor and significant partner in the success of all exhibitors. This year, more than 50 foreign companies are directly participating and more than 400 foreign principals are participating through their channel partners in India. The foreign companies which are participating are from Germany, USA, UK, Hungary, Switzerland, Italy, Canada, China, South Korea, Russia, Taiwan, Sweden, Netherland etc. The organisers expect 300+ exhibitors and 10000+ visitors representing diverse industries to participate in 5th India Lab Expo, 2013. The exhibiting space is getting sold out very fast and only few locations are left out to be grabbed. The organisers are committed to remain the leader in the laboratory exhibition in India and provide the best value to their partners and patrons by providing opportunities to grow their business within the country and beyond. The organisers believe they will continue to make a difference to your business. PPP

Pharmatech Expo 2013 - Central India's pharma industry witnesses the biggest pharma show of the year

Central India's pharmaceutical industry witnessed the biggest pharma machinery, laboratory & packaging equipments show of the year from 6th to 8th October, 2013 at the Brilliant Convention Centre, Indore (MP). The second edition of Pharmatech Expo 2013 proved to be the best so far in terms of the services and the vibrancy it produced. The 3- days exhibition started with the inauguration ceremony by Dr. V. G. Somani, Joint Drugs Controller General (India) who was also the Chief Guest for the inaugural ceremony. Also present was Dr. D. S. Mandloi, Director, MSME Development Institute, Indore as the Special Guest of the ceremony. Pharma Tech Expo 2013, Indore was jointly organised by PharmaTechnologyIndex.com Pvt. Ltd. (a KNS group of company) jointly with the Indian Drug Manufacturers' Association (IDMA), Pharmexcil and supported by Ministry of MSME. The show was highly productive & latest international products were shown by the exhibitors.

Speaking at the inaugural function, Dr. V. G. Somani said Madhya Pradesh is fast catching up with neighbouring states like Gujarat and Maharashtra due to presence of pharmaceutical manufacturers such as IPCA Laboratories, Lupin, Cipla, Ranbaxy, Pentagon, Plethico, Alpa Labs, MCW Healthcare and IMA-PG. Several other pharma companies were also eyeing Indore especially in view of the upcoming Indore SEZ.

The Event was supported by MPPMO, Pithampur Audhyogik Sangathan, IAIA and MPSSDMA. IMA-PG India Pvt. Ltd. was the industry partner for the show and Newtronic Lifecare Equipment Pvt Ltd was the Conference Partner for the Show. Cadmach and Modern Institute of Pharmaceutical Studies were amongst the sponsors for the show.

Around 100 companies participated at the event from all over India. Some of the international companies also participated from South Korea, Germany, USA, China and Hong Kong. All companies exhibited their latest technologies and products. PharmaTechnologyIndex.com Pvt Ltd has put special efforts to make the exhibition a successful event for exhibitors as well as visitors. The exhibitors in the Expo mainly consisted of Processing Plant & Machinery, Packaging Materials & Machinery, Lab Equipments & Lab Wares, R&D and Quality Control. Participants were from Healthcare Products, Environment & Pollution Control as well as Trade, Associations & Promotion Bodies.

The "Pharma Tech Expo 2013" was a major, specialized event of pharmaceutical industry where exhibitors showcased their latest advancements, achievements, modern technologies and newest trends within the industry in manufacturing, packaging, R&D, etc. The Expo had displayed latest products, machinery, equipments for business generation & up gradation. It had projected quality controls and government regulations & controls. It also projected the brand value of organizations, joint venture firms, partnership firms, project collaborations, transfer of technology, Investments and R&D.

A full day seminar was organized on 7th October 2013 on 'Pharmaceutical Stability Study' which was conducted and sponsored by Newtronic Equipments Lifecare Equipment Pvt Ltd. The seminar was inaugurated by Mr. Daara Patel, Secretary General, IDMA. The proceedings went ahead with opening remarks alongwith technical presentation by the sponsor Mr. Navin Mehta of Newtronic Lifecare Equipment Pvt Ltd. Mr. Kapil Bhargava, former Deputy Drugs Controller, India made an interesting presentation on the regulatory issues vis-à-vis stability chambers. Mr. Arun Gosavi, Research and Development incharge of Alpa Labs Ltd, Indore also made a presentation. PPP

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