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VENUE : NESCO Complex, Goregaon (E), Mumbai.

Defence, Railways Throng IRE 2019 For 'Made In India' Spare Parts



By **Dominick Rodrigues**

Mumbai: The Indian Rubber Industry is poised for capturing big business at the home level itself -- with the various buyer and seller sectors prominently displaying their needs at the Indian Rubber Expo 2019. The Expo had kicked off on January 17 to a roaring start with the Union Minister for Commerce, Industry and Civil Aviation Suresh Prabhu aggressively asserting the country's efficiency, talent and capability to make India a global leader and self-sufficient economy.

One of these buyer sectors is the Indian Defence Sector, which is prominently showcasing its presence at the Indian Rubber Expo 2019 in Mumbai through its products, while also highlighting its needs that can be met by the various manufacturers in the rubber industry through the 'Make In India' initiative.

The Indian Defence products on display include the "Infantry Combat Vehicle," which can travel through any terrain on land and water. Built like a tank, "This vehicle weighs 16.5 tonnes but moves at a speed of 7 kmph and can dive down to any depth while keeping its occupants breathing safely with the

its airtight rubber sealing systems," said V P Raju, Junior Works Manager of 'Ordnance Factory Medak' which has a stall at the Expo.

"The ICV fires 500 rounds per minute continuously and is in use on our country's borders as an important defence vehicle. While this is a product of India-Russia collaboration in Hyderabad, we have to depend on spare parts from abroad. So this is the reason why we are exhibiting the various types of parts -- as many as 18 -- that can be sourced through manufacture under the Make in India initiative locally," he said.

"O F Medak is interested in outsourcing various components/sub-assemblies like pneumatic valves and systems, hydraulic valves, rubber gaskets etc that are required for the tank's production -- to technically-capable industries, as these are required for defence applications and have to be fail-safe during operations," he said adding that this Initiative would also ensure employment for many people while also promoting entrepreneurs to promote such ventures and savings much in precious foreign exchange.

The Indian Air Force too is flying high at the Expo, where picturesque models of their fighter aircraft



"The Expo has surpassed all our expectations in the fact that a large number of visitors and participants have graced this show with their presence. This Expo has successfully played a key role as the "Ultimate Networking Platform" for the rubber industry and we are confident -- from the momentum set by this show -- that IRE 2021 will be even bigger and better."

Vishnu Bhimrajka
Chief Convener,
IRE 2019:



"After witnessing the spectacular response to the IRE 2019, we are confident that this show will usher in a +New Era+ for the Indian Rubber Industry. The event not only attracted large numbers, but set a new benchmark in the quality of participants comprising both of buyers and sellers."

Vikram Makar,
Chairman, AIRIA



seem to swoop upon the gaze of the visitors. The IAF's Base Repair Depots (BRDs), which function under the HQ Maintenance Command and are described as the +Apostles+ of the "Maintenance, Repair and Overhaul" facilities for all class of military aviation assets ranging from: fighters and transport aircraft, Helicopters, Ground Support Systems, Guided Weapons, Radar Systems, Communication Systems and Electronic Warfare.

"Rubber is used in a big way in the manufacture of trains that run on the Indian railway network, which is the fourth-largest in the world with a size of total 121,407 kms track over a 115,000 kms route that witness transportation of 12,617 passenger trains, 7,421 freight trains, 23 million passengers and three million tonnes of freight daily. Since we are importing much of the needed products and spare parts from abroad, we are also looking at sourcing them from 'Make In India' sources," said a railway spokesperson.

Wing Commander P S Rathore of the IAF stressed the need for indigenization of manufacturing in

meeting the requirements of the Air Force, whose aircraft and spare parts come in from different countries that include Russia, France, USA, UK, Slovenia and Ukraine. "We require many types of spares for all our aircraft and other aviation assets and these include simple yet specification/performance critical things from gaskets and seals made of rubber to nuts and bolts that come from the original manufacturers, who charge hefty amounts for their manufacture and supply," he said.

"While these aircraft are costly, atleast these spare parts can be made in the country through +Make In India.+ So we have set up this stall to inform vendors what we are looking for, and if they can provide it, then it will save a lot of money besides also asserting self-reliance, providing jobs to Indians and also emphasizing India's capability of development and exports," he said.

"This +Make In India+ initiative is a win-win situation for both the IAF and India as, imagine if we are buying things such as 'seals' from abroad at five times the price in India and were faced with the problem of supply during wartime. So hence, encouraging +Make In India+ projects is a good idea as we know India has the potential and can progress toward self-sufficiency speedily," Rathore said, while pointing out that the IAF would like to partner with the Indian Aviation Industry for design, development and substitution of aviation spares/equip-

ment; repair, refurbishment and re-conditioning, part-tasking, modernization of test benches/machine and self-reliance initiatives, he added.

The Ordnance Parachute Factory (OPF), Kanpur is showcasing at the Expo four of its unique products including the 'Float for KM Bridge', -- a massive black floatation object -- that is made of single-texture Nylon fabric Chloroprene rubber, 12 metres long and three metres wide, for depths of 500 mm (13 tonnes), 1,000 mm (26 tonnes) and complete immersion (34 tonnes), and costs Rs nine lakhs. "This is an inflatable float body that used in making standard light metal bridges and deployed across rivers and rivulets upto 100 metres wide," he said.

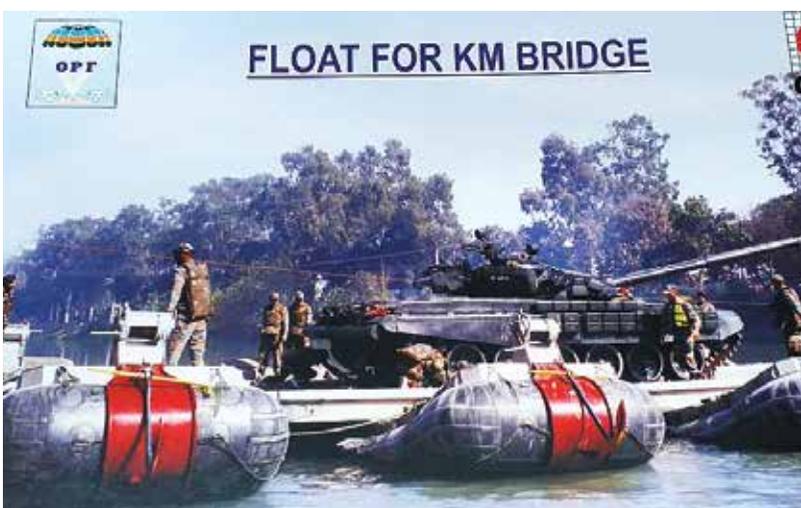
The Railways too have their presence in the Show, where they -- Central, Western and Konkan Railways-- are seeking to procure much needed supplies for their trains and related systems. Faced by constraints of lack of suppliers for the spare parts that drive the engine of passenger and other transportation on the railway network, they depend for much of these supplies on imports, while others are sourced from their availability in India.

The Chinese have come in strength -- with the maximum number of individual country participants -- for the IRE 2019 and their presence at the +China Pavilion+ is drawing increasing crowds of visitors. "We have total

70 companies participating in this Expo and have been coming here many times. We have been witnessing many entrepreneurs, companies and visitors coming to our stalls and inquiring about our products," said a representative of the Chinese Pavilion.

"Business is good but India is now providing good competition for companies coming from abroad," said Derek Xu of Actmix that is located in the Ningbo Jiangbei Investment Center -- a leading manufacturer of pre-dispersed rubber chemicals masterbatch close to Shanghai in mainland China. "We are participating in this Expo for the third time and drawing good business that is increasing over the years. Our production of polymer-bound rubber chemicals in 2018 was 10,000 tonnes annually and worth US\$ 35 million, while our exports are worldwide with the biggest overseas market being Europe, and followed by Brazil," he said, adding that India represent a big market for China and while no plans are there setting up a manufacturing company in India, the future will decide for itself.

One Chinese company has come with a product that captures, neutralizes and absorbs irritants and bad smell of different chemicals and their harmful, volatile residues such as benzene, ammonia, formaldehyde, chlorine, while also reducing the VOC of these products considerably.



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Slach Hydrates introduces unique Intermeshing Kneader



By **Forever News**

Slach Hydrates Equipment has on display a unique 'Intermeshing Kneader', which is being introduced for the first time in the Indian polymer and rubber industry. "Excellence and innovation is built into its every design," said an official of the company.

Established in 1960, Slach Hydrates

Equipment started by using indigenous design and technology to manufacture 'Two Roll Mixing Mills', Calendering mills, extruders etc. under the earlier name of Slach Engineering Works. Over the years, the company has geared up to manufacture the entire range of mixing mills up to the size of 26" X 84" and rubber extruders up to the size of 200mm roll dia, hydraulic presses and calendars etc.

Bharaj - a pioneer in rubber processing machinery



By **Forever News**

Bharaj Machineries Pvt. Ltd. started from a small manufacturing unit in 1987, with a core vision to produce most advance and quality machineries for the rubber industry. They have a long experience in rubber mould manufacturing, rubber moulding, extrusion and mixing technology and have transformed into a major machinery supplier for the rubber industry.

At the show, they are displaying a range of their machinery, including their 'Super Mix Rubber Dispersion Kneaders', their heavy duty Rubber Mixing Mill, Vacuum/compression moulding machines, among others.

Their BMK - 110 Super Mix Rubber Dispersion Kneader, which is a 110 litre back feeding and front discharge type, is equipped with hydraulic tilting system. It requires practically zero maintenance in the tilting system to other machines.

INTERNATIONAL RUBBER CONFERENCE
9.30 AM - 10.15 AM
Impact of EV on the Commercial Vehicle Supply Chain
Speaker
Mr. Anand Raghvan
Designation
LEAD PORTFOLIO MANAGEMENT, EV & eMobility Solutions Business Unit Company
Ashok Leyland
Session Chairperson
Mr. B.B Sharma (Reliance Industries Ltd.)
Sr.Vice President
Product Development & Technical Services
10.15 AM -11.00 AM
Future requirements of elastomeric products: perspective of off-roadequipment manufacturer
Speaker
Dr. Madhuchhanda Maiti
Designation
Senior Technical Specialist Company
John Deere India Pvt. Ltd.
Session Chairperson
Mr. B.B Sharma (Reliance Industries Ltd.)
Sr.Vice President
Product Development & Technical Services
11.00 AM - 11.45 AM
Rubber Products Requirement in Indian Railways
Speaker
Mr. Rajkumar K Makwana
Designation
Western Railways Chief Materials Manager CMM Company
Indian Railway
Session Chairperson
Mr. R.Lakshminarayan (Hitech Arai Pvt.Ltd)
Chairman
Tea Break
12.00 PM - 12.45 PM
Modern Plasticizers in Tire Compounds
Speaker
Mr. Juergen Trimbach
Designation
Head of R&D Company
H&R Group
Session Chairperson
Dr. M.A.Shenoy (Institute Chemical Technology (ICT))
Former HOD- Polymer Engineering &Technology
12.45 PM - 1.30 PM
Automobile Industry
& Expectations from Rubber SMEs
Speaker
Mr. Swapnil Walimbe
Designation
Deputy General Manager Company
Mahindra & Mahindra Ltd.
Session Chairperson
Dr. M.A.Shenoy (Institute Chemical Technology (ICT))
Former HOD- Polymer Engineering &Technology
1.30 PM - 2.30 PM
Lunch
2.30 PM - 3.15 PM
Fine mesh Straining and Extrusion applications with Gear Pump systems for rubber compounds
Speaker
Mr. Peter Uth
Designation
Managing Director Company
UTH GmbH, Germany
Session Chairperson
Dr. M.A.Shenoy (Institute Chemical Technology (ICT))
Former HOD- Polymer Engineering &Technology

Rubber Workshops Stretch Audiences Imagination


 By **Forever News**

The IRE 2019 also witnessed interesting workshops on a variety of products and related issues that needed to be focused upon. One of these was the “Standardisation activities for Rubber and Rubber Products and Harmonization with International Standards.” Chandrakesh Singh of Bureau of Indian Standard noted that Standards played an important role in the economy by: facilitating business interaction; enabling companies to comply with relevant laws and regulations; speeding up introduction of innovative products to market; providing interoperability between new and existing products, services and processes.

His presentation focused on: role of standardization for rubber and rubber products, procedure of standard formulation and participation in standardization activity, national committee (BIS) for formulation of Indian Standards on rubber and rubber products including test methods; important Indian standards related to rubber and rubber products; related international standardization activity, participation of Indian experts in ISO committee in this regard; and importance of harmonizing Indian stand-

ards with ISO standards.

In another workshop on Physical Testing of Rubber Products, Dr Rupesh Rohan noted that rubber is important in many engineering applications because of its unique properties, which should be measured with appropriate test methods that have been developed for this class of materials. Physical testing of rubber products played a significant role in the quality assurance of rubber products and intermediates such as master batches for maintaining stable and consistent manufacturing processes being practiced by the rubber industry.

“Evaluation of the physical properties of rubber and elastomeric materials can be used to predict the durability and performance for use in a multitude of final product applications,” he said. The presentation also highlighted the working principle of equipments/instruments used in testing of rubber products along with the significance of the test method to be followed for the performance of the tests under controlled environmental condition. The key equipments used for testing raw rubbers are: Plasticity Retention Index, Mooney Viscometer and -- for compounded rubber – Rheometer, Processing Analyzers and Viscometers respectively.

Injection moulding machines from DESMA


 By **Forever News**

Kloekner DESMA Machinery Pvt. Ltd. manufactures rubber injection moulding machines, moulds and ancillary equipment in their facilities in Ahmedabad. A subsidi-

ary of DESMA, Germany, they have been supplying Indian moulders state-of-the-art technology rubber processing machinery, including vertical rubber injection moulding machines, moulds and cold rubber blocks.

Schedule of Speakers, Papers to be presented today, at the India Rubber Conference

Paper Title:

Future requirements of elastomeric products: perspective of off-road equipment manufacturer



Speaker:
Dr. Madhuchhanda Maiti,
John Deere India Pvt. Ltd.,
Magarpatta City, Pune

Abstract:

Elastomeric products used in off-road equipment are constituted from a wide range of elastomers and their composites with

reinforcing fillers, polymeric fibers as well as metal reinforcement. These products are critical as a small O-ring costing a few cents can compel customers to incur huge service cost. The paper gives an overview of requirements of different elastomeric products, used in off-road equipment, keeping the regulations and future technologies in mind.

Paper Title

Impact of EV on Commercial Vehicle Supply Chain



Speaker:
Anand Raghvan,
Divisional Manager - Electric Vehicle Portfolios, Ashok Leyland

Abstract:

1) Opportunities and threats for auto suppliers due to emergence of EV

2) What are the emerging technologies being considered

3) How can suppliers contribute and have a win-win scenario

Paper Title

Modern Plasticizers – Status and Future of an important Tool for better Compounds



Speaker:
Jürgen Trimbach,
Product Manager,
Process Oils and Director of
R&D in Hansen & Rosenthal

Abstract:

Since the implementation of new regulations for plasticizers in different

regions of the world and new performance labels for tyres, a development has been started to improve not only the synthetic rubbers and fillers but also plasticizers. The manufacturers of tyres and technical rubber goods have learnt that these plasticizers may have a noteworthy influence on the performance of the final articles. Especially in the tyre industry, plasticizers are used to improve traction, rolling resistance cold properties but also abrasion. Now, during the last years, we see also plasticizers which are produced by using sustainable resourced raw materials.

Paper Title

“Fine mesh Straining and Extrusion applications with Gear Pump systems for rubber compounds”



Speaker:
Peter Uth
Managing Director and
Head of Technology
Uth GmbH, Fulda, Germany.

Abstract

Product quality requirements have been continually growing for the rubber processing industry during the past few years, while the

pressure to contain costs has significantly increased for some elastomer products.

Clean rubber compounds that have not been impurified by dirt, foreign substances or not dispersed ingredients are the prerequisite for meeting these requirements. This problem can be counteracted by straining the rubber compound.

The processing of sensitive and highly accelerated compounds poses new challenges yet for the rubber industry to deal with. The Gear extruder technology facilitates meeting the above-mentioned requirements because it allows the gentle treatment of materials and the use of extremely fine strainers. This process is also referred to as ‘fine mesh straining’ because it differs in essence from conventional capabilities.

The straining of highly accelerated rubber compound with fine mesh screens has proved to be a very effective step to avoid these waste rates. The straining of rubber compounds at this time, is one of the main applications for gear extruders. Especially high quality products like in the areas of automotive, tyre manufacturing, membrane technique, etc. require very clean compounds.

Gear extruders, due to its volumetric transport characteristics, is predestined for applications as precise extrusion and high pressure operations. By combining screw extruder with a gear extruder, their technical process features are provided commonly.

Paper Title:

Rubber product requirements for Railways



Speaker:
Mr. Rajkumar Makwana,
Chief Material Manager
(Sales),
Western Railway, Mumbai.

Abstract:

Indian Railway is engaged in running passenger and goods trains. For safe train operation regular preventive maintenance of rolling stock i.e. diesel electric locomotives, electric locomotives, coaches, wagons, EMU & MEMU coaches is carried out in workshops, C&W depots and loco sheds.

Various rubber/metal rubber bonded items are used in these rolling stock suspension systems, air brake systems and buffers. These rubber items serve

the purpose of shock absorption to ensure passenger comfort in passenger trains and to avoid damages to goods in wagons, safety of equipment in locomotives. Rubber items used in air brake system provide air tightness to avoid en-route failures. Due to limited shelf life, these rubber items are must-change items in preventive maintenance schedules and are procured annually in large quantities.

After the introduction of LHB (LINKE-HOFMANN-BUSCH) coaches and EMD (Electro Motive Diesel) locomotives in train operations, the requirement of rubber items has drastically increased. Presently 671 types of rubber items are required during maintenance of rolling stock. Further, due to ever increasing use of LHB coaches and EMD locomotives in train services, Indian Railway will prove as the biggest market for finished rubber products in the government sector. Indian Railway procurement costs run up to approximately Rs. 50,000 crores annually for different spares required in maintenance of locomotives, coaches and wagons.

Hence, to develop competent vendors, few of the rubber products are selected and are being displayed in IRE 2019, with relevant technical details and annual requirements, to invite the attention of rubber product manufacturers and others.

Paper Title:

Automobile Industry & Expectation from Rubber Industry



Speaker:
Swapnil Walimbe,
DGM : Strategic Sourcing,
Mahindra & Mahindra Ltd
• The supply landscape for rubber manufacturers is changing and so is the automotive OEM landscape. Automotive OEMs are looking for more responsive, independent, capable with

highly reliable supply chain wherein supplier factories and machines are connected, customisable, flexible, innovative and updated to latest technologies where quality (Zero Defect), cost and delivery (JIT) are imperative with delightful customer experience.

• Automotive OEMs are gradually shifting towards electrification where engine related rubber parts, seals and hoses used in hydraulic systems, rubber muffler hangers, drive belts will be replaced by sound-deadening rubber parts, shock and vibration control rubber systems, more durable seals and rubber parts inside the car, use of rubber based technologies to reduce cabin noise. These products and application innovations will continuously challenge this industry and will bring in first movers' advantage to manufacturers by patenting their innovations. We see immense opportunities in this space for rubber manufacturers.

• New cars will demand more lighter and stronger materials to rein in weight for range / mileage advantages with improved / innovative chemistry, newer material grades and wider applications. This presentation will talk about pure automotive customer expectations from the rubber industry to support the new future.

Himadri Speciality Chemical - completely integrated carbon company



By **Forever News**

Himadri Speciality Chemical Ltd. is amongst the few completely-integrated speciality carbon companies leveraging on its deep knowledge of one of the most versatile substances - Carbon. Over the years, with its core products and value-added by-products, the Company has established itself as one of the world's most-extensive value chains in the carbon segment. "Our commitment to the customers' success drives us to continuously develop innovative products with emphasis on R&D and focus on maximum utilization of resources. Our aspiration is to emerge as one of the leading speciality carbon chemicals conglomerate in the world on the back of an unmatched product portfolio, cutting-edge research and best-in-class technical capabilities," said Anshuman Parashar, Dy. General Manager - Marketing, Carbon Black Division (N & W).

Headquartered in Kolkata, the company has seven manufacturing facilities in India and one state-of-

the-art manufacturing unit in China. The company has R&D facilities that are recognized by the Government of India, demonstrating a strong emphasis on technological innovation and research.

"Our in-house facility allows for all of the manufacturing processes involved, starting from coal tar treatment till powder processing. Having our own facility also allows us the flexibility to manufacture customized material to suit the individual battery application for high energy density and high power battery application," he said. With access to superior, consistent and customized raw material feed from its in-house distillation unit and after its success in launching rubber grade series of carbon black, Himadri has successfully launched and marketed its speciality carbon black range that are high-performance and cater to niche applications in plastics (food and non-food grade), fibre, coatings and inks, among others. They are commonly used in inks, paints, plastics master batches, wire and cable etc.



Swapnil Walimbe
DGM : Strategic Sourcing , Mahindra & Mahindra Ltd

Swapnil, aged 45, holds a Production Engineering Degree , He has completed Post Graduate Diploma in Industrial Engineering in 1998 from VJTI, Mumbai and MS in Manufacturing Management from BITS, Pillani in 2006.

His career spans over 25 years, having worked with Pradip Metals, Dagger Forst Tools Ltd., and finally with Mahindra & Mahindra Ltd., where he joined their Farm Equipment Sector in 1997. During his 21 years tenure at M&M, he has contributed immensely in establishing the Costing cell in Component Development and Materials Management function and was instrumental in leading the Suppliers Relationship Management. He headed the AppliTrac business sourcing for 4 years, helping it gain momentum and also handled the responsibility of Executive Assistant to Chief Executive - Tractor & Farm Mechanization. He currently is Deputy General Manager in Strategic Sourcing Unit handling responsibility of defining sourcing strategies for EGS commodity & also heading Budgeting & MIS portfolio for M&M AFS. He also leads initiatives like big data analytics & Digitization of Sourcing.

Swapnil is a very jovial person by nature who enjoys playing on Mandolin and spends time listening to Indian classical music. He is actively involved with Gen Y and plays a vital role mentoring them. His work as a faculty in the areas of Costing, & Sourcing and has won him many accolades.

Swastik Shivpriya Impex has a mission to 'Build Technology in India'



By **Forever News**

Representing Ningbo Chap Machinery Manufacture Co, Swastik Shivpriya Impex has on display Chap brand's CE Standard Vacuum Compression Moulding machine. It has technologically advanced features such as IE3 twin motors for better energy efficiency, twin PLC,

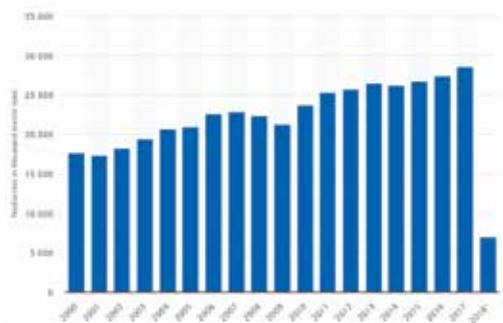
for low breakdown cost and SSR instead of contactors to facilitate an extended service life.

Swastik Shivpriya Impex has a mission to 'Build Technology in India'. They deal in high performance rubber machineries and have formed joint ventures with overseas manufactures to achieve their vision.



Rubber Industry An Overview

Production of rubber worldwide from 2000 to 2018 (in 1,000 metric tons)



By *Forever News*

Mumbai: Whether natural or synthetic, rubber is an essential raw material. More than half of all the rubber produced is used for tires and tubes for automobiles, trucks, and other vehicles; it is also used in making rain wear, shoes, rubber gloves, medical syringes, large storage containers, floor coverings, balls for sports, insulating materials, and many other products.

The rubber industry offers careers as varied as the products it produces. Rubber cutters and rubber-mill operators work hands on to produce rubber while sales and marketing professionals sell products to the public. Chemists and engineers devise new ways of

processing rubber while industrial designers create new products. All of them and others are part of an industry that produces more than 27 million metric tons of rubber each year.

Manufacturing and sales of vehicle tires accounts for 60 percent of the rubber industry's business, making it sensitive to ups and downs in the automobile market. When fewer cars are being manufactured and sold, there is less need for workers who make tires. Forty percent of rubber manufacturing and sales is for rubber components supplied to the aerospace, appliance, medical, transportation, construction, electrical and electronic industries as well as general products such as industrial products,

chemicals, consumer products, flooring, and metal products.

Career growth in the rubber industry is projected to be somewhat limited in coming years due in part to increased automation in rubber manufacturing facilities and technological advances that are making rubber goods more durable and longer lasting. Companies operating within the rubber industry striving to maintain a strong market position must obtain and hold a share of the available business in all product areas. Because markets change continuously, a company's distribution network must be adaptable to keep pace, and continued expansion of various retail outlets that sell rubber products to consumers is crucial.