







BUILDING RESPONSIVE, INCLUSIVE & COLLECTIVE SOLUTIONS



BRICS TRADE FAIR

12-14 October, 2016, Pragati Maidan, New Delhi

DAY 2





Scan QR-Code &

NEWS @SHOW

All that Glitters The exhibition is most definitely a catalyst for

IBV International Vaults 3



Geared towards success Set a measurement framework 6

BRICS investment Opportunities 1,2

Exhibitor's Voice 3

Infrastructure 4

Delegate's Corner 5 Industry Insight 6

Imprint 6

Company Profile 7

Start-Ups 8

tête-à-tête @SHOW



We are aware and appreciative of India's breakthrough in the automobile sector. We hope Indian automobile companies will also help us enhance our own manufacturing capabilities."

CE, Chairman, Borala Group South Africa, SG Mosena



We are looking for joint ventures between local companies, as well as international companies, which have developed technologies and which are looking to enter the Brazilian market."

Investment Manager -Apex Brazil, Maria Luisa



🔀 Indian Renewable Energy Sector can help bolster South Africa's efforts to increase their capacity for energy supply in the country."

Group Chairman & President - Sebvest Group South Africa, George Sebulela



Industry experts during session on investment opportunities in Brazil.



Industry experts during session on investment opportunities in South Africa.



Industry experts during session on investment opportunities in Russia.

BRICS Presents Paths to Synergies к синергии

On the first day of the international event, representatives from Brazil, South Africa and Russia spoke on investment opportunities in their respective countries.

"BRICS nations can come together to develop affordable medical technologies," said Leading Research Scientist and Specialist in Foreign Affairs, Cardiology Research Institute, Tomsk NRMC, Dr Yana Anfinogenova from Russia. As Pragati Maidan opened its doors to business delegates, we met some of the speakers from the day one sessions.

BRICS - пути

В первый день международного события представители Бразилии, Южной Африки и России говорят об инвестиционных возможностях в своих странах.

"Странам BRICS следует вместе разработать доступные медицинские технологии", поделилась ведущий научный сотрудник, специалист в области иностранных дел, НИИ кардиологии Томского ТНЦ СО РАМН, д-р Яна Анфиногенова. Как только Pragati Maidan открыл свои двери для деловых посетителей, мы встретились с некоторыми выступавшими в первый день заседаний.

金磚國家展示協同增效 的道路

在國際活動的第一天,來自巴西, 南非和俄羅斯的代表們分別闡述 了,各自所代表國家的投資機

💴 俄羅斯Tomsk NRMC,心血管領域研究 機構的首席研究科學家與外交專家, Yana Anfinogenova博士說: "金磚國 家"更可以群策群力,共同開發彼此間 可負擔得起的醫療技術"。隨著 Pragati Maidan向商業代表敞開大門, 我們也有幸接觸了更多Day 1與會的演 講者。

Continued from page 1

Strengths and Capabilities

Investment Manager, Apex Brazil, Maria Luisa spoke about investment opportunities in Brazil in the sectors of oil & gas, automotive, renewable energy, infrastructure and more.

"BRICS Bio-Medical Consortium was initiated to promote bio-medical technologies and pharmaceutical products across all five BRICS countries" explained Dr Anfinogenova. "I am personally fascinated with Ayurvedic medicine," she added, revealing they have a huge market in Russia.

Hopes and Aspirations

Speaking of South Africa's business aspirations, the CE, Chairman, Borala Group South Africa, SG Mosena expressed hopes for channeling Indian investment and expertise towards South Africa in the areas of infrastructure, ICT, power, agriculture & agro-processing, mining, as well as leisure & tourism.

Speaking on the opportunities for venture capitalism in Indian start-ups, Assistant Vice President (Life Sciences & ITKnowledge Banking), Yes Bank, Agnideep Mukherjee walked delegates through the various funding mechanisms.

"The business environment (in India) is a lot easier than other countries," said Maria.

Extended report on magicwandindia.in

Galvão

CEO of the JSC High-Speed Rail Lines

• Dongwei Shi, Vice President, Alibaba Group

Преимущества и возможности

Менеджер по инвестициям из АРЕХ, Мария Луиза, рассказала об инвестиционных возможностях в Бразилии в секторах нефти и газа, автомобилестроения, возобновляемыхисточниковэнергии,инфраструктуры и многих других направлений. "Биомедицинский Консорциум BRICS был инициирован с целью продвижения биомедицинских технологий и фармацевтической продукции во всех пяти странах BRICS", объясняет д-р Анфиногенова. "Лично я увлечена аюрведической медициной," добавила Яна, также сказав, что Россия - огромный рынок для нее.

Надежды и стремления

Говоря о деловых устремлениях Южной Африки, главный исполнительный директор и председатель Borala Group, С.Г. Мосина, выразил надежду, что индийские инвестиции и профессиональный опыт смогут быть направлены в следующие секторы экономики Южной Африки: инфраструктуру, технологии, информационно-коммуникационные энергетику, сельское хозяйство и переработку сельскохозяйственной продукции, горнодобывающую промышленность, а также отдых и туризм.

Говоря о возможностях венчурного капитала в индийских стартапах, помощник вице-президента банка Yes Bank (банковские услуги в Life Sciences & IT Knowledge), Агнидип Мукерджи, ознакомил делегатов с различными механизмами финансирования. "Бизнессреда в Индии устроена намного проще, чем в других странах", сказала Мария...

Продолжение читайте на magicwandindia.in

優勢和潛力

來自巴西 Apex的投資經理 Maria Luisa也談到了巴西在石油,天然氣, 汽車,可再生能源,基礎設施等領域的 投資機會。"金磚國家,生物醫療協會 已經開始在整體金磚國家市場内推廣生 物醫學技術和藥品",Anfinogenova博 士進一步解釋說。"我個人對阿育吠陀 醫學說十分著迷",她補充說到此一領 域在俄羅斯將存在著一個巨大的市場。

希望和展望

談到南非的企業願景,Borala Group南 非公司的董事長SG Mosena 表示: 望能在;民生基礎設施,ICT,電力, 農業(包含農業加工技術),採礦,休閒 旅遊等相關領域,對南非本地的企業, 分享來自印度市場的投資與專業知 識"。

在談到印度初創企業的風險與投資機會 的話題時,Yes銀行(生命科學與IT知識 銀 行) 的 助 理 副 總 裁 Agnideep Mukherjee,願意協助所有參加者,提 供各種融資的機會。Maria提到: 業環境(在印度)將比其他國家而言,更 加的友善"。

更詳細的內容在 magicwandindia.in

BRICS Business Forum

Alexander Misharin, First Vice President of the JSC Russian Railways &

Moderator: K Ramchand, Chairman, BRICS Business Council Working Group on Infrastructure and CEO, IL&FS

October 13, 2016, 0830 - 1830 hrs | Hall 11, Pragati Maidan, New Delhi, India

On Day 2 of the three-day BRICS Trade Fair in New Delhi, BRICS Business Forum is slated to bring together over 1000 business delegates from all BRICS countries for a full day conference. Speakers from the top echelons of member country governments and the New Development Bank (NDB) will be among the speakers. Here's what to expect...

TIME	DETAILS	TIME	DETAILS	
9:30 – 10:45 hrs	INAUGURAL SESSION Welcome Address by Mr Harshavardhan Neotia, President, FICCI Panel Discussion Participants • Harshavardhan Neotia, President, FICCI • Naushad Forbes, President, CII • Sunil Kanoria, President, ASSOCHAM • Onkar Kanwar, Chairman, BRICS Business Council, India Chapter • José Rubens de La Rosa, Chairman, BRICS Business Council, Brazil Chapter • Sergey Katyrin, Chairman, BRICS Business Council, Russia Chapter • Capt. Xu Lirong, Chairman, BRICS Business Council, China Chapter • Brian Molefe, Chairman, BRICS Business Council, South Africa Chapter	13:15 – 14:15 hrs	LUNCH BREAK	
		14:30 – 15:15 hrs	SPECIAL SESSION WITH VICE PRESIDENT AND COO, NEW DEVELOPMENT BANK • Special address by Xian Zhu, Vice President and Chief Operations Officer, New Development Bank	
		17:00 hrs	MINISTERIAL SESSION • Welcome address by Ms. Rita Teaotia, IAS, Commerce Secretary, Government of India TRADE MINISTERS FROM THE BRICS COUNTRIES • Nirmala Sitharaman, Minister of State for Commerce & Industry, India • Dr. Rob Davies, Minister of Trade and Industry, South Africa • Marcos Pereira, Minister of Industry, Foreign Trade and Services, Brazil • Wang Shouwen, Vice Minister of Ministry of Finance and Commerce, China • Alexey Likhachev, First Deputy Minister of Economic Development, Russia Inaugural Address by Mohammad Hamid Ansari, Hon'ble Vice President of India, Government of India Vote of Thanks by L C Goyal, Chairman and Managing Director, India Trade Promotion Organization	
11:00 – 12:00 hrs	SECTOR SESSION ONE Panel Discussion: Cooperation in Energy Sector Topics: diversification of energy supplies, environment friendly technologies of energy production, storage and consumption, joint development of cleaner energy technologies, promoting use of renewables, setting of a BRICS Energy Data Centre and BRICS Energy Fund for supporting research in strategic scientific projects. Participants • Eduardo Eugênio Gouvêa Vieira, President, Federation of Industries of the State of Rio de Janeiro • Bin Dong, President of China Energy Engineering Corporation Limited International Company			
		17:15 – 18:15 hrs		
12:15 – 13:15 hrs	SECTOR SESSION TWO Panel Discussion: Cooperation in Infrastructure Development Topics: developing a robust pipeline of bankable projects, new financial instruments that can be supported by NDB for developing local capital markets in BRICS countries for infra-financing, early stage project preparation support from development banks, etc. Participants		climate change resistant seed varieties, collaboration in agri-machinery sector and experience sharing on mechanization for higher agri-productivity. The contribution of private sector in BRICS Agriculture Research Institute being set up may also be discussed.	
		18:15 hrs	Closing Remarks by Onkar Kanwar, Chairman, BRICS Business Council	
	Raghav Chandra, Chairman, NHAI João Miguel Drummond, Director of Institutional Relations, Queiroz	P	www.magicwandmedia.in	

ROOK **SPACE** in **DailySHOW @BRICS**



Magic Wand Media Inc BRANDING - PULISHING

Contact: +91 9740048390 E: info@magicwandmedia.in

All that GLITTERS

IBV International Vaults operates exclusive private vaults, providing state-of-the art security with a sophisticated multitiered system monitored 24 hours a day, 7 days a week, 365 days a year. With a growing network of over 14,000 members of the IBV International Vaults, the company boasts of high standards of safety, privacy and confidentiality.

COUNTRY: SOUTH AFRICA | SECTOR: GEMS & JEWELLERY

IBV International Vaults operates exclusive private vaults, providing state-of-the-art security with a sophisticated multi-tiered system monitored 24 hours a day, 7 days a week, 365 days a year. With a growing

network of over 14,000 members of the IBV International Vaults, the company boasts of high standards of safety, privacy and confidentiality.



IBV specializes in competitive trading in Gold, precious metal and stones and the marketing of South African coins. Krugerrands are one of the most widely held gold bullion coins in the world - with more than 60 million sold. Silver bullion coins are typically legal tender coins that have been issued by a specific country or government that has a specific currency value on the face of the coin. The company also trades in diamonds, specialising in sourcing the specific stone the Investor requires.



Elucidating on the company's motivation to participate in the BRICS Trade Fair, CEO, International Vaults,

Ashok Sewnarain apprised, "This trip to India, and our attendance at the BRICS Trade Fair is very much an exploratory trip for our team. One cannot trade gold and not understand the Indian market. We will be using this opportunity to meet with both the Public and Private sector exploring various business opportunities."

Way ahead

"Exhibitions like BRICS Trade Fair give individuals an opportunity to discuss current business challenges by brainstorming and learning from others. Discussions with individuals from various industries helps one to look at problems from different perspectives assisting in coming up with creative and innovative approaches to challenges," he concludes."

IBV Gold (Pty) Ltd Hall 18 / Stall G35





Our plans for expanding into India are, to a great extent, dependent on our findings and the discussions that will be held during the fair. The exhibition is most definitely a catalyst for IBV in obtaining a global footprint."

CEO, IBV Gold (Pty) Ltd, Ashok Sewnarain



CEO, IBV Gold (Pty) Ltd, Ashok Sewnarain

Ace Micromotic Group

Delivering PERFORMANCE for Decades

8,000+ CNC Machining centers



30,000+ CNC Turning centers



4,500Grinding Machines



China office

迈克罗迈帝克数控机械贸易(上海)有限公司 Micromatic Machine Tools (Shanghai) Co. Ltd.

上海市外高桥保税区富特西一路475号 邮编: 200131 No.475, 4F, Fute (West)Road, Waigaoqiao Free Trade Zone, Pudong, Shanghai Code 200131

电话: +86 (21) 5866-5031 /32 传真:+86(21) 5866-5033





The future is here

Current road construction designs, from a materials consumption perspective, are simply unsustainable, not to mention very costly.

Smart Materials benefits are numerous:

- low environmental impact
- construction time is reduced by
 30 - 50 percent
- costs are reduced
 15 30 percent
- reduced maintenance
- improved road longevity

Road SMART

Smart material engineering is all set to trigger the next big revolution in road construction.

An overview...

Conventional road design has changed very little since the introduction of the macadamised road designs in the late 1800s.

Construction machinery and geotechnical lab testing equipment such Triaxial shear testing kit, has moved along in leaps and bounds. However, the majority of road designs are still based on the 1993 AASHTO Guide for Design of Pavement Structures, utilizing quarry materials. Considering the current international levels of aggregate consumption, it is no secret that engineers are looking at alternative options to quarry materials, in order to reduce the environmental impact.

Smart material engineering

The development of smart materials necessitates the deeper understanding, not only of chemical reactions but also an indepth knowledge of the geotechnical properties of different materials around the world. Smart materials contain revolutionary properties. Material science research is of necessity multi and cross-disciplinary, drawing from many aspects of physics, chemistry, engineering and geosciences.

Smart Materials at Polyroads have been developed to interact with a multitude of different materials in

stabilizing and binding soils for road construction. Tounderstand a material, scientists and engineers examine its composition and structure and what it does under specific conditions. Then, on the basis of what they have found, they can modify that material (design/processing) to improve its behavior (performance) for particular industrial purposes.

Smartly bound

Polyroads have developed several cross-linking smart material binders, for stabilizing insitu materials into a solidly bound state, displaying very high CBR strengths, while also continually improving the tensile properties of the material for up to 12 months. The Resilient Modulus (MR) is a measure of subgrade material stiffness. A material's resilient modulus is actually an estimate of its modulus of elasticity (E). While the modulus of elasticity is stress divided by strain for a slowly applied load, resilient modulus is stress divided by strain for rapidly applied loads - like those experienced by typical roads.

This critical relationship of structural strength and high yield strain (elastic modulus), sets SoilTech MK III polymer stabilization technology apart from conventional geotechnical design methodologies, based on empirical

cement stabilization of road layers.

Better in many ways

Improvement in tensile strengths means that the flexible pavement's support layers are eliminated or reduced, thereby shortening construction time and reducing costs. As can be appreciated, insitu materials by nature will always have different properties. It

is therefore necessary to test the insitu materials to ascertain, what strengths can be achieved with SoilTech. Once the expected bearing strengths of the materials has been established, one can then proceed with designing the road in accordance to traffic dynamics.

Source: Polyroads Hall 18 / Stall G37



NEWS @SHOW

Strengthening through COOPERATION

Zhang Xiaoliang an auto component trader from China hopes to get ample exposure through attendance at the fair.

COUNTRY: CHINA SECTOR: AUTO & AUTO COMPONENTS



Sales, Tianjin Qiangbang Industrial Co Ltd,

are planning meet some long-term friends and business partners, as well as explore the potential customers and markets and deepen our understanding for Indian people and culture. Being one of the five biggest emerging countries, we need to strengthen our cooperation with each other. The BRICS trade fair serves as the perfect meeting ground for countries and companies looking beyond shores. I am optimistic the exhibition will achieve resounding success."

Beyond LIMITATIONS

For M Shoeb Chowdhury, Chairperson of an English daily from Bangladesh, the fair is an opportunity to connect with international audiences, as well as for lagging economies to meet desired commercial goals.

COUNTRY: BANGLADESH SECTOR: INFORMATION & COMMUNICATION TECHNOLOGY

"The BRICS Trade Fair can familiarize business enterprises from



Chairman, The Asian Age (daily English newspaper), M Shoeb Chowdhury

our country with prospective clients from various parts of the world, with special emphasis on our access to the South Asian market. Emerging economies like that of Bangladesh have to confront various hurdles on the way of entering international markets with their enterprises. In this context the fair can broadly assist those countries who cannot achieve desired commercial goals abroad due to various regulations stipulated by the World Bank IMF. In this way countries with emerging economies can explore business potentialities with likeminded foreign partners."

Amalgamating ACROSS SECTORS

For Brazilian Leather representative Rogério Cunha, the fair is a window into the Indian market for the Brazilian leather industry.

COUNTRY: BRAZIL SECTOR: LEATHER & FOOTWEAR

"Brazilian Leather is a project coordinated by the Centre for the Brazilian Tanning Industry (CICB) in partnership with the Brazilian Trade and Investment Promotion Agency



Trade Intelligence of Centre for the Brazilian Tanning Industry (CICB), Rogério Cunha

(Apex-Brasil), and dedicated to promote Brazilian leather in the international market. Brazil is one of the five largest leather producers in the world and we want to show this great potential to India and all visitors of the fair. There is also participation of Brazilian tanneries at the fair. By not being an event related to one single industrial sector, this fair brings together a diverse range of industries and serves as a very rich place to observe the world's economic outlook, with more countries and segments. This, notably, brings a differential over the BRICS Trade Fair, enlarging the experience of visitors and exhibitors."

SOLUTIONS through dialogue

Russian scientist Dr Yana Anfinogenova expects the fair to help identify barriers preventing efficient integration of business and research within BRICS.

COUNTRY: RUSSIA | SECTOR: HEALTHCARE & PHARMACEUTICALS

"First of all, I would to express my profound gratitude to the organizers of the event and to the Embassy of in Moscow! Counsellor in Science & Technology of the Embassy, Dr. Abhishek Vaish, visited our city (Tomsk, Russia) recently and shared his highly appreciated suggestions on the Indian-Russian

cooperation in science. At the BRICS Trade Fair and Business Forum, I am and Trade. This round table is titled:



Leading Research Scientist, Leading Specialist in Foreign Affairs; Cardiology Research Institute, Tomsk NRMC, Dr Yana Anfinogenova

Results and Prospects of Future Development". Our team expects to establish essential academic and business contacts promoting cooperation in biomedical BRICS countries. Attending the show will give new insights into the future opportunities and joint projects.

Dialogue at exhibitions like BRICS Trade Fair will help to identify the helping to hold the round table challenges where BRICS partners can discussion supported by the Russian help each other. Dialogue will build the Ministry of Economic Development foundation for future mutually beneficial integration creating social "BRICS-Biomed Consortium: The First value and new business interests.

GEARED towards SUCCESS

A brief overview of the Indian automotive components industry with statistics, prospects and industry vision.

COUNTRY: INDIA | SECTOR: AUTO AND AUTO COMPONENTS

The global auto component industry is a strong USD 1.75 trillion industry with USD 500 billion as its contribution in value-addition; last year top-100 component manufacturers invested close to USD 50 billion in R&D. In the last one-decade, 50 percent of total innovations in the automotive sector were co-developed by the auto component sector.

According to Automotive Mission Plan 2016-26 (AMP 2026) the Indian auto component industry aims to achieve USD 200 billion in revenue by 2026, with exports in the region of USD 70-80 billion and to realise this, the

industry requires USD 25-30 billion in investments.

With increasing vehicle parc in the country, the aftermarket in 2015-16 grew by 12 percent to INR 44,660 crore (USD 6.8 billion) from INR 39,875 crore (USD 6.5 billion) in the previous fiscal. For the fiscal 2015-16 an estimated capital investment of INR 2,700 – INR 4,000 crore (USD 0.44 – 0.66 billion) was witnessed in the auto component sector compared to INR 2,000 – 2,800 crore (USD 0.33 - 0.46 billion) in 2014-15.

Exports

Exports of auto components grew by

3.5 percent to INR 70,900 crore (USD 10.8 billion) from INR 68,500 crore (USD 11.2 billion) in 2014-15, registering a CAGR of 18 percent in the last six years. Europe accounted for 36 percent of exports followed by Asia and North America, each at 25 percent. Exports to Central America and North America increased by 30 percent and 3 percent respectively, over the previous fiscal. The key export items included hydraulic power steering systems & steering gear systems, gear boxes & parts, parts of diesel engines, parts for automobiles and earth moving equipment, drive - axles & parts, spark ignition, suspension systems, crank shaft for engines, toothed wheels, brakes and servo brakes.

Imports

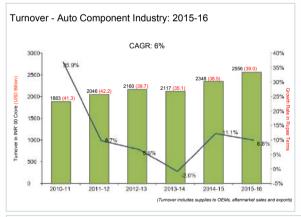
Imports of auto components grew by 9.3 percent to INR 90,600 crore

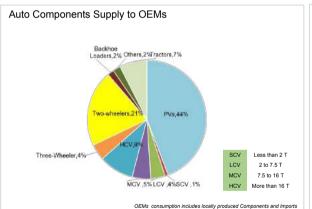
(USD 13.8 billion) in 2015-16 from INR 82,900 crore (USD 13.5 billion) in 2014-15; Asia and Europe contributed to 58.6 percent and 30.9 percent of the imports respectively.

The Road Ahead

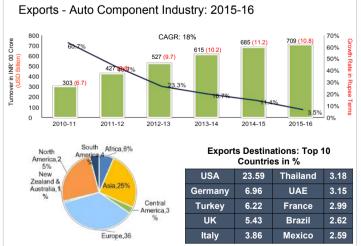
To reach the collective vision for the next decade of automotive industry in India as delineated in the AMP 2026, significant investments of around USD 25-30 billion would be required. The industry will also have to develop capabilities for in-house design, harness frugal engineering and create product differentiation through innovation. A move towards product and process innovation along with zero defect quality will be an integral part of this change.

Source: Automotive Component Manufacturers Association of India

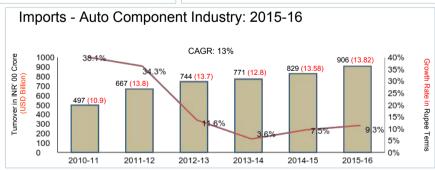








Export Destinations: Top 10 countries in %								
USA - 23.59	Germany - 6.96	Turkey - 6.22	UK - 5.43	Italy - 3.86				
Thailand - 3.18	UAE - 3.15	France - 2.99	Brazil - 2.62	Mexico - 2.59				



Indian Auto Component Industry: 2015-16				
Turnover	Rs. 2,55,600 crore/USD 39.0 billion			
Contribution to GDP	2.3%			
Foreign Exchange Earnings/ Exports	Rs. 70,996 crore/USD 10.81 billion			
Share of India's Exports	4%			
Domestic Aftermarket	Rs. 44,600 crore/USD 6.8 billion			
Investments	USD 0.44-0.66 billion			
Direct Employment	1.50 million			





Published by: Magic Wand Media Inc

Printed by: ASAP Offset Pvt Ltd, A-38, Naraina Industrial Area, Phase-I, New Delhi-110028

Disclaimer: Every effort is made by MW Media to ensure that the information is correct. Personal views expressed in this show daily are solely those of the respective contributors and do not reflect those of the publishers. Reproduction in whole or in part of this publication is strictly prohibited without prior consent.

Solid State SWITCHING TECHNOLOGY



MADHAV R BADSHESHI DGM BUSINESS DEVELOPMENT, ELECTRONIC RELAYS (INDIA) PVT LTD



Our long experience, market sustenance, understanding market needs, enabled by shorter development cycle and flexible production and inexpensive products makes ERI a right choice!"

About ERI

With technology advancing at a lightning speed, Electronic Relays (India) Pvt Ltd (ERI) is a company that keeps pace with the changing times. It has consistently remained so since 1979, the year it started manufacturing solid state relays and input/output modules. ERI started off by exporting a major part of its production to the US. Subsequently, it expanded activities and began catering to the huge demand in the domestic market too. The customer list remains highly satisfied and hugely appreciative of ERI's adherence to quality and professionalism. ERI exports the products to the US, Europe, China and other countries, and has been awarded several times by the state and central governments for highest exports.

For details contact M/s. Electronic Relays (India) Pvt Ltd T: -+91-80-22354189 / 22354190 F: +91-80-22357760 E: mktg@eri.co.in sales@eri.co.in W: www.electronicrelaysindia.com An informative read on what led to the emergence of solid state technology in switching, and how ERI, with its comprehensive suite of products, is making sure its advantages are fully utilized for the benefit of its customers.

During and after the World Wars, switching was mechanical. It was then followed by electromagnetic technology. This technology was matured for more than 30 years and the users were very much familiar and comfortable with it. With time, the advancement in the electrical engineering and sophisticated machines called for better switches.

Reasons to innovate

The electromagnetic switches were made using rare materials like copper, silver etc. Their erosion paved the way to a new technology using semiconductor devices to make similar switches.

During 80s, a few companies in the US made a switch called as static switch using semiconductor devices. Japan soon took the idea to use these static switches in the machines they made.

Better than EMR

The solid state switching technology, which is matured now, has distinct advantages over its rival EMR (Electromagnetic Relays).

Being solid state, the switching is by the flow of current without damaging the so called contacts. There is no arcing and no welding as there are no mechanical movements of the contacts as in conventional relays. Switching is much faster (in microseconds). Hence, corrections can be very fast and accurate and no errors arise since there is no switch bouncing as in EMRs. Moreover, solid state relays are compatible with the digital circuits, thereby interfacing the electrical field and the intelligence (microprocessor).

Applications galore

There are several applications where in solid state switching is essential like accurate and fast control of temperature, fluid flow using solenoids, motor control etc.

With the advancement in the



1 2





1 2 Phase Proportional Controller

3 Din Ready SSR

semiconductor technology, the company can now offer high current switches. The devices like IGBT allow high current and high voltages witching. The most common applications are for heating, lighting, motor control, and power factor correction.

The typical examples are furnace, trafficsignal control, coffee m/c, ATMs, petrol dispensing, satellite tracking, food processing, studio lighting, building lighting, pump control etc.

Products Manufactured

Solid State Relays

Solid state Relays are available up to 205 Amps for the AC switching and up to 40 Amps/200 VDC for switching DC loads. The relays up to 150 amps are approved by 'UL' (US Lab for safety standards). All the relays are tested and marked as per 'CE' requirements.

Input/output Modules

I/O modules - AC/D C output modules, AC/DC input modules - which act as an interference between the field and the microcontroller, are available for both AC/DC applications. Apart from the standard products, the company undertakes custom designs related to switching applications.

Solid state relays are for phase angle control applications. The world is moving towards energy saving concepts. The typical On/Off relays do not aid energy savings. Here comes the concept of phase angle switching to conserve or save energy. ERI product range contributes to single and three phase applications, typically for the heater control applications. The standard hockey pucks, 020 series, are for the single phase applications and the 012 series for the three phase application. I/P can be 0-10V or 4-20mA control. O/P can be a phase control or burst fire control with controlled AC cycles.

Source: Electronic Relays (India) Pvt Ltd



TECHNOLOGY @ work



18th Indian Metal-Cutting Machine Tool Exhibition with International participation

concurrent show



19th International Exhibition of Cutting Tools, Tooling Systems Machine Tool Accessories, Metrology & CAD / CAM

26 Jan - 01 Feb 2017, Bangalore

Venue





Indian Machine Tool Manufacturers' Association T: +91-80-66246600. F: +91-80-66246661. E: info@imtex.in



www.imtex.in

Betting HIGH

In post-liberalization India, entrepreneurship has gained a lot of respect and support from a receptive market. Umang Srivastava, JMD, Bonita India gives a snapshot of the Indian startup ecosystem.

Indians have spent years acting as the back offices for many international brand and companies. However, more and more Indians are today standing on their entrepreneurial feet. Some of India's most successful start-ups that went on to become huge businesses have been in the IT domain, be it Flipkart, Just dial, Bookmyshow, Makemytrip or even Shadi.com.

Rise of the startup

The first generation of entrepreneurs who established such brand names as Infosys, Bharti, Kotak, ICICI, opened a whole new scale of job opportunities for India's educated young. Successive governments have lent policy support to entrepreneurs with new policies towards encouraging micro or small businesses, such as making loans easier. The global financial crisis of the last decade gave impetus to new ideas and $newer\,ways\,of\,doing\,things, to\,do\,more$ with less. The growth of start-ups in India could be mainly accounted to Source: SME World

the factors like large domestic market, increased M&A activity and access to capital through investor funding.

Inflow of investors

Unlike the debt-oriented financing of the past, start-ups today have access to venture capitalists (VC), private equities (PE), angel investors, banks and financial institutions as well as incubators. Segments such as travel, matrimonial services, jobs, games, mobile payments, etc., are getting substantial capital infusion.

Indians today are not only launching their own brands but also marketing them in the international market under own brand names. Owning patents of many products, Indian entrepreneurship has set sail to conquer the international market as well.

Start-Up Boom

According to NASSCOM, India is the 3rd largest base for start-ups in the world at present. Here are some interesting numbers...

5,000 (or more) startups present in India

1000 (at least) setting up annually

11,500 - number of start-ups projected to be in India by 2020

250,000 - people could be potentially be employed

20 - M&A's worth USD 5bn completed in India in last three years

72 - per cent of start-up founders are under 35 years of age

