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## India@75: The Making of a POWER-ful Nation....10





Maillefer: An Intuitive Approach to Creating Manufacturing Systems



SIKORA AG: Bringing Avant-Garde Innovations in Measuring & **Control Systems** 









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The **5th** International **Exhibition & Conference** for Wire & Cable Industry

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## **INDUSTRY TRENDS**

# India@75: The Making of a POWER-ful Nation

PM Modi, in his Independence Day speech, mentioned that India needs to become Aatmanirbhar in the energy sector. Being a direct beneficiary of the development of power generation, transmission, and distribution infrastructure, the wire & cable industry has huge opportunities ahead.

ndia recently celebrated 75 years of Independence. From a GDP of INR 2.7 lakh crore to INR 150 lakh crore, the country has come a long way. While it witnessed various ups and downs over the last seven decades, India made enormous strides in almost all sectors and is now among the biggest economies in the world. Just like many other sectors, the wire & cable industry has made significant progress, growing from being a small industry to a very large one. Today, the wire & cable industry is not only serving Indian defence, railways, government & utility companies but also empowering the

companies but also empowering the nation by developing new technologies and bringing out product innovations.

Prime Minister Narendra Modi, in his Independence Day speech, mentioned that India needs to become Aatmanirbhar in the energy sector. He further said that the nation needs to take green energy initiatives forward and lead as an example in the world. Being a direct beneficiary of the development of power generation, transmission, and distribution infrastructure, the wire & cable industry continues to see tremendous opportunities ahead.



Talking about the instrumental role played by the industry, **Mr. Shreegopal Kabra, Managing Director, RR Global** says, "It is a proud moment for all of us as we celebrate the 75th year of Independence. The 'Azadi Ka Amrit Mahotsav' is a commendable initiative by the government to encourage participation from people all over the country and to celebrate this historic moment. Over the years, the manufacturing sector has seen indispensable growth and the 'Make in India' movement is only here to make it stronger. We at RR Kabel have also seen incredible growth and potential in this country and are truly a proud 'Make in India' company and hope that we continue to make our country proud for the

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## **INDUSTRY TRENDS**

next 75 years and beyond. According to Technavio's report, the wire and cables market in India has the potential to grow by USD 1.65 billion during 2021-2025, and the market's growth momentum will accelerate at a CAGR of 3.80. The rising investments in underground cables and the growth of renewable energy are set to escalate the adoption of wires and cables."



Highlighting the sectors that hold immense opportunities for the sector, Mrs. Kirti Kabra, Director, RR Global, adds, "75 years of independence is a celebratory moment, and we couldn't be prouder of the development the country has made ever since. Right from education, sustainability and women empowerment amongst others, India has been at the forefront of these movements. The support given to women entrepreneurs to showcase their work and empower them to achieve great things on their own is commendable. The B2B sector has grown enormously with new innovations and a better standard of living. Likewise, with the government's emphasis on pushing renewable energy to the forefront, the industry is now looking forward to supplying cables for solar and wind power applications in addition to oil and gas, railways and other specialised segments. We hope that the country keeps this momentum on for the

coming 75 years and paves the way for others to follow."

The industry is powering every house in the country and bringing light to the lives of people. A building block to the power sector of India, the wire & cable industry also contributes immensely to the defence sector by supplying tactical cables, and submarine & torpedo cables. Moreover, Indian wire and cable companies are increasingly aligning themselves to the international quality and technology benchmark to produce wires and cables satisfying both domestic and global customers.



Talking about APAR Industries, the company's **Senior President**, **Business Strategy and Innovation**, **Mr. VK Bajaj** says, "It is a privilege for APAR to be recognised at par with other internationally reputed organisations in terms of quality of products. We are proud to bring to attention and represent India by innovating, developing and contributing to the global cables & wires industry."

Supporting the vision of the country, the industry has developed specialised cables for the renewable energy sector with fireretardant features. While most of such cables were previously imported, various companies have lately started manufacturing them in India propelling 'Aatmanirbhar Bharat'.

One of the largest manufacturers in the wires and cables industry in India, Polycab India Ltd. manufactures and sells a diverse range of wires and cables including power cables, control cables, instrumentation cables, solar cables, welding cables, submersible flat and round cables, railway signaling cables, specialty cables and green wires.



Speaking on the company's product portfolio, Mr. Bhushan Sawhney, **Executive President & Chief** Business Officer (Cables), Polycab India Ltd. says, "Technology has assumed the stature of acting as a double-edged sword. Our lifestyles are ever evolving to a higher convenience level with the use of technology. On the other hand, we need to be cautious and ensure that such advancements in technology do not negatively impact the environment and in fact, drive the sustainability objectives. At Polycab we have embraced this approach to enhance our product offerings to modern-day 'smart' and 'intelligent' quotients while ensuring that these deliver on industry-best benchmarks related to sustainability by being efficient, saving energy as well as having minimal carbon footprints. Not only product offerings, but our manufacturing facility too is designed with state-of-the-art capabilities which

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## **INDUSTRY TRENDS**

help us to produce the most advanced wires and cables including fire survival cables, e-beam, and green wires, as per modern industry standards. We feel it is our fiduciary responsibility to guide the industry towards balancing modernization and its impact on the ecosystem."

India aims to achieve 175GW of renewable energy capacity by 2022, comprising 100GW of solar, 60GW of wind, 10GW of biomass power and 5GW of small hydropower and this ambitious target can never be completed without the contribution of the wire & cable industry.



Mr. Gary Bateman, Managing Director, LAPP India Pvt. Ltd. says, "The world is gradually recognising the critical responsibility we hold to protect and preserve the environment. Prioritising green energy initiatives and environmentfriendly products has become the need of the hour. The renewable energy sector will see major advancements in India, to keep up with the ambitious target to achieve 175 GW worth of renewable energy by the end of 2022, which will expand to 450 GW by 2030. Renewable energy technologies are more cable intensive as compared to traditional energy generation methods. Reliable distribution and transmission network infrastructures are vital in ensuring that the energy generated

can be transmitted with only negligible losses. This is where the role of wires and cables come into play."

"LAPP India has been expanding its product portfolio for solar and wind energy with products of the longest possible flexibility, durability, and robustness. We have an exclusive range of products for the PV solar segment. We offer solutions for photovoltaic projects to simple rooftop installations and energy storage. We are also looking at local manufacturing/sourcing of solar products for India. Recently, we partnered with CAHORS, a French multinational company specialised in energy distribution, to complement our portfolio of solar cables with an exhaustive product range from CAHORS, including plug-in connectors, branch connectors, panel connectors, module junction boxes, enclosures, combiner boxes, and crimping/cutting tools. Our cable and accessories programme includes halogen-free products which are safer options in case of fire incidents. They also offer protection from toxic reactions and benefits for recycling. All our products and packaging are free of asbestos and CFC," he adds.

Many wire and cable companies are catering to railway locomotives & coaches, steel, and mining industries through their wide range of elastomer cables. Meanwhile, the Indian Railways has an ambitious plan to electrify its entire network by 2023-24 which paves way for the industry.

Talking about APAR Industries being one of the companies that manufacture many first-in-India products and technologies, **Mr. Shashi Amin, Chief Executive Officer (CEO), APAR Industries Ltd.** says, "With our superior product range, we are on the path of making India Aatmanirbhar (self-



reliant). We are strong in renewable and defence sectors, proudly serving world-class products to the Indian market and further raising the benchmark for the industry."

After the COVID-19 pandemic, the demand for optical fibre has increased substantially, not only in India but across the world. According to the latest report released by Facts & Factors, the demand for global fibre optics market size was valued at around USD 4,528.5 million in 2021. The market is expected to grow above a CAGR of 9.5 percent and is anticipated to reach over USD 7,896 million by 2028. Not only telecommunications, various industries in India such as medical, industrial, data storage, networking, and broadcast industries are applying fibre optic technology in a variety of applications.

The wire & cable industry is expected to be driven by various other factors such as the government's thrust on infrastructure, projects like BharatNet, the rollout of 5G technology, and schemes like Integrated Power Development Scheme (IPDS), Revamped Distribution Sector Scheme (RDSS), Ude Desh ka Aam Naagrik (UDAN), and Pradhan Mantri Awas Yojana (PMAY). Marked by significant milestones and reforms throughout the journey, the wire and cable market is likely to dominate in the near future.

### WIRE & CABLE

## APAR Demonstrates its Innovations across Wire & Cable Industry at the CRU Conference 2022

APAR becomes the only Indian company invited as a panellist at CRU Wire & Cable 2022 Conference, held from 25-27 July 2022 in London.

#### August 30, 2022

n its three days conference from 25-27 July 2022, CRU's Wire & Cable Conference brought together key executives from the wire & cable industry around the world. The agenda of the conference was to explore both energy and communications network developments, across the full value chain for insulated wire & cable products produced from copper, aluminium, optical fibre and associated materials. Mr. VK Bajaj, Sr. President – Business Strategy & Innovation from APAR Industries Ltd. was recently invited to CRU Wire & Cable 2022 Conference held in London, England. This is for the first time an Indian company was invited as a panellist on the forum.

At the forum, Mr. VK Bajaj highlighted a few of the innovations APAR is driving to bring a change in the wires & cables industry. He talked about how APAR's latest e-beam technology is the future of wire & cables and will meet the growing electricity demands of every country and industry. He also emphasised how this technology supports a wire & cable to perform at optimum state without any derating even at higher operating temperatures.

Talking about the acceptance of the e-beam cables Mr. VK Bajaj said, "I am proud to introduce E-beam insulated XLPE cables that have better ageing properties compared to conventional XLPE cables. This is what makes them well accepted in the renewable industry like wind, solar and nuclear where the base operating temperature is high. Due to its high current carrying capacity and fire-resistant properties, this e-beam cross-linked zero halogen wire is an ideal choice for other industries including railways (for locomotive and coaches), defence, shipping, house wiring, etc."



*Mr.* VK Bajaj highlighted the key innovations with which APAR is driving to bring a change in the industry.

During his presentation, he also elaborated on the various initiatives APAR is taking to foster innovation.

Post this occasion in an interview Mr. Kushal N Desai – Chairman and Managing Director of the company, said, "We entered the cables business in 2008 and for the last 10 years, we have been steadily growing at about 19 percent CAGR. It is a privilege for APAR to be recognised at par with other internationally reputed organisations. As the only Indian company invited to speak at the podium, we are proud to bring to attention and represent the innovation, development, growing exports and contribution to the global cable & wires industry." ■

## Ajex & Turner Develops Extrusion Tips & Dies with Ideal OD/ID Concentricity

The tight concentricity allows wire insulators to meet the demands of today's super thin-wall constructions.

A jex & Turner manufactures extrusion tips & dies in various shapes and sizes with alloy steel and special custom materials. It uses high-quality rust free steel with tested ideal OD & ID concentricity. The tight concentricity allows wire insulators to meet the demands of today's super thin-wall constructions. These tools are made in alloy steel, carbide and diamond as per the customer's requirement.

The extrusion dies can be tubing die, compression die or semi compression die. Ajex & Turner makes tip & die with a mirror polish and no sharp edges to ensure optimal insulation

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## WIRE & CABLE

## Goa Government to Invest INR 10 crore for Underground Cabling in Each Constituency

Power Minister of Goa emphasised that the Goa Tamnar Transmission Project Ltd. (GTTPL) will be instrumental in fulfilling the increasing requirements for reliable power supply.

July 25, 2022

Power Minister of Goa Ramkrishna 'Sudin' Dhavalikar said that INR 10 crore would be spent in each state constituency to take up underground cabling – as published in a leading news daily. The state government will generate money to initiate underground cabling projects.

The Power Minister also asserted that the Goa Tamnar Transmission Project Ltd. (GTTPL) is the need of the hour to serve the rising requirements for reliable power supply in the region. He also informed about the significant efforts of the government to ensure the availability of an uninterrupted power supply in Goa.

In 2021, Goa Electricity Department had taken up the conversion work of HT and LT overhead power lines to cover conductors in Querim, Veling, Priol, and Cuncolim in the Priol constituency in the state. Additionally, there was other significant underground cabling work: laying 33 kV



Representative Image: Underground Cables

double circuit cable from Porvorim substation to Saligao substation, and conversion work of overhead to the underground in Cuncolim Industrial Estate. ■

## APAR is Proud to be a Contributor to the Indian Navy's Marvel INS Vikrant

APAR Industries has been providing indigenously developed specialised cables to the Indian Defence for over a decade.

#### September 6, 2022

2 nd September 2022 marked an essential milestone for Indian defence manufacturing as the Indian Navy commissioned "INS Vikrant" – the largest ship (aircraft carrier) ever built in India's maritime history. Earlier on May 17th, 2022, India had successfully launched two indigenously made frontline warships, INS Surat and INS Udaygiri and the third ship "INS Taragiri" is scheduled to be launched on 11 September 2022 from Mumbai's Mazagon Docks.

These are some of the momentous steps of the Indian Navy in achieving self-reliance in the defence sector, as India joins a select group of nations having the capability to design and build an Aircraft Carrier indigenously.

INS Vikrant is built using indigenous equipment, machinery & over 2,500 km of cabling (more than the distance between Kochi to Kailash). APAR Industries Limited is proud to be one of the partners of the Indian Navy for supplying specialised e-beam (EBXL) cables.



Image source: APAR Industries



APAR has been supplying indigenously developed and manufactured specialised cables to the Indian defence for over a decade. These specialised cables include control cables, power cables, instrumentation cables, co-axial cables manufactured at APAR's Khatalwada plant in Gujarat.

Cables manufactured by APAR undergo Electron Beam (ebeam) irradiation process. In this process, wires pass through high-energy electrons for crosslinking the polymers which improve the electrical and mechanical properties of the wires and cables. This crosslinking significantly improves the thermal, mechanical and chemical properties of the polymer.

Today, APAR Industries houses India's largest e-beam facility and is a highly reputed supplier of specialised OFC cables, tactical cables, torpedo cables and submarine cables. This range of cables is specially developed to support the Indian Army and Navy, strengthening and safeguarding Indian borders and coasts. ■

## LS Cable & System Brings Remote-Based Management System

Within the i-check platform by LS Cable & System, an IoT sensor, which is attached to the cable, detects abnormal conditions such as overheating and short circuits.

#### September 6, 2022

South Korea-based LS Cable & System has launched 'icheck' – the first-ever platform in the industry that paves the way for remote cable management utilising the Internet of Things (IoT) technology. The new solution can be helpful in reducing the number of incidents in which fires are caused by short circuits and power outages.

The cable manufacturer is planning to expand its range of cables while seamlessly integrating the core concept of 'asset management' and emerge as a core platform for managing the life cycle of cables.

In the system, an IoT sensor, which is attached to the cable, detects abnormal conditions such as overheating and short circuits. Moreover, it prevents power outages and fires caused by cable abnormalities. The administrators can also check cable status in real-time via web and mobile. It also sends push notifications when an abnormal situation occurs.

The company has also brought a way to digitise and manage cable information. With a distinct QR code with a dedicated reader or mobile device, the consumers can conveniently find out about the cable manufacturer, maintenance history, and remaining service life.

i-check has a sound and vibration monitoring system using optical cable sensors. It detects and notifies about the minutest modifications in sound and vibration of the line. The fire monitoring system detects carbon monoxide that is generated when a cable or nearby power facility catches fire and shares a push notification. Fires are monitored by observing abnormal temperature rises with a temperature sensor.



Image Source: LS Cable & System

The platform is being commercialised actively. Ever since its introduction, LS Cable & System has been in talks with several domestic and international firms regarding the introduction of the system. As a matter of fact, companies in various segments such as semiconductors, displays, petrochemicals, telecommunication services, and steel have expressed their eagerness to install the platform.

In fact, LS Cable & System has expressed its plans to continue developing and expanding i-check in terms of having multiple management functions with one sensor. In the future, the goal of the company is to start a 'cable health index' feature that can even identify the health of the cable. ■

## **Global Steel Wire Market to Surpass USD 570 Million by 2026**

One of the major factors driving the growth in the global steel wire market is the rise in demand in the automotive sector.

#### August 23, 2022

The steel wire market is expected to increase to USD 570 million from 2021 to 2026, at a CAGR of 4.37 percent, according to the latest report released by

Technavio. Around 51 percent of the market's growth will originate from APAC during the forecast period. China, Japan, and South Korea are the key markets for steel wires in APAC. Market growth in this region will be faster than the