

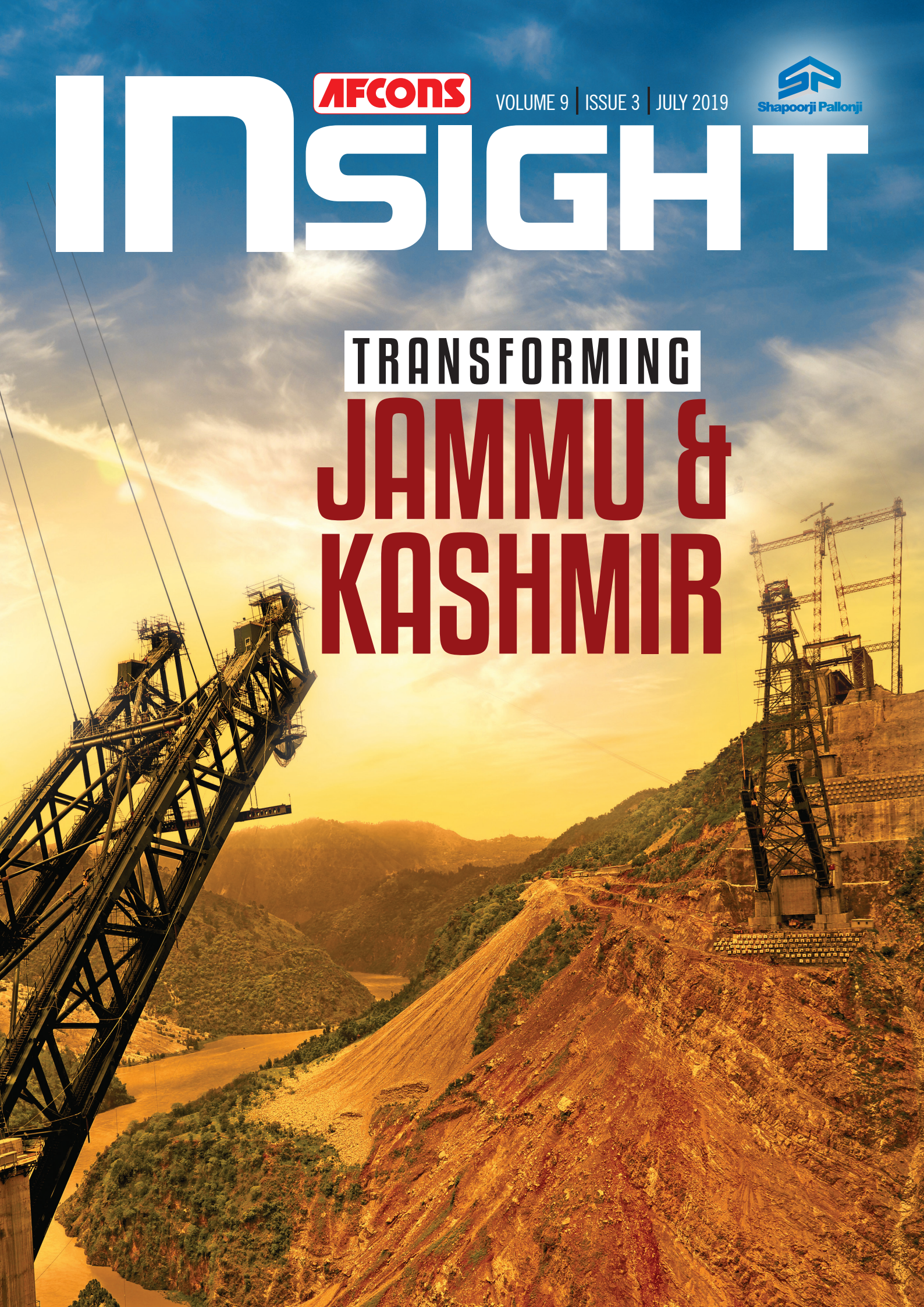
INSIGHT

AFCONS

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Shapoorji Pallonji

TRANSFORMING JAMMU & KASHMIR



from **EVC'S** desk

Winning J&K, softly

There is often an increased level of anxiety and concern associated with infrastructure projects in the northern most state of our country, ie, Jammu and Kashmir (J&K). A lot of sensitive issues combined with tough terrains make construction jobs extremely difficult. But over a decade, or so, Afcons has quietly transformed the region by virtue of its patience, sacrifices, and, engineering daredevilry. Our teams have put extraordinary efforts to carve roads, daylight tunnels, and, build bridges in J&K. But our success is not an entitlement. It is something that we have slogged to earn every day. As Afconians, we have tried to do everything we can to individually and collectively exceed our customers' expectations.

Afcons has created some mind-boggling infrastructure. The Jammu-Udhampur Highway is regarded as the fastest hill road project in National Highway Authority of India's (NHAI) history. The series of completed and ongoing railway tunnels for the arduous Udhampur-Srinagar-Baramulla Rail Link project, including the Chenab Rail Bridge, is nothing short of distinction.

We're proud to be the ones to make the Chenab Bridge project a reality. Constructing this world-beating project has been one of the biggest learning experiences. We are innovating, adapting and experimenting along this exciting journey, and, will continue to do so as the bridge takes shape.

During this decade-long journey, we have weathered many different types of storms. Our breakthrough innovations, value engineering have inspired confidence in our customers. Our commitment to community development by creating jobs, addressing necessities at the grassroots, providing construction support to locals, and, providing sustainable solutions has endeared us to every community in the region. Our moto of holistic growth leads us to manage our company and projects through the lens of humanity.

May this spirit of resilience and generosity grow stronger as we continue, in our limited ability, to transform infrastructure in Jammu & Kashmir.



K Subramanian

making **headlines**



Aid for Fani victims

Cyclone Fani ravaged through Odisha recently. In an attempt at helping those affected by the cyclone, Afconians from Gopalpur site shared a truckload of food items and other essentials. The material was handed over for distribution to the Sub Divisional Police Officer of Chatrapur. Afconians from KMRC (1674) site also sent a truck with food items, water bottles and solar lanterns to help the distressed. The material was handed over to the Confederation of Indian Industry (CII) office in Kolkata from where they were dispatched to Puri.



Photocaption comes here....

Indian High Commissioner visits Lusaka site



Indian High Commissioner Mr NJ Gangte visited the Lusaka City Roads Decongestion Project in May 2019. He expressed satisfaction with the progress of the project, and, appreciated the engagement of local engineers and capacity building. This project is one of the most critical road projects in the country, and, is slated to improve bilateral relations between the two nations.

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EDITORIAL

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AFCONS IN J&K

A journey of love & perseverance

If there is a heaven on earth, it is here, it is here, it is here!

— Sufi scholar Amir Khusrow on Kashmir

Afcns has made the heaven called Jammu & Kashmir (J&K) its home for more than a decade now. The company is instrumental in giving the region some of the most iconic projects, not only in India, but across the world. Each of these structures began with a dream of transforming the region that evokes emotions and tensions in equal measure. These projects have involved arduous labour amidst toughest of conditions. Tenacious teams have braved harsh weather, hostile locations and turbulent socio-economic climate to give this land hope by connecting it with the rest of the world. Every bit of infrastructure built here is a step taken towards transforming J&K and ushering in business and employment in the region.



At 359m, Chenab Rail Bridge is the world's highest railway bridge



Afcns displayed sheer grit while constructing tunnels in Sangaldan

World's highest

The Chenab Rail Bridge project is Afcons' pride. Once built, the 359m tall and 1315m long structure will be the world's highest single-arch rail bridge. With a design life of over 100 years, this bridge is being built in extreme geological and climatic conditions. The bridge between Udhampur and Baramulla is a part of Konkan Railway Corporation Ltd's ambitious Udhampur-Srinagar-Baramulla Railway Link (USBRL) project envisaged for socio-economic development in J&K.

In a first, worldwide, Afcons is attempting incremental launching on a transition curve to launch the main steel arch of 480m span. The deck on the viaduct is partly in straight, partly in a circular curve and partly on transition curve. The arch span is being built using cable cranes and derrick moving on the already-erected portion of the viaduct. The Chenab Bridge Project Undertaking (CBPU) has



Afcns has constructed 11 tunnels in Jammu & Kashmir



Jammu Udhampur Highway is NHAI's fastest road project in a hilly terrain

Our relationship with Afcons is very cordial and the trust and working environment what we have created for the Konkan Railway Project way back in 1991, the same we are also feeling here also with the Afcons

RAJESH K, DEPUTY CE, KRCL

commissioned the world's tallest cable crane at site that can handle loads up to 34T on single hook. Many sophisticated equipment such as CNC cutting machines, Flux Core Arc welding equipment mounted on trolleys, ultrasonic testing machine for examining welds for internal defects etc are being deployed.

NHAI's first

With the commissioning of the Jammu-Udhampur highway in 2015, Afcons completed the fastest hill road project in the history of National Highway Authority of India (NHAI). The breathtaking ride takes just 45 minutes, considerably less than the two-and-a-half hours it used to take earlier.

Smoother navigation significantly cuts down chances of accidents. Apart from political and strategic importance, these areas are major tourist attractions. NH 1-A is also used for all commercial and defence logistics making it the lifeline of J&K.

The biggest challenge that posed the engineers was ensuring undisrupted flow of traffic, and, therefore, diversions had to be precise throughout the period of construction. The old road was strewn

We have got a very good contractor (Afcons) and a good concessionaire (Shapoorji Pallonji). This will be the fastest project in the hilly area of the country where we are able to complete the project well ahead of schedule. In that way, it's a landmark project

RP SINGH, PROJECT DIRECTOR, NHAI

with blind curves. The highway was, therefore, re-designed such that the alignment had less curves and wider bends that allowed an average speed limit of 60kph (earlier the average speed was 25-30 kph). Blasting was not allowed during construction. So, excavation had to be done by rock breakers and environmental safety norms were strictly followed.

The highlight of the project was the sheer number of structures. It included 76 bridges/viaducts and underpasses, 223 culverts, almost 10 km of retaining wall, 27 km of breast wall, four twin-tube tunnels, amongst others. Over 8,000 workers

PROJECTS IN JAMMU & KASHMIR

11 COMPLETED TUNNELS

21.5 KM COMPLETED TUNNEL LENGTH

7.4 KM LONGEST SINGLE TUNNEL UNDER CONSTRUCTION

5 UNDER CONSTRUCTION TUNNELS

16.45 KM UNDER CONSTRUCTION TUNNEL LENGTH

17 BRIDGES INCLUDING CHENAB RAIL BRIDGE UNDER CONSTRUCTION

65 KM OF ROAD

1000 MW UNDERGROUND POWER HOUSE PACKAGE UNDER CONSTRUCTION

COMMUNITY SUPPORT

- Disaster Relief
- Aid for flood, land slide victims
- Providing locals with food, drinking water
- Infrastructure support for schools, locals
- Medical support
- Donation of ambulance
- Installation of borewells
- Development of village roads
- Construction of community halls, playgrounds

were deployed to build the 65-km stretch.

Extreme Engineering

Afcons has already constructed five BG single-line railway tunnels on the Katra-Laole section of the USBRL project. The total length of the tunnels, including cut and cover, is approximately 8,500m. This is a challenging project because of the tough terrain and erstwhile terrorist attacks. Undeterred, Afconians have continued their mission, and, Afcons became the first company to daylight tunnels in this section. The company is also executing five tunnels and 16 bridges in the region for the USBRL project. All the bridges are set in geologically extreme locations and are critical for the ambitious project.

Hydro-electric boost

The most-recent project Afcons bagged in J&K is the 1000 MW underground powerhouse package for the Pakal Dul Hydro Electric Project,

the biggest hydroelectric project in the state. Built on Marusadar River, a tributary of Chenab River, the project is part of the Prime Minister's Development Package for the state and is aimed at boosting power generation.

Community engagement

While on one hand, our teams have displayed excellent project management skills, on the other, they have mingled with local communities and embraced their culture and sentiment. Afconians have stood by locals during natural calamities, extended help through rescue operations, supported with food, medicine, shelter, construction and refurbishment of schools, buildings, markets, playgrounds, community centres etc. At every stage, Afcons has ensured development and well-being of local communities and these are just small steps into making a haven of the heaven that Kashmir is.

in **conversation**

SM Viswamurthy Bridging the Chenab Valley

Mist cuts through into a sunny afternoon at the Chenab Railway Bridge Project site. It soon begins to drizzle. The faint drone of welding from the fabrication yard merges seamlessly with the pitter-patter.

“My team is building the world’s highest railway bridge in extreme conditions. We are having to acclimatise ourselves with the topography and climatic conditions every step of the way to make Chenab Railway Bridge Project a success. We never know what’s in store for us in terms of weather when we begin the day,” says S.M. Viswamurthy, project manager, Chenab Rail Bridge Project.

The 545m arch, which is being built over Chenab river, takes shape in a hostile terrain where landslides and downpours are a way of life. Building a single-arch railway bridge at this height in such weather conditions is not a job for the faint-hearted.

“The highlight of the Chenab Railway Bridge is the single arch, whose highest point will be 359m, on which the railway deck will be built. We began the process of

building the arch on November 2017. Arch segments are being launched using the world’s tallest cable cranes. Individual segments are being lifted and joined with high-strength friction bolts. The activity is being conducted simultaneously on both ends of the valley at Kauri and Bakkal. The progress of the arch from both ends has been nearly identical. We conducted extensive trial assemblies before the actual mammoth task of building the arch,” he says.

The team battles inclement weather conditions every day. Fluctuating temperatures pose a challenge while erecting the arch segments and wind bracings as they result in expansion and contraction of these parts.

“I am proud we have maintained world-class quality in every activity we have done despite such tough conditions. Fabricating the viaduct segments, piers, trestles and arch segments and erecting them have been challenging for our team. All activities have been minutely monitored and advanced safety gear has been provided to all our men,” says Viswamurthy.

“In case of Chenab Bridge, where



every activity is a project in itself, innovations have been the name of the game. The height at which the project is built just adds to our challenges. One of the innovations en route building the arch have been installing working platforms at such great heights for our workers. Every activity done for this project has been a lesson for the team,” says the native of Bellary, Karnataka, who is as keen on sports and reading.

SM Viswamurthy is the project manager of Chenab Rail Bridge Project

2019 **strategyconclave**



Shapoorji Pallonji Group Chairman Mr Shapoor Mistry with Afcons top management led by Executive Vice Chairman Mr K Subramanian and Managing Director Mr S Paramasivan at the 2019 Strategy Conclave in Mumbai

awards



AWARD FOR HSE EXCELLENCE

Afcons has won the award for Construction Company of the Year 2019 in HSE Excellence at the HSE Summit & Awards India 2019. A total of 63 organisations were in the running for the award, 17 being from the construction sector. The ceremony was held in Mumbai, on June 14, 2019. The award was received by Mr Vipinchandran Nair, AGM-HSE, and Ms Prabha Mishra, Senior Manager-HSE.

BRITISH SAFETY COUNCIL AWARD FOR TWO PROJECTS

British Safety Council has awarded Ahmedabad Metro Rail Project and Vizhinjam Sea Port Project the International Safety Award (Merit) 2019 for demonstrating a strong commitment to good health and safety management in 2018.

The Vizhinjam Project also won two awards at the CII-SR EHS Excellence Awards 2018. The project won the second place in Projects, Construction, Development/Water/Power/Ports category and 5-star Rating Award for Excellence in EHS practices.



JNPT ON A ROLL!

Afcons has been honoured for its Outstanding Contribution in Port Project for Bharat Mumbai Container Terminals Project at Jawaharlal Nehru Port in the Infra category during the 8th EPC World Awards.

news

EVC VISITS AHMEDABAD METRO PROJECT

Executive Vice Chairman, K Subramanian, visited the Ahmedabad Metro Rail project on June 7, 2019. They reviewed the progress of the project at all sites and motivated the team to complete the project on time. A tree plantation drive near project office was also held during their visit.



MD VISITS KUWAIT SITE

Managing Director S Paramasivan and Director – CPE V Manivannan, visited the RA 256 PART, Roads and Bridges project, Kuwait, from April 29 to May 1, 2019. A team headed by the MD, met the Minister of Public Works Dr Jenan Mohsen Bushehri. Mr Paramasivan and Mr Manivannan also interacted with the project management team, assessed the progress and motivated them to achieve the target in stipulated time.



IFTAR CELEBRATIONS IN KUWAIT AND DUBAI

The Kuwait project team organised a Dawat-e-Iftar, on May 23, 2019. The occasion was graced by senior delegates including Mr Mohammed Ismail Al-Saffar, PE, PART, and officials from Parsons WSP Mr Mohammed Basheer, GM-BD and Adel M Elsekhily, RE, among others. Afconians at The Entrances to the Jewel of Creek site, in Dubai, also came together to partake iftar on May 26, 2019.



PROFESSIONAL DEVELOPMENT CONFERENCE

American Society of Safety Professionals (ASSP), India chapter organised 7th Professional Development Conference at IIT Madras on April 27-28, 2019 in collaboration with ICOH Scientific Committee on Occupational Health in Construction Industry (SCOHICI), ICOH Scientific Committee on Small Scale Enterprises and the Informal Sector (SCOHSSEIS) and The Department of Engineering Design, IIT Madras. Afcons HSE head Mr Ramakrishna Rao was felicitated with 'Best Safety Professional of the Year Award-2019'. He also delivered a lecture on 'Creating an Accident Injury Free Workplace through BBS'.



hse



Afconians celebrated World Environment Day at Afcons House and sites with several initiatives such as tree plantation drives, motivating speeches, quiz and drawing competitions.



new projects

NAGPUR METRO REACH 1

Afcons has been awarded the job of constructing facilities at Mihan and Higna depots for Reach 1 of the Nagpur Metro project by Maharashtra Metro Rail Corporation Ltd. The company is already working on Reaches 2 and 3.

LNG TERMINAL JOB AT CHHARA

HPCL Shapoorji Energy Pvt Ltd has given Afcons an EPC job for LNG storage tank for Chhara LNG terminal in Gujarat.

R ANANTAKUMAR



CLOCKING METRO MILES, ONE RECORD AT A TIME

India's deepest underground Metro station (30m below ground level) in Kolkata. We recently completed a 11-km viaduct for Nagpur Metro in a record time of 31 months. This is by far the largest Metro viaduct constructed by a single entity in India, and, perhaps the fastest too. Also, earlier this year, we achieved simultaneous tunnel breakthroughs for Ahmedabad Metro and completed the tunnelling works one month ahead of schedule. We're happy that, at Afcons, we have a strong foundation, and, are reckoned amongst leading Metro players in the country. Today, Afcons has the distinction of being the first Indian contractor to qualify on its own (without partner) for TBM tunnelling in Metro.

R Anantakumar, Executive Vice President, and, BU Head Urban Infrastructure

A city is known by how its people travel. The first image Mumbai conjures up is local trains while London is synonymous with the Underground. This puts into context the role of transport infrastructure in defining a city's identity.

Indian cities are stretching themselves beyond capacity. Long-established modes of public transport are burdened; Roads are choked with increasing number of vehicles; And, pollution levels are rising at an alarming rate. Metro Rail, therefore, is the most viable solution. India features amongst world's top 10 Metro Rail networks, and, is expanding rapidly. Today, we have a Metro network of nearly 600 kms, with an equal number under construction across 15 cities. We are set to see an exponential growth in this sector, with around 1,500 kms of Metro rail projects being cleared across 21 cities.

Afcons began its Metro journey in the 1980s, and, we have built over 100 kms of Metro network, and, more than 30 elevated and underground stations in five Indian cities since. It has been one exhilarating journey!

In 2017, Afcons made history when we completed India's first underwater Metro tunnels for in Kolkata under river Hooghly. We were the first Indian company to construct an underground Metro station without a foreign JV, at Barakhamba, in New Delhi. With Chennai Central Metro Station, we built one of Asia's biggest underground inter-change Metro stations. And, presently, we're constructing

Management Development Programme

A Middle Management Development Programme 2019 (Phase III) was organised at Head Office from April 22-26, 2019. The programme was attended by senior managers and managers from different sites and modules covered included QS & Contracts, HSE and soft skills session.

Soft Skills Trainings

A one-day workshop on personal effectiveness was conducted at Chenab and KRCL bridge sites on April 29-30, 2019. The objective of the programme was to bring about an understanding on the importance of personal effectiveness to enable the participants enhance their interpersonal competence.

Leadership Workshop

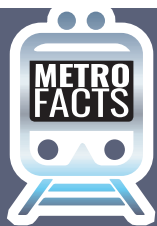
A day-long workshop on leadership was organised at KMRC site on June 6, 2019. The objective was to help participants in effective management of teams through better leadership and motivation skills.

community engagement



In continuation to our efforts of assisting communities around Afcons' project sites, in Ghana, Afconians extended their helping hand to residents of Kpong Quarters (Km 62+400) by providing them access to the National Health Insurance Scheme (NHIS) (photo top). The NHIS is a social intervention programme introduced by the government to provide financial access to quality healthcare for Ghanaian residents. The team also constructed a fence around a basic school (pre-school to Grade 9) to ensure safety of the children. Afcons has adopted the school and is aiding by providing manpower support and furniture.

In Bhutan, the Phuentsholing Township Development Project, the Afcons team has donated a TV set with network connection and wall fans for residents of a Drug Rehabilitation Centre.



One of Asia's biggest inter-change Metro stations, Chennai Central Metro Station

<p>11km viaduct for Nagpur Metro Rail project ready in record time of OF 31 MONTHS</p>	<p>India's first underwater Metro tunnels for East-West Metro Project, Kolkata, BUILT IN 67 DAYS</p>	<p>30M excavation for Howrah Metro Station, India's deepest Metro Station</p>	<p>9 UG Metro Stations of Chennai Metro awarded Platinum Rating by Indian Green Building Council (IGBC)</p>
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First Indian company to construct an underground Metro station using top-down methodology without a foreign JV

Simultaneous breakthrough of Metro tunnels for Ahmedabad Metro

First Indian contractor to qualify on its own (without partner) for TBM tunnelling in Metro

Sharing is Caring



Afconians poured their heart and soul to make the stationery donation drive held for students of the tribal Ashramshala a grand success. The three-day drive held between June 17-20, 2019, saw employees form groups, interact and co-ordinate to select writing, study, drawing and craft material for the children. At the end of the drive, 12 huge cartons were packed and handed over at SP Centre for them to be sent to the Ashramshala, at Padsare, in Raigad district.



ALERTS

Afcons now has a dedicated Youtube channel. Scan the code to visit the channel and stay tuned with the latest videos

