

GHANA'S FAST TRACK TO GROWTH

METRO RECORD IN NAGPUR

**PG 3 & 4****PG 5**

Afcons plays a pivotal role in the country's agenda to revamp and modernise its railway sector



Afcons erects 80m, 1,650MT double decker girder for India's first four-level transportation corridor in two months

**NEW PROJECTS- PG 6****AWARDS - PG 8**

It's time to accelerate

Dear Afconians,

Here we are at the beginning of another financial year! We have once again proved to be remarkably durable despite a lot of things changing around us over the past few years. Times have proved that our global outlook, strong values, employee focus, and a strong operating system have helped us to withstand the vicissitudes of time.

Around this time last year, we were still uncertain how the year would unfold even though we were pretty optimistic. It seems like our hopes were not unfounded because we managed a decent turnover of Rs 11,500cr which is almost a 20 per cent growth from the previous financial year. Our pending order book has also grown in excess of Rs 36,000cr.

Various factors have contributed in this journey. It definitely starts with you showing the intent to help the organisation bounce back in the post-Covid recovery. Some of our projects have done exceedingly well and have bagged bonuses while some are at a touching distance. This is the time when we have to act with a heightened sense of urgency and not wait until next week when something can be done today. We must accelerate our high priority initiatives and move faster together as an organisation.

We continue to build some awe-inspiring projects that are useful to billions of people globally. Very soon, the longest railway project of Ghana will reach a stage of substantial completion. We are completing one of Kuwait's largest and most critical road projects in the South Surra region. Recently, we erected an 80M double decker Open Web Girder (OWG) structure weighing 1,650MT for Nagpur Metro. It will eventually transform into the country's first four-layer transportation corridor. In Maharashtra's Samruddhi Mahamarg, we are the first agency to complete our package (PKG-2) out of 16 other packages in the mega expressway project. All stakeholders, including the client, have expressed total satisfaction with the quality and speed of delivery.

I think these kind of projects capture our extreme engineering mindset and show how we act as an organisation to bring grand visions to life.

As we move forward, we must be wary of overseas



K SUBRAMANIAN

contracts and must take into account the long-term impacts of the war in Ukraine, surging global oil prices, and the impact of Covid lockdowns in various geographies.

Let's keep optimising our resources and take on challenges that will be impactful for people and economies.

MAKING HEADLINES

Foundation stone laid in Rwanda

The Honourable Minister of State for the Ministry of Agriculture and Animal Resources (MINAGRI), Rwanda, Dr Jean Chrysostome Ngabitsinze, and the High Commissioner of India to Rwanda, Mr Oscar Kerketta, laid the foundation stone for the Development of Irrigation (1956/2669 Ha) in Mahama Sector (Lot-2) project on March 1, 2022. The project, to be executed by Afcons-Vijeta JV, is set to boost the country's economy.

Groundbreaking ceremony in Zimbabwe

His Excellency Honourable Dr Emmerson Dambudzo Mnangagwa, the President of the Republic of Zimbabwe, presided over the groundbreaking ceremony of Upgradation of Deka Water Pumping Station and River Water Intake System Project, on March 18, 2022. During his tour, the honourable President reviewed the activities and expressed happiness over the progress made by Afcons-Vijeta JV. Also present on the occasion were the Ambassador of India to the Republic of Zimbabwe, Mr Vijay Khanduja, and the Chief Engineer - WAPCOS Ltd, Mr Sanjay Gupta.



Groundbreaking ceremony in Maldives

Dr S Jaishankar, Honourable Minister of External Affairs, Government of India, and His Excellency Ibrahim Mohamed Solih, the President of the Republic of Maldives, visited the Construction of Roads and Drainage System project in Addu City, Maldives, for the groundbreaking ceremony on March 27, 2022. They began the asphalt work in the project and gave best wishes to the Afcons team. Mr Giridhar Rajagopalan, Deputy Managing Director, and, Mr Ravi Prakash, Director, Projects, from Afcons, along with the site management team were present during the occasion.

Minister reviews Samruddhi Pkg-2

Shri Eknath Shinde, Honourable Cabinet Minister of Urban Development and Public Works in Government of Maharashtra, visited Package-2 of the Samruddhi Mahamarg on March 27, 2022. He flagged off a car rally and also drove on the expressway to review the completed stretch. He appreciated the quality of work done by Afcons, and expressed his happiness at the smooth drive. Package-2 was the first among all 16 packages to complete PQC of the entire stretch. It is also the first package to be completed in the mega project.

EDITORIAL

**Bhakti Prasad, C Krishnakumari,
Bivabasu Kumar, Chandrika Sen**

OFFICE ADDRESS

Afcons House, 16, Shah Industrial Estate, Veera Desai Road, Azadnagar, Andheri (W), Mumbai - 400 053, Maharashtra, India.

Tel No: +91-22-67191000 | **Fax:** +91-22-2673 0047/ 2673 0026

Website: www.afcons.com | **CIN No:** U45200MH1976PLC019335

COVER STORY

From Ghana's first standard gauge track, to its longest railway bridge over Lake Volta, Afcons plays a pivotal role in the country's agenda to revamp and modernise its railway sector

TEMA TO MPAKADAN: GHANA'S FAST TRACK TO GROWTH

When trains finally start plying on the 97.7 KM route from Tema to Mpakadan, in Ghana, entire west Africa will sit up and take notice. This railway line, which is the first step in Ghana's grand vision for a 4,000-KM railway network, showcases an ideal transportation framework in Africa. This 97.7 KM route is also the longest railway network in Ghana, so far.

Multi-modal transportation

This grand vision emanates from a long-standing desire for a multi-modal transportation system that will reduce the country's over dependence on road transport. As West Africa's biggest economic hub, goods arriving at Tema port, in Ghana, will now be moved seamlessly to northern landlocked

countries like Burkina Faso, Mali & Niger via rail, water, and road networks. The train will carry freight and people from Tema to Mpakadan, from there the cargo will be moved through Lake Volta by ships till Buiepe, and, finally, it will travel further north via road transport.

"So, we will be going from railways to lake transport and then to transport by automobiles. This will shorten the distance between Tema and Paga," says a beaming Yaw Owusu, the CEO of Ghana Railway Development Authority (GRDA).

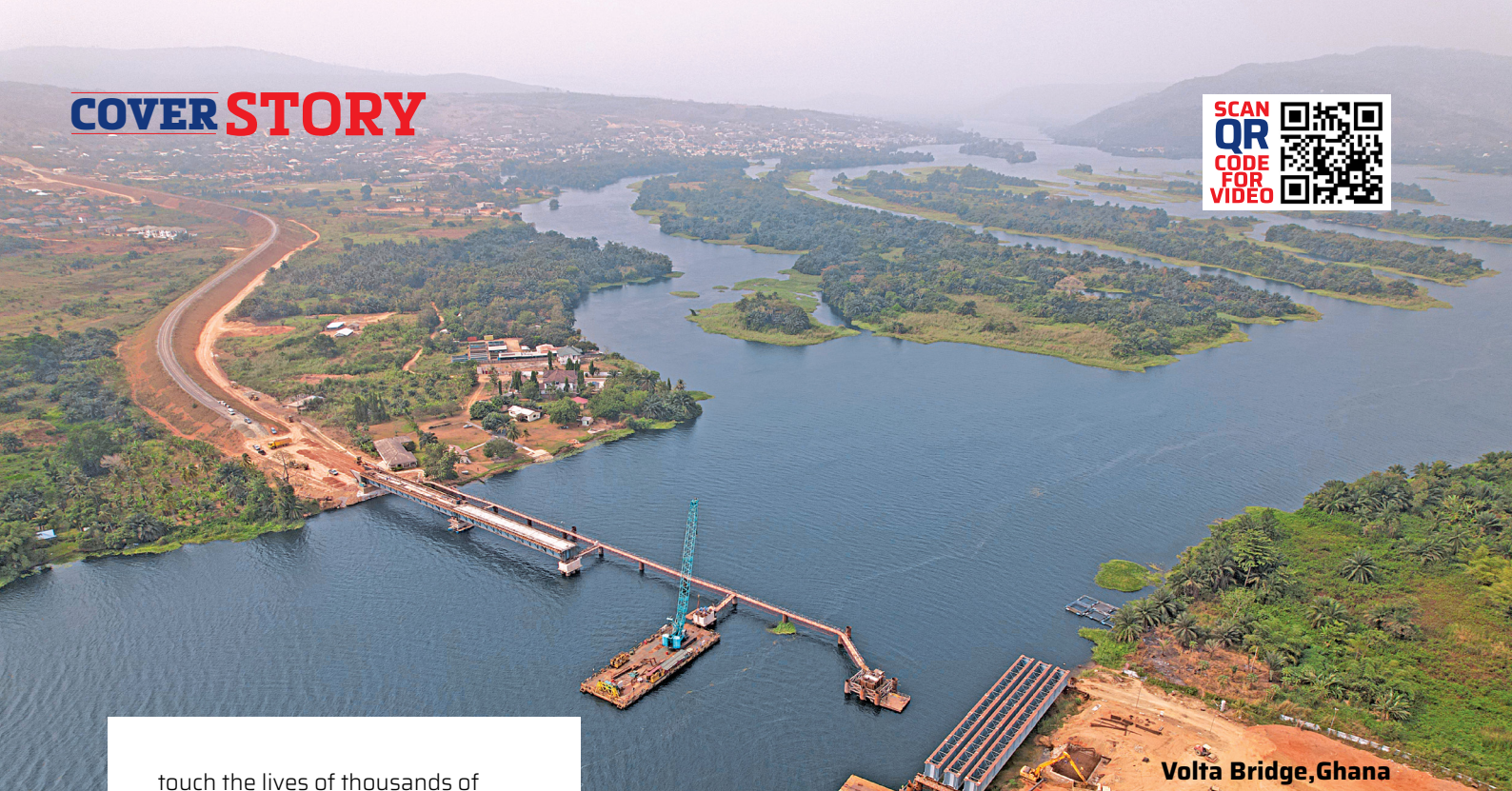
This rail network from Tema to Mpakadan, with seven passenger stations, two rail head facilities, four rail bridges, 11 road under bridges, 22 road over bridges and 120 box culverts lays the building blocks of the infrastructure that will carry not just freight and passengers, but the

hopes and aspirations of the new Ghana.

Efficient rail network

According to Owusu, the development of a safe, efficient and reliable railway system is fundamental to the socio-economic transformation of any country. He feels revamping the railway sector that was vibrant during the colonial period is relevant even at this time and age. "Moreover, car accidents are rampant in Ghana due to conditions of the road and highway networks, and introduction of a modern and efficient railway system will significantly reduce carbon emission," adds the GRDA CEO.

By connecting Tema to Lake Volta, the railway line will enable swift movement of goods at a fraction of the cost. This will also



Volta Bridge, Ghana

touch the lives of thousands of Ghanaians who traditionally lack connection to mainstream economy. This is only possible by integrating various modes of transport.

Longest railway bridge

The bridge over Lake Volta stumped engineers. The Volta Lake is the world's largest manmade reservoir and the lakebed was found almost at a depth of 70 metres.

"The Volta Bridge is one of the most iconic bridges of Ghana. The water depth at the bridge location is around 30m and below the water there is a sand deposit of about 30m before you can reach the rock for foundations," says Udai Veer Singh, Ghana Railway Project Controller.

The Volta Bridge was not part of the original project plan. Later on, it came as a modification. "To ensure that the committed timeline for completing the entire project was not compromised, we mobilised a special team and dedicated machinery to take up this job parallelly," Singh adds.

The Volta Bridge is the longest railway bridge of Ghana, and it is the first ever bridge of Africa on raker pile foundations.

With the project at a stage of substantial completion, the Tema-Mpakadan railway line gives hope that the dormant railway sector will soon be resurrected and facilitate ease of doing business by driving down the time and cost of transportation.



Locally, Afcons has employed over 2,200 locals in the construction of the railway line. We know that railway construction in Ghana is a very unique area. We don't have much technology here. The experience that the workers are gaining from Afcons will be useful in future. I believe that this partnership between Afcons and the Ghana Government will go a very long way in developing the skills of Ghanaians in the field of railway construction.

KWAKU ASANTE-BOATENG
Deputy Minister,
Ministry of Railways
Development, Ghana



Afcons has demonstrated their capacity and capability to deliver results in a timely fashion. If not for Covid-19, the 97.7 KM three-year Tema to Mpakadan project would have been completed in July 2021. They have been superb in their community engagement efforts and have been instrumental in revamping our railway sector.

YAW OWUSU
CEO,
Ghana Railway
Development
Authority

SELECT COMMUNITY INITIATIVES

Distribution of health cards among locals

Refurbishment of hospital at Apeguso

Refurbishment of school at Akrade and Juapong (pic below)

Assisting govt in Covid-19 fightback

Distribution of pandemic-relief material

Organising health outreach programmes

Organising Covid-19 vaccination camps

Food distribution among communities and construction support



A Metro record in Nagpur

Afcons erects 80m, 1,650MT double decker girder for India's first four-level transportation corridor in two months

A defining moment in the history of India's Metro Rail construction was witnessed at Nagpur Metro this February. In a record time of two months, Afconians erected an 80M double decker steel span, weighing 1,650MT. Standing 28M from ground level, this 18.9M-wide superstructure was placed over the busy Gaddigodam Railway Crossing. More than 150 trains and over one lakh vehicles pass this construction site every day.

Nagpur Metro Reach-2 stretches 6.67 Km between Sitabuldi Interchange and Automotive Square stations. In this, 5.3 Km makes up India's longest double decker Metro-cum-NHAI-viaduct. This one-of-its-kind structure consists of flyover and Metro spans supported on single piers, two solid approach ramps, a 44M obligatory steel plan, and the 80M steel span. The mammoth structure is a double decker Open Web Girder (OWG) and has as many as 8,000 structural elements.

Once operational, the double decker superstructure will create

a unique four-level transportation corridor, also a first in the country. An existing vehicular and pedestrian underpass is the bottommost layer with a railway line over it. The National Highway and the Metro line will form the third and fourth layers, respectively. Breaking conventions, this highway will be at a height of 22M as against 6-7M in India.

Highlighting the meticulous execution, R Anantakumar, Director and BU Head, Urban Infrastructure, said, "The dimensional accuracy achieved was in millimetre tolerances (+/- 3mm) and the camber dimensions were achieved well within theoretical limits. The entire activity was completed in two months, which is a huge record."

The real challenge was, however, in the delivery timeline.

"While reviewing the project, we realised the enormity of the task was so huge that completion in original base schedule of five months was in itself a challenge. But, in true Afcons spirit, we accepted the challenge and agreed to deliver in two months," recounted K Subramanian, the Executive Vice Chairman (EVC) of Afcons.

A crack team was formed under the EVC's leadership. It completed the task within two months adhering to quality and safety standards. Also, several records were created on the way.

"The entire team of NMRCI praised Afcons for achieving this technically challenging task in such a short time. This excited us to the core," Subramanian said.

IN CONVERSATION

Amarsingh Raut

It was a titanic challenge



Sometimes we have to dig deep into our reserves of grit to produce something extraordinary. So, when the top management, under the leadership of our Executive Vice Chairman Mr K Subramanian, decided to complete the erection activity at Gaddigodam Railway Crossing in just two months instead of five, we knew we were in for a titanic challenge.

While we were motivated by the fact that the topmost authority and engineering mind was monitoring and supporting the execution, we also wondered what if something went wrong. The entire team had to be galvanised like a bunch of obdurate fighters who would finish the job safely, properly, and on time. It was a tightrope walk with several uncertainties, but who can beat the Afconian spirit?

The girder to be lifted was 13.2M high and was hoisted 28M above ground level. Over 80,000 bolts were torqued to complete its erection. We positioned four 250-500 tonne cranes, one super lift arrangement, 22 torque wrench machines, and special lowering arrangements for the erection of this behemoth. And it wasn't just the superstructure, we also had to erect two adjacent composite girders of 25M span each. All of this was happening with over 150 trains passing below us every day. I can't find the right words to praise the execution team for their heroic efforts.

We introduced unconventional erection methodologies such as elimination of nosing structure altogether. The proactiveness of the site team, and, the collaborative support from headquarters, NMRCI, as well as other project teams gave us amazing confidence.

We were able to complete the erection in a record time of 60 days. The entire span was lowered to 3.5M, within stringent permissible camber limit in just 48 hours. The deck slabs at both levels and lowering of the entire truss was completed in 20 days. Both adjacent spans were also ready within three days after the lowering of the Open Web Girder (OWG). Part of India's longest double decker Metro-cum-NHAI-viaduct, this OWG will form India's first four-layer transportation corridor and will be remembered for its extreme engineering and construction.

INDIA'S FIRST FOUR-LAYER TRANSPORTATION CORRIDOR

Part of 5.3 Km double decker Metro-cum-NHAI-viaduct

80m double decker Open Web Girder (OWG) erected over live railway crossing

Two double decker launching girders designed in-house for erection

Two 86M-long launching girders fabricated in 3 months

Launching of 18.9 M wide steel girder across live railway track at 28M height is a first for Indian Railways



An existing vehicular and pedestrian underpass is the bottommost layer with a railway line over it. The National Highway and the Metro line will form the third and fourth layers respectively

NEWS

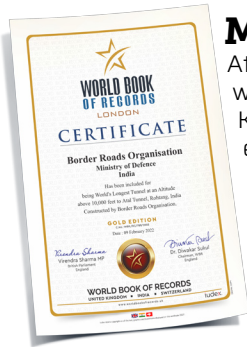
Breakthrough of India's longest railway tunnel

A major milestone was achieved on the Udhampur Srinagar Baramulla Rail Link project (USBRL) on February 15, 2022, with the breakthrough of Tunnel T49 between Sumber and Arpinchala Stations on the ongoing Katra-Banihal section. T49 is a 12.75 KM-long tunnel and is going to be the longest tunnel of the Indian Railways. Afcons excavated 7.32 Km from the north portal (Arpinchala) at an altitude of 1,600 M.



More glory for Atal Tunnel

Atal Tunnel, Rohtang, enters World Book of Records as the world's longest highway tunnel above 10,000 feet. The 9.02 KM strategic tunnel, constructed by Strabag-Afcons JV, is an engineering marvel in the Himalayas made possible by a decade-long arduous journey amidst challenging conditions of hostile weather and extremely difficult terrain. World Book of Records, a UK-based organisation that catalogues and verifies extraordinary records across the world, handed over the certification to Border Roads Organisation (BRO) on February 9, 2022.



Fastest dome roof concreting at Chhara

The Chhara LNG Tank project has set a record for fastest tank dome roof concreting in Afcons in January 2022. The team completed this activity at Tank 102 in just seven-and-a-half days, beating the previous timelines of this project as well as the LNG Tank projects in Dahej and Kochi. This critical activity involved 650MT reinforcement and 2,717 cum of concrete to be cast across nine stages in 15 days of structural roof air support.



Truss erection completed for MG Setu

The truss erection of the eastern flank (downstream) of the Mahatma Gandhi Setu, in Patna, has been completed. The team is now giving finishing touches to the bridge.

Launched with a golden joint

Afconians achieved an important milestone in the Udhampur Srinagar Baramulla Rail Link (USBRL) project by completing the launching of Bridge 43 with a golden joint. This bridge is a part of the 16 KRCL bridges being constructed by Afcons, and most importantly, it connects to the iconic Chenab Railway Bridge.

HSE AWARDS & APPRECIATION

Awards for Samruddhi Mahamarg PKG-14

Package-14 at Igatpuri was honoured with a plethora of HSE awards for the year 2021. The project was named winner of International Safety Award by the British Safety Council as well the Global Safety Summit Award. It also received three ICC awards. Project Manager Mr Sekhar Das was bestowed with Project/Site Award and Business Leader Award at Forum of Behaviour Safety 2021.

Award of Excellence in Ivory Coast

Afcons was honoured with an Award of Excellence by Caisse Nationale De Prevoyance Sociale (CNPS), San Pedro, Ivory Coast. The award recognises Afcons as an Excellent Citizen Employer with Social Security in the region, conforming to all regulations and compliances as stipulated by CNPS Authority (a social security organisation under the Government of Ivory Coast).

NEW PROJECTS

Metro project in Delhi

Delhi Metro Corporation Limited (DMRC) has assigned Afcons the job of underground tunnelling and constructing six stations along Janakpuri West to RK Ashram (Line-8 Ext) Corridor in Phase-IV of Delhi MRTS.

Water project in Benin

Afcons will construct nine multi-village drinking water systems in the Republic of Benin. The company will be undertaking all water pipeline and allied electro-mechanical works in Alibori, Borgou, and Atacora regions as part of Lot 1 of this project.

Water project in Varanasi

Afcons will be implementing various rural water supply projects in Varanasi division, Uttar Pradesh. This will be the company's first such project in India under the new hydro water supply division without any JV.

Road project in B'desh

The Roads and Highways Department, Government of Bangladesh, has given Afcons a job of upgrading the Dharkhar to Akhaura Land Port Road to a four-lane National Highway, including maintenance of the stretch.

Marine project in Dahej

Afcons has been awarded the job of engineering, procurement, fabrication, and construction of the Second Liquid Cargo Berth at Dahej, Gujarat, for Gujarat Chemical Port Limited (GPCL).

Tunnel project in HP

Afcons will be constructing three tunnels (T11, T12, T13), bridges and formation works for Bhanupali-Bilaspur-Beri New Railway Line, in Himachal Pradesh, for Rail Vikas Nigam Limited (RVNL).

Appreciation in Bangladesh

The Roads and Highway Department (RHD), Bangladesh, has issued a certificate of appreciation to Afcons' Bangladesh Road Project team. The RHD has commended the project team for its commitment towards providing and maintaining welfare facilities at site ensuring health & hygiene of staff and workmen.

18MN Safe Man Hours in Kuwait

The Roads & Bridges Project in Kuwait has been awarded an appreciation certificate for achieving 18 Million Safe Man Hours.

10MN Safe Man Hours in Ahmedabad

Afcons has been awarded an appreciation certificate for achieving 10 Million Safe Man Hours at Underground Package 1 of Ahmedabad Metro Rail Project, Phase-1.

Safety Week celebrated across sites

The 51st National Safety Week was celebrated across various Afcons' sites between March 4-10, 2022. Various events such as safety quizzes, safety drills & trainings, health camps etc. were organised by site teams during the week.



Holi Celebrations

Employees at various sites indulged in colourful celebrations of Holi in the month of March spreading cheer within the Afcons family.



HR CORNER

General Management Trainings

An Online Personnel Officers Development Programme (Level-2) was conducted to sensitise site Human Resources (HR) personnel about various site-related challenges and how they should prepare themselves to handle various scenarios.

Soft Skills Training Programme

- A personal effectiveness training was conducted to help participants enhance their inter-personal competence.
- An online workshop on negotiation skills was conducted to help participants understand the concepts and styles of effective negotiation, enabling them to identify and resolve obstacles in achieving the desired results.
- A workshop on delegation skills was conducted with an objective to train participants on how to effectively delegate work with a step-by-step approach. It also highlighted the importance of delegation as a vital tool for developing the competencies of subordinates.
- Multiple training programmes on Managing People at Work was conducted in the light of challenges faced by managers and their experiences in their roles.

NEW JOINEES

Capt. Vidhu Shekhar Gupta has joined as Deputy General Manager (Marine Logistics) at the Greater Male Connectivity Project in Maldives.

Mr J Nickson Solomon has joined the water construction project in Zanzibar as Joint General Manager (Projects).

Mr Sudhir Balkrishna More has joined Afcons Head Office as General Manager (HSE).

Mr Dipayan Saha has joined as Vice President (Projects) at the Delhi Metro Underground projects in the capacity of Project Director.

Mr Abhas Kumar Sharma has joined the Delhi Metro Underground Project DC-07 as Joint General Manager (Projects).

Mr Prasanta Saha has joined as Deputy General Manager (Projects) at the water pipeline project in Benin.

Mr Budhmal Jain has joined as Deputy General Manager (Geo-Technical) at Afcons Head Office.

Awards

KANPUR METRO WINS A DOUBLE



April 2022 began on a winning note for Afcons with Kanpur Metro Project. India's fastest elevated Metro project was adjudged the Best Construction Project at the **CIDC Vishwakarma Awards 2022**. Afcons' remarkable performance also garnered the Special Appreciation Award for **Excellence in Infrastructure & Civil Works at Rail Analysis India Summit 2022**. Both awards were received by Mr Sanjay Singh, Project Manager of Kanpur Metro Project.



CII Award for Srinivasa Setu

Afcons won the Gold Award at CII-SR (Confederation of Indian Industry-Southern Region) EHS Excellence Awards 2021 for excellence in EHS practices at Srinivasa Setu Project in Tirupati. Project Manager S Rengasamy and team received the award on behalf of Afcons.

Global HR Excellence Awards 2022

Afcons was honoured with two prestigious awards by the World HRD Congress

- Award for Excellence In Learning & Development
- Award for Institution Building



The awards were received by Mr Akhil Gupta, Executive Director (Operations), and Mr Hitesh Singh, Head Corporate Strategy, at an event in Mumbai, on March 22, 2022

Mr Hitesh Singh, Head – Corporate Strategy, received the Best Corporate Strategy Officer Award



ALERTS

Scan the code to visit Afcons' YouTube channel and stay tuned with the latest videos

