

IN **AFCONS** INSIGHT

VOLUME 6 | ISSUE 3 | SEPTEMBER 2016



TALE OF THE UNDERGROUND

AFCONS has become a key player for Metro Rail projects in India's metropolitan landscape



AFCONS became the first company to bag a CII award (western region) in construction sector for outstanding performance in implementing HSE standards. AFCONS received the third prize in service sector category.

Uttar Pradesh Expressway Industrial Development Authority (UPEIDA) has presented AFCONS with a certificate of appreciation for achieving 10.76 million safe man hours without lost time accident at Package-2, Agra-Lucknow Controlled Access Expressway (Greenfield) Project.

AFCONS has been awarded an appreciation certificate by Cullen Grummit & Roe (India) for achieving one million safe man hours at the JNPT 4th Container Terminal Project.



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EDITORIAL

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Metro: Our growth story



The financial results of AFCONS for FY15-16 were published recently and I would like to extend my heartiest congratulations to each one of you for such a good performance. We have survived one of the toughest times faced by the infrastructure sector in recent times. Though the sector is showing signs of revival, it is not completely out of the woods yet.

In this light, Metro Rail- one of the business segment which has posed unique challenges, needs a special mention. Our achievements in Metro Rail have made us proud but equally it has provided us lots of points to ponder over. In August '16, eight tunnel boring machines were simultaneously operated across various projects of AFCONS. This is no mean feat and could be a record for Indian infrastructure sector. We are also the only Indian company to qualify on our own without a JV partner for tunnelling by TBM. This highlights our capabilities and scale in the Metro Rail business. While our long journey as India's leading Metro solutions provider has been a fulfilling one, we still have a lot of ground to cover. Like the Metro network itself, we have grown in terms of knowledge, expertise and equipment over a period of time, and have the scope to make further inroads in this segment.

The projects we have done so far have been lauded; our clients have recognised our ability to deliver. We are executing some of the most challenging and iconic Metro Rail projects in India and bagging new projects indicates our willingness to continue to contribute in this sector. The ride has been very challenging yet engaging and productive. And we hope this is only the beginning of a rewarding journey.

K Subrahmanian



WORLD BELOW OUR FEET

60kms of Metro rail network, 26kms of tunnels and 14 underground stations across the country — there's more to AFCONS' Metro Rail story than just numbers

If we have to sum up the concept of urban India, the way it is today in one word, dynamism would be the obvious choice. Our cities, brimming with opportunities and promise of better lifestyles, are stretching themselves to make room for their inhabitants. However, rapid urban growth has come with a cost, and the biggest problem that most cities face is traffic congestion.

Our roads are choked with traffic, which leads to increased pollution levels and accidents. Long-established modes of public transport are stretched beyond capacity, with people spending harrowing hours on commute.

Metro Rail, being a mass people mover and environmentally friendly, therefore was looked at as a possible solution to resolve these issues at large urban centres.

With an eye on revolutionising public transport in our country, the Government of India made the Metro a priority infrastructure solution.

METRO RAIL AS A SOLUTION

Metro involves large capital expenditure and specialised execution skill. Decades ago, urban planners were not

confident of its success, given the limited experience in constructing Metro solutions.

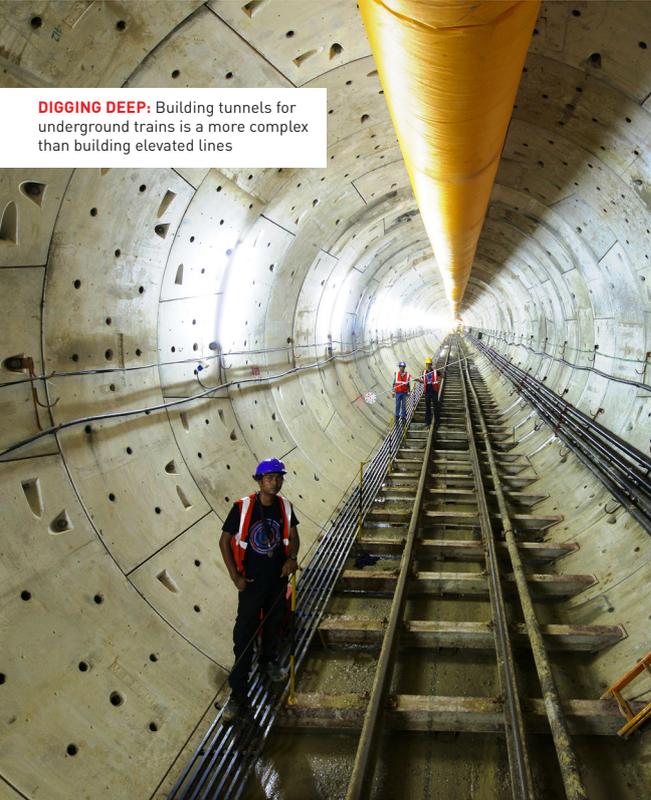
In the interim, bus rapid transit, bypass, ring roads were built to solve the traffic problems and soon they were bursting at the seams of their operational capacities. The then planners felt the need for a solution to solve urban commute-related problems on a long-term basis.

The Metro in India dates back to 1984, when the first underground train service was unveiled in Kolkata. For nearly two decades, this remained the only service of this kind in the country until planners, consultants, contractors and funding agencies joined hands on the Delhi Metro project.

Following the initial success of Delhi Metro, other Metro management bodies were inspired to implement similar solutions.

DELHI SHOWED THE WAY

The task of getting a Metro project running was considered an uphill task till Delhi Metro Rail Corporation (DMRC) implemented the Delhi Metro.



DIGGING DEEP: Building tunnels for underground trains is a more complex than building elevated lines

THREE KEYS

INTEGRATION

Integrating seamlessly with existing infrastructure is a challenge as it requires new approaches to ensure minimal disruption to existing infrastructure.

SAFETY

Safety is of paramount importance. Considering the pace of construction and deadlines it is crucial that the work is executed safely. Delivery with focus on safety is important.

TRAINING

Training people to deliver complex projects. With 15 years of experience in Metro construction, AFCONS has been able to develop a pool of people with the expertise needed to create world-class Metro infrastructure projects.



WELL EQUIPPED: State-of-the-art tunnel boring machines owned by AFCONS have been deployed for Metro projects

The fact that the project was completed on time without exceeding the budget made several other cities that suffer from same challenges as the capital, consider Metro as a viable mass transit alternative. International financial institutions such as Afd France, EIB, JICA, World Bank among others have stepped in to provide funds for such projects. Indian companies such as AFCONS, HCC and L&T executed the Delhi Metro project and gained several insights from their international partners.

AFCONS, which has been part of Metro rail since its inception in India, is at present part of projects in Chennai, Kolkata and Delhi. We have built 60kms of Metro network and 30 stations (26kms of underground tunnels and 14 underground stations) across India. The Chennai Metro Project, an ongoing exercise, is an AFCONS-Transtunnelstroy joint venture that aims at building nine underground metro stations.

AFCONS became the first Indian contractor to independently build an underground Metro station at Barakhamba in New Delhi. The station and its adjoining tunnelling works were completed in record time of 22 months.

In Kolkata, AFCONS is a major player in the East-West Metro project for Kolkata Metro Rail Corporation Limited (KMRC). It is constructing the country's first underwater Metro tunnel.

ROADBLOCKS NOTWITHSTANDING

Typically, Metro projects are undertaken in heavily-con-

gested areas. We have improvised and developed new construction methods and equipment to meet the construction requirement. We are the first Indian company to build and underground station without a foreign JV partner. Constructing an underground structure is far more complex than building elevated ones. One of the primary challenges is limited work space.

The ground condition can throw surprises which cannot be ascertained beforehand and the construction method needs to be improvised on an ongoing basis.

In case of elevated structures, there are interfaces with other services such as overhead lines, underground utilities and availability of continuous work area. Another challenge is working close proximity of traffic, whose safety has to be ensured.

For the Chennai Metro Project, tunnels are being built below several key heritage structures, roads with heavy traffic, densely built-up areas and railway lines. Utmost care has to be taken considering the significance and condition of the heritage structures and the potential impact of the construction work on them.

The ongoing Chennai Central Metro station project near the Chennai Central railway station will be one of India's biggest underground Metro stations. The two-storied interchange will connect commuters with suburban and long distance train services and buses for both intra and inter-city travel, thus improving connectivity and solve traffic problems.

HIGHLY-SPECIALISED EQUIPMENT

Most cities, where Metro networks are proposed, are heavily populated and saturated in terms of structures. Building underground Metro infrastructure without damaging the existing structures is challenging and AFCONS ensures utmost care is taken during the construction. Also, Metro construction requires tunnel boring machines (TBMs) that are specialised equipment. Many other specialised equipment deployed such a heavy crane have been procured as strategic equipment. These capital assets are vital to deliver complex metro projects. Among peers, AFCONS has one of the largest capital asset bases.

UNENDING LEARNING PROCESS

AFCONS has gained significant experience in re-engineering, design optimisation which are unique value proposition for pitching for international projects. Several lessons have been learnt while undertaking the projects, and one of those is detailed planning. There are multiple interfaces of a metro projects, multiple permissions to be attained. Stakeholder engagement is essential for successful delivery. With experience and expertise in Metro construction, even the sky isn't the limit for AFCONS.

ABUZZ WITH ACTIVITY: The Chennai Central Metro station will be one of India's biggest underground Metro stations



Strategy Conclave



ROAD TO LEVEL NEXT

It has become a habit for AFCONS to keep challenging itself, year after year. On its journey to Level Next, some of the achievements from the last financial year were the firsts in the company's history. AFCONS cracked the Rs 1,000 Crore turnover mark from a single project (Agra-Lucknow expressway, package IV) in a single financial year.

The proactive business development moves of last year are bearing fruits in the current financial year. We have already bagged orders of more than Rs 6,500 Crore in the first quarter of 2016-17, a record procurement in a single quarter of company's history.

At the Strategy Conclave this year, AFCONS' leadership team acknowledged the progress that has been made in each dimension of the Level Next roadmap. With a strong order book, AFCONS is bound to achieve a turnover of Rs 6,000 Crore in 2016-17.

GREAT MINDS: Strategy Conclave was held at Taj Mahal Palace Hotel on June 30-July 1, 2016.

News

DMD'S SPEECH IN GHANA

Deputy Managing Director Mr S Paramasivan was the sole Indian speaker to address a gathering on behalf of the Confederation of Indian Industry (CII), in Accra, Ghana, on June 13, 2016. President of India Shri Pranab Mukherjee was a top dignitary at the forum.

DAHEJ PROJECT FETED

VC & MD'S Rolling Trophy for best annual safety performance in 2015 went to LNG Storage Tank Phase III-A-Dahej. The trophy was presented by VC & MD Mr K Subrahmanian, Mr Pallon S Mistry and HSE chief Mr Ramakrishna Rao.

RELIEF FOR FARMERS

A relief aid programme was organised by ALEP PKG IV 4545 for the farmers of the drought-affected Kabrai area in Mahoba district of Uttar Pradesh from July 9 to 11, 2016.

AFCONIAN AWARDED

Dr U. Senthilnathan from HSE department of AFCONS Oil & Gas business unit received the Rashtriya Gaurav Award for excellent service and outstanding performance in the field of environmental engineering.



BUDDING ARTIST

A colourful rath made by Shreesan Ghosh, son of Mr SK Ghosh at ALEP-02 (4546), was shortlisted as one of the best entries in the rath design competition organised by The Times of India, Bhubaneswar, as part of the annual Jagannath Rath Yatra celebrations.

Awards



CONSTRUCTION WEEK AWARD: AFCONS Infrastructure Ltd was honoured with the Infrastructure Company of the Year Award at the Construction Week Awards 2016 in Mumbai, on September 21, 2016. The award was received by the Deputy Managing Director, S. Paramasivan.

New Projects

KUWAIT GOVT ROAD PROJECT

A road project has been awarded to AFCONS Infrastructure Ltd. by the ministry of public works, Kuwait. The project includes construction, completion and maintenance of roads, bridges, storm water drains and

sewers, among other services.

ONGC AWARDS LEWPP PROJECT

Oil and Natural Gas Corporation Ltd (ONGC) has awarded a Life Extension of Well Platform Project (LEWPP) to AFCONS Infrastructure Ltd.

CHENNAI METRO EXTENSION PROJECT

AFCONS Infrastructure Ltd. has been awarded a project by Chennai Metro Rail Ltd for designing and construction of balance work of underground tunnels from the south end of May Day Park to north shaft of AG-DMS.

New Joinee

Mr. Pandurang R. Pai, Project Director: Mr. Pai has an experience of over 24 years and has worked with companies like Tata Electric Company, L&T Ltd.

Mr Avinash Patil, Vice President - Design: Mr Patil has an experience of over 26 years and has worked with companies like HCC, JMC Projects India Ltd., Larsen & Toubro Ltd., Konkan Railway Corporation Ltd., SE & Sons Consultants.

Mr Yogesh Velapure, General Manager - Projects: Mr Velapure has an experience of over 27 years and has worked with companies like Konkan Rail-

way Corporation Ltd., IRCON International Ltd. and IMCC.

Mr K N Mallikharjuna Rao, General Manager - Projects: Mr Rao has an experience of over 26 years and has worked with companies like Deepika Infratech Pvt Ltd., IL & FS Engineering Construction Company Ltd. and Gammon India Ltd., Madhucon Project Ltd.

Mr Sanjay Jha, General Manager - Projects: Mr Jha has an experience of over 28 years and has worked with companies like Essar Offshore Subsea Ltd. and Indian farmers Fertilizers Cooperative Ltd.

Life at AFCONS



Vishwakarma Pooja at ALEP PKG IV 4545 on September 17, 2016



Engineers Day Celebration at ALEP PKG IV 4545 on September 15, 2016



Engineers Day Celebration at KNPC 5712 on September 15, 2016



Independence Day celebrations at the Gabon site

HSE

Environment in our hands: World Environment Day was celebrated on June 5, 2016, at the head office. Afconians made a pledge to take small steps to contribute towards a cleaner and healthier environment.



HR Corner

WELLNESS WORKSHOPS

Hepatitis awareness camp: An awareness camp for hepatitis was organised at the head office on April 7, 2016. Dr. Akash Shukla spoke on the disease, its preventive measures, liver function and other common liver diseases. The talk was followed by a screening for HBsAg for hepatitis B and anti HCV for hepatitis.

Yoga session: International Yoga Day was marked at the head office on June 21, 2016, with a yoga-cum-meditation session conducted by a team from the Art of Living Foundation. The facilitators spoke about the importance of yoga and meditation in our lives, demonstrated yoga asanas and encouraged the participants to learn and practise them.

CIVIL TRAINING

Contract management: A workshop on contract management was organised at KMRC & RVNL project sites on June 15, 16 and 17, 2016. The workshop, conducted by Dr Ajit Patwardhan and attended by 37 employees from both sites, aimed at enabling the participants draft better contract conditions / deviations and also maintain records of claim status. The participants gained an understanding of maintaining day-to-day records with regards to contractual issues and also learnt several terminologies used in FIDIC & Indian Contract Act.

Equipment management for civil engineers: A two-day training programme on equipment management was organised at Butibori workshop on June 17 and 18, 2016. It was conducted by Rabin Bose and was attended by en-

gineers / senior engineers – execution (civil) from various sites. The objective of the training was to help the execution engineers use construction equipment more efficiently and effectively.

MANAGEMENT PROGRAMMES

Junior management development programme: The third phase (final phase) of junior management development programme for the batch of 2015-16 was held at the head office in April. It was a blend of technical (CPE/finance, management/costing and budgeting) and soft skills modules (interpersonal skills and team dynamics) and is designed to enhance the technical and behavioural competencies of the participants.

SOFT SKILLS TRAINING

Personal effectiveness: A two-day workshop on personal effectiveness was organised at the head office in April. The workshop was attended by 24 employees from various depts / BUs. The objective was to bring about an understanding on importance of personal effectiveness and to enable the participants to enhance their interpersonal competence in key areas.

Effective communication skills: A two-day training programme on effective communication skills was organised on May 17-18, 2016, at the head office. The programme was conducted by Seema Dasgupta (external faculty) and attended by employees of head office and oil and gas BU. The objective of the programme is to help participants communicate effectively.



BRO LAUDS CHUNI LAL & TEAM FOR BRAVERY

Mr Chuni Lal, safety officer of the SAJV Rohtang Pass Highway Tunnel Project in Manali, Himachal Pradesh, was recently praised by Border Roads Organisation (BRO) for his bravery in rescuing four BRO personnel trapped in an avalanche. In an appreciation letter, BRO mentioned how Mr Chuni Lal and his team responded swiftly after an avalanche came roaring down near Rakchi Dhak temple on the Manali-Rohtang-Khoksar road. Mr Chuni Lal was returning after a recce of North Portal at Sissu when the incident took place. His bravery, presence of mind and swift response saved the lives of the four BRO personnel. SAJV is proud to have such selfless and dedicated officers whose intrepidity and alertness makes operations in the Himalayas safe and sound.



A L E R T S

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



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