

# INSIGHT

**AFCONS**

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Shapoorji Pallonji

**A SUPERLATIVE SHOW SEALS  
AFCONS A PLACE IN HISTORY  
FOR REINCARNATING THE ICONIC  
MAHATMA GANDHI SETU IN BIHAR**

# BRIDGE REBORN

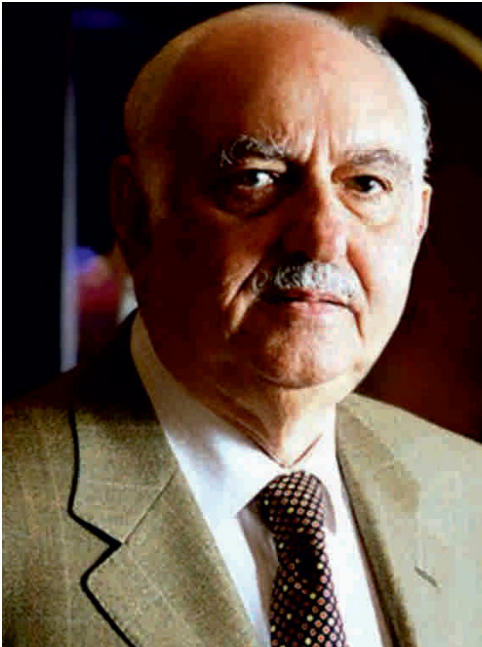
**PAGE 3-5**

**NEWS - PG 6**

**NEW PROJECTS- PG 7**

**AWARDS - PG 8**





## Pallonji Shapoorji Mistry 1929 - 2022

It is with deep sadness that we record the demise of the Shapoorji Pallonji Group patriarch, Padma Bhusan Pallonji Shapoorji Mistry. He was 93.

Mr Pallonji Mistry was a philanthropist and a successful businessman who believed in the philosophy of staying away from limelight. He developed the family-owned construction and real estate business and took it to newer heights. Under him, the Shapoorji Pallonji Group built some of Mumbai's most prominent landmarks, including The Taj Mahal Palace, the Reserve Bank of India, Hong Kong Bank to name a few. He also pioneered the Group's entry into the Middle East and Africa and orchestrated its diversification into new business areas. But above all, it was Mr Pallonji's kindness and humility that made him an endearing figure.

May his soul rest in peace.

All of us at Afcons extend our deepest condolences to the Mistry family.

## MAKING HEADLINES

### Appreciation in Mozambique

The honourable minister of Public Works, Housing and Water Resources, Govt of Mozambique, His Excellency Carlos Mesquita, visited the Mozambique Road Project in April 2022. He reviewed the project and visited Buzi major bridge. While addressing the media, Mr Mesquita appreciated the quality of execution and the progress achieved by Afcons.

### Kuwait road project handed over

The Kuwait road project was successfully handed over to client on June 20, 2022. To mark the occasion, a ribbon cutting ceremony was organised which was honoured by Ms Soha Ashkanani, Director General - PART. Afcons' project team was present during the occasion.

## EDITORIAL

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

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## FROM EVC'S DESK

## A bittersweet moment

**Dear Afconians,**

**Personally, for me the news of our Group patriarch Shri Pallonji Shapoorji Mistry leaving for his heavenly abode is deeply saddening. I have many memories of him, his humble yet towering personality, and the calm assurance with which he built an empire that has withstood the vicissitudes of time. I shall miss him dearly and pray for his soul to rest in peace.**

Overall, this quarter was filled with bittersweet moments.

I am happy that our team could complete the iconic Mahatma Gandhi Setu in Bihar and open the downstream lane for traffic in just 18 months. We have also completed particularly challenging Kuwait Road Project. Many of our projects have created national and international records. Mr Ajit Penkar completed 40 years with Afcons. This reflects his commitment to the company and the family culture provided by the organisation. But I am tad sad that Afcons will miss the leadership of Mr Akhil Gupta, BU Head, Surface Transport. Our loss is to the benefit of the Group. Akhil has assumed the role of CEO at Shapoorji Pallonji E&C. We all

wish him all the best in his new assignment.

This year is especially important for us as we, through our Strategy formulation exercise, are in the process of setting goals and directions for the next five years for Afcons. This is the time to delve deep and identify the areas where we have done well and areas where we need substantial improvement.

For instance, we have maintained a steady inflow of new overseas projects, and I urge all our business units to be extremely mindful of the external factors emerging out of the prolonged Russia-Ukraine conflict.

I congratulate the award winners in various fields and hope for more participation from our employees.



**K SUBRAMANIAN**





**BIHAR'S  
MG SETU  
IS INDIA'S**

# LONGEST STEEL BRIDGE

**Afcons completes downstream lane and hands over for traffic opening in 18 months**



**O**n June 7, 2022, the country's longest steel bridge was finally opened for traffic in its totality, allowing access to the eastern flank (downstream lane) over river Ganga, in Bihar.

Plagued by heavy traffic since its inception in 1982, the Mahatma Gandhi Setu (MG Setu) suffered extensive wear and tear over decades and earned the notoriety for traffic bottlenecks. The newly refurbished bridge now has a steel superstructure with a lifespan of 100 years. It means the bridge will require minimal maintenance with an improved capacity to withstand the state's burgeoning traffic.

## **Economic Lifeline**

The MG Setu connects Patna with Hajipur and is considered to be the economic lifeline of Bihar. Lakhs of people and vehicles use this bridge every day.

Traffic congestions due to poor condition of the bridge often used to hold up passengers, private and public transport and heavy goods vehicles for hours. Reminiscing the times when the bridge refurbishment works began in 2017, project manager SK Misra said "There used to be long queues of vehicles on the bridge."

**EXTREME**  
ENGINEERING & CONSTRUCTION



MG SETU IS INDIA'S LONGEST STEEL BRIDGE (5.6 KM APPROX)

EASTERN FLANK  
(DOWNSTREAM  
LANE) COMPLETED  
AND HANDED OVER  
FOR TRAFFIC IN18  
MONTHSERECTION OF  
STEEL SUPER-  
STRUCTURE  
COMPLETED IN13  
MONTHS50 PIER CAPS  
MODIFIED  
AND CAST IN11  
MONTHSBRIDGE  
DISMANTLING  
ACTIVITIES  
COMPLETED IN08  
MONTHSAFCONS IS RANKED  
**21ST**  
IN BRIDGES SECTOR  
GLOBALLY  
(ENR SURVEY)

66,360MT STEEL USED IN BRIDGE SUPERSTRUCTURE

FOUR-LANE BRIDGE CONNECTS PATNA WITH HAJIPUR

Recurring repairing and maintenance activities resulted in diversions on the bridge which used to have cascading effects. Normally, this bridge can be crossed in 15-20 minutes. But earlier, it took hours."

The renovation of the bridge was a herculean task. For the first time a balanced cantilever bridge was converted into a simply supported superstructure — the substructure of the bridge was retained and the concrete superstructure was replaced with steel superstructure.

### Speedy Execution

However, the highlight of the downstream lane was its speedy execution. "We were able to complete the downstream lane and hand it over for inauguration in just 18 months. That was a huge achievement. We learnt a lot while working on the upstream lane (western flank). Fabrication of trusses for the downstream lane were done in advance. We improvised and innovated in our dismantling methodologies like use of holding frame for wet spans. We worked parallelly on pier modification and truss erection," Misra said.

The bridge rehabilitation works began in 2017 and the western

## For the first time in India a balanced cantilever bridge has been converted into a simply supported superstructure

flank was inaugurated in 2020. "It is nothing short of a remarkable achievement that a complex bridge rehabilitation project of this scale is completed in five years," he added.

The biggest concern in the project was the running traffic in the adjacent bridge at all times. "At the top of it, we had to handle huge volume of dismantling works with environment-friendly disposal of waste material. We had to make sure

that no debris from bridge demolition settled into the river," Misra said.

### Multiple Challenges

Almost 66,360 metric tonnes of steel have been used in the entire bridge superstructure. Elaborating on this massive volume of steel usage, the project manager said, "The steel works were a massive scope in the project. Procurement and fabrication works were completed through suppliers and workshops across India."

Construction of a river bridge is always fraught with danger especially in flood-prone areas. The risk was high in case of MG Setu too. "During monsoon we had to negotiate up to 7m of water level rise and high currents in the river zone. Flooding was normal and shoal formation due to siltation in dry seasons hindered barge movements."

The hard work has paid off and Misra is satisfied that the project team has given the iconic M G Setu a new lease of life. It has gone into history books as India's longest steel bridge and the first balanced cantilever bridge to be converted into a simply supported superstructure.

I am delighted that the dream of revamping MG Setu has come into reality today. The Gandhi Setu is the communication lifeline between north and south Bihar. The (concrete) piers at the bottom (of the bridge) have been retained as they were in good condition, while the deck at the top (of bridge) has been converted into a steel superstructure. This is India's longest (5.6 km) steel bridge and 67,000 MT of steel (approx) has been used in its refurbishment. I assure you that this iconic bridge will not only be important in the history of Bihar but also of the country as well.



SHRI NITIN GADKARI (L), UNION MINISTER OF ROAD TRANSPORT AND HIGHWAYS





## TECH KNOW

# Holding the key to success

**The search for a safer and quicker way to dismantle the downstream lane of Gandhi Setu ended up with the idea of a Segment Holding Frame.**

Previously, for upstream lane dismantling, a gantry was designed to hold the segment during cutting, and the cranes transferred load and lowered cut segments on barges. Complete span dismantling took 30-35 days. But this system had possibilities of sudden jerks on cranes during load transfer. A crane damage/accident was staring in the face, especially for cranes on barges where irregular water currents were a known foe. The team wanted to eliminate this risk completely.

The introduction of segment holding frame provided a separate, safer system for holding segments during cutting. It consisted of two units. The main frame was anchored over the segments adjacent to the segment to be cut. The lifter rested over the front arms of the holding frame and anchored to the segment to be cut. Once anchored, jacking of about

50% of segment load to be cut was done. After cutting, the segment, along with the lifter, was removed from the holding frame and lowered to the ground, or, on the barge with cranes. It ensured safer transfer of loads on the crane.

Additionally, it helped in better resource utilisation, as the cranes were only required for lowering, and the holding frame was self-sufficient for cutting operation. The holding frame was designed for segments up to 76 MT. This was an improvement over the gantry design. It was also easier to re-assemble for next cutting. The average time cycle was reduced to 21 days/span dismantling from 30-35 days.

This indigenously designed segment holding frame turned out to be a brilliant and successful idea. A detailed methodology was devised to simplify its operation for the site team. The supervisor, riggers, operator, and workers were acquainted with it in no time, and with several improvements, the operation became quicker and easier. The success of the idea spoke for itself when the dismantling activities were completed in just 8 months for the downstream lane.



## IN CONVERSATION

# 'An example of extreme engineering'

**SK MISRA**



The swift completion and commissioning of the MG Setu was a big deal. Ever since the upstream side was inaugurated in 2020, the pressure was on us to complete the downstream lane quickly and restore the iconic bridge back to shape. The original MG Setu was nearly 40 years old, and soon after its completion, it started becoming weak. Replacement of the concrete superstructure with a steel superstructure was

a novel idea, and it was a huge honour for me and my team to be a part of this watershed project.

While constructing the upstream side we faced some unforeseen challenges. So, we approached the downstream lane intuitively and were well prepared for any surprises. The two rivers, Ganga and Gandak, with different patterns, merged at the upstream side and created problems during upstream flank construction. Working in the river zone was a big challenge, too, with temperature varying in summer and winter months, besides 7-8 m change in water level during monsoon. But since we had detailed the issues, we didn't lose much time for the downstream lane. Such kind of planning helped us to complete the eastern flank in less than 18 months despite the second Covid-19 wave and one full month lost due to high flood level.

While dismantling activities for the downstream lane were completed in eight months, the erection of steel superstructure was completed in 13 months. After the construction of the upstream lane, we realised that parallel execution is necessary on several fronts especially in the intermittent and wet spans. As soon as dismantling of the spans was completed, the pier cap team and the erection team started work on the spans simultaneously.

We have received a lot of praise from ministers and locals but what will stay with me forever is the extreme engineering to bring out the full potential of this iconic bridge. The completion of the superstructure replacement will not only provide a pleasurable ride but also reduce travel time to just 10-15 minutes. This project was a fantastic experience for me. We will be remembered for giving Gandhi Setu the new status of India's longest steel bridge.

**SANTOSH KUMAR MISRA**  
IS THE  
PROJECT  
MANAGER OF  
MG SETU  
PROJECT



## NEWS



### Honorary award for EVC

Executive Vice Chairman Mr K Subramanian was honoured with 'Outstanding Personality' award at the 2022 Samaj Shakti Awards. The awards, organised by Shree Hariharaputta Bhajan Samaj, were held in Mumbai

on May 28, 2022, to recognise extraordinary achievements and contributions of noteworthy citizens from various fields.

### Three bridge structures completed in J&K

Afcons achieved three major milestones in the Udhampur Srinagar Baramulla Rail Link (USBRL) project, in Jammu & Kashmir, between March and June 2022. First, the launching of Bridge 43, which connects with the iconic Chenab Railway Bridge, was completed with a golden joint. Second, the



erection of steel structure for Bridge 87 was completed. Third, the main span deck slab of Bridge 39, which is higher than the Qutub Minar, was completed with the highest safety

protocols in place. All the bridges are part of the 16 KRCL Bridges project being executed by Afcons.

### MD visits Ahmedabad, Kuwait sites

Managing Director Mr S Paramasivan visited the underground and elevated packages of



Ahmedabad Metro for reviewing the project progress in March. He was accompanied by Mr R Anantakumar, Director and BU Head, Urban Infrastructure. Later in the month, he visited Kuwait and met with His Excellency Mr Ali Husain Ali Al Mousa, Minister of Public Works and Minister of State for Youth Affairs, State of Kuwait. He was accompanied by Mr V Manivannan, Director - CPE, and Mr Mudit Sharma, Vice President, Business Development.

### Water kiosks bring joy to Tanzanians

Tanzanian people are overjoyed and full of gratitude for their Government and the Government of India for the ongoing execution and commissioning of kiosks as part of the Chalinze Water Supply Project. Many regions that have only lately begun to benefit from the facility have had to wait for generations for a direct supply of drinkable water. At present, Afcons is delivering completed water kiosks to the client.

### Donation of computers in Maldives

Afcons donated 25 computers to Hithadhoo School in Maldives. The donation was made by the Addu City project team following a request made by the school during the High Commissioner of India to Maldives, Shri Munu Mahawar's visit to Addu City. The computers were received by the principal of Hithadhoo School, Dr Asiyath Mohamed Didi.



### FELICITATION FOR AJIT PENKAR

Afconian, who is fondly called a "superstar of construction", completes 40 years of service

Mr Ajit Penkar was felicitated for completing 40 years of loyal and dedicated service with Afcons on Tuesday (May 31, 2022). Penkar started his journey in May 1982 with Tata Trombay - Unit 4 project.

During his long and illustrious career, he has worked in numerous landmark projects like Construction of Power Plant at Tanir Bavi, Mangalore, Hooghly River Diversion in West Bengal, Bandra Worli Outfall, LNG Jetty in Dahej, Chana Railway Project etc. His sound engineering skills and astute insight into cracking complex problems has made him the go-to-man within the organisation.

Penkar expressed his satisfaction for a fulfilling journey and hailed Afcons for being a Knowledge Enterprise. Mr R Giridhar (Dy MD), Mr V Manivannan (Director - CPE), and Ms Bhakti Prasad (Director - HR) congratulated Penkar for his yeoman's service and presented him with a memento & bouquet.

Join us in congratulating Mr Ajit Penkar for his remarkable contribution to Afcons. We wish him many more years with us.

## HSE AWARDS & APPRECIATION

### Environment award

Ahmedabad Elevated Metro project (C1 - Phase 2) won Environment Award in Construction Sector (Gujarat) at the 9th Global Safety Summit Awards 2022. The award was presented in a virtual ceremony. The awards are one of the most prestigious recognitions, showcasing the achievements of various industries in environment, health, safety, and CSR. The Global Safety Summit 2022 was organised by the Fire and Safety Forum, and United Nations Global Compact Network India.



### British Safety Council award

The British Safety Council honoured Afcons with International Safety Award (Distinction) for the offshore process platform project at Kakinada. The award recognises commitment to good health and safety management.



### Safety milestone in Bangladesh

The Roads & Highways Department, Bangladesh, issued a certificate of achievement to Bangladesh Road Project team for achieving Two Million Safe Man Hours without LTI.



### Safety milestone in Ivory Coast

The Terminal Industriel Polyvalent De San Pedro (TIPSP) awarded a certificate of appreciation to Afcons for achieving Four Million Safe Man Hours at Dry Bulk Cargo Terminal project, Ivory Coast.





# World Environment Day

Afconians at various sites and HO celebrated World Environment Day on June 5, 2022. The occasion was marked with various activities such as tree plantation drives, cleanliness drives, HSE oaths, online quiz contest, best HSE performance awards etc.



## Road project in Bangladesh

The Roads and Highways Department, Government of Bangladesh, has awarded Afcons the job of upgrading Dharkhar to Akhaura Land Port Road to a four-lane National Highway, including all structures, earthwork and foundation works, as well as maintenance of the stretch.

## Road project in Gabon

Afcons has won an EPC contract of the By-Pass road for the new Libreville International Airport in the Republic of Gabon.

## Water projects in Tanzania

Afcons has bagged two new water projects in Tanzania. One is an EPC contract for construction and commissioning of water supply schemes at Kilwa - Masoko and Nanyumbu towns (PKG-02). The other is an EPC contract for construction, testing, and commissioning of water supply schemes at Kayanga, Chato and Geita towns (PKG-06).

## Metro project in Delhi

The Delhi Metro Rail Corporation Limited (DMRC) has awarded Afcons the job to design and construct underground up & down tunnels, including underground ramp, cut & cover tunnels, and three stations on the Aerocity Tughlakabad corridor in Phase-IV of Delhi MRTS.

## NEW JOINEES

**Mr Gaurav Tiwari** has joined as Deputy General Manager (CPE) at Afcons Head Office

## HR CORNER

### General Management Trainings

- A training programme on Hazard Identification & Risk Assessment was conducted through MS teams for various sites
- A training to sensitise site employees about Behaviour Based Safety was conducted
- An awareness programme on Standard Environment practices at project site was conducted virtually for employees at various sites
- A QMS implementation & awareness session was conducted online

## ORGANISATIONAL CHANGE

### Akhil Gupta moves to SP E&C as CEO



Mr Akhil Gupta, Executive Director (Operations) and BU Head - Surface Transport, has now taken up the role of CEO, Shapoorji Pallonji Engineering and Construction (SP E&C). He will also be Executive Director on the board of Shapoorji Pallonji and Company Pvt Ltd (SPCPL). He was a part of Afcons family for more than eight years. During his tenure, he has made significant valuable contributions in Afcons' growth story. The Afcons family wishes Mr Akhil Gupta all the best in his new role.





# Awards

## EPC WORLD AWARD FOR KANPUR METRO

Kanpur Metro project received the 'Outstanding Contribution in Urban Infrastructure' award at the 9th EPC World Awards. Mr Devusinh Chauhan, Minister of State for Communications, Government of India, gave the award to Mr Sanjay Singh, Project Manager, and, Mr Ravikant Shukla, AGM Planning of Kanpur Metro project.



### Award for India's deepest Metro ventilation shaft

India's deepest Metro ventilation shaft, constructed in Kolkata, for the East West Metro, won an award for safe construction practices. Ayan Mukherjee, Senior Manager - Construction, Bappaditya Mondal, Manager, and Senior Engineers Pranshul Shukla and Bikram Roy were present to receive the award on behalf of Afcons. The award was organised by Civil Engineering & Construction Review (CE&CR) Magazine.

### Afcons shines in StratComm Awards 2022

Afcons won an award for Most Innovative Use of Content Marketing in the 7th StratComm India Summit & Awards 2022. Afcons has now won at the StratComm Awards for two years in a row. The nomination for this year was the online video campaign on Afcons website covering Chenab Bridge Arch Closure. It was a maiden attempt at online marketing with an aim to broadcast the unique arch closure moment to the world in the backdrop of the Covid-19 pandemic. The award was collected by Bivabasu Kumar and Pratik Kolekar from Corporate Communications department.



### ALERTS

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