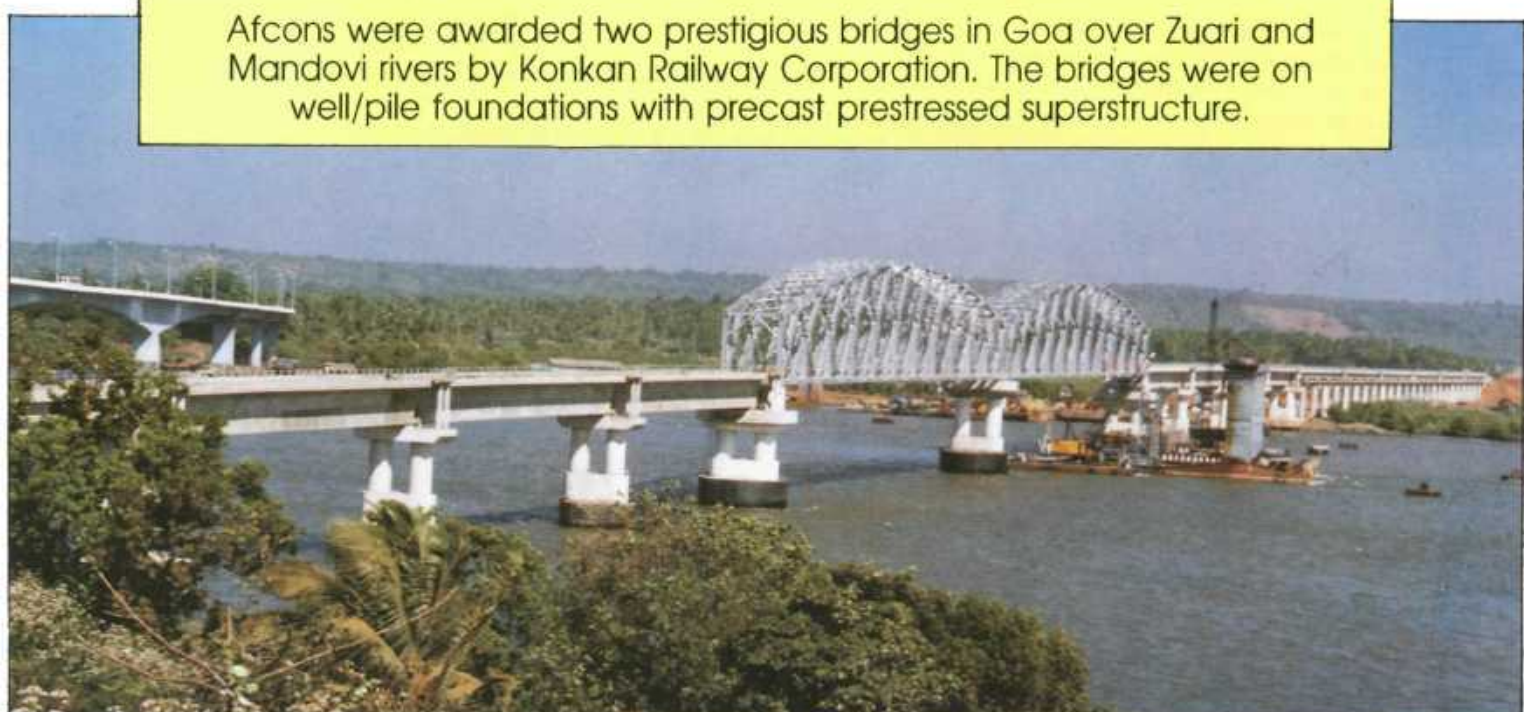


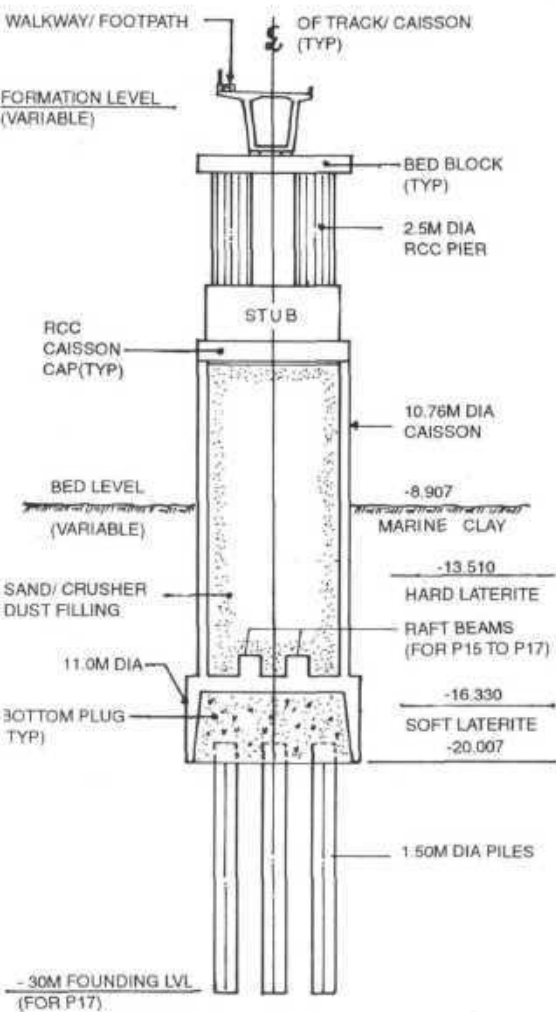
AFCONS



RAILWAY BRIDGES ACROSS ZUARI AND MANDОВI RIVER GOA FOR KONKAN RAILWAY

Afcons were awarded two prestigious bridges in Goa over Zuari and Mandovi rivers by Konkan Railway Corporation. The bridges were on well/pile foundations with precast prestressed superstructure.





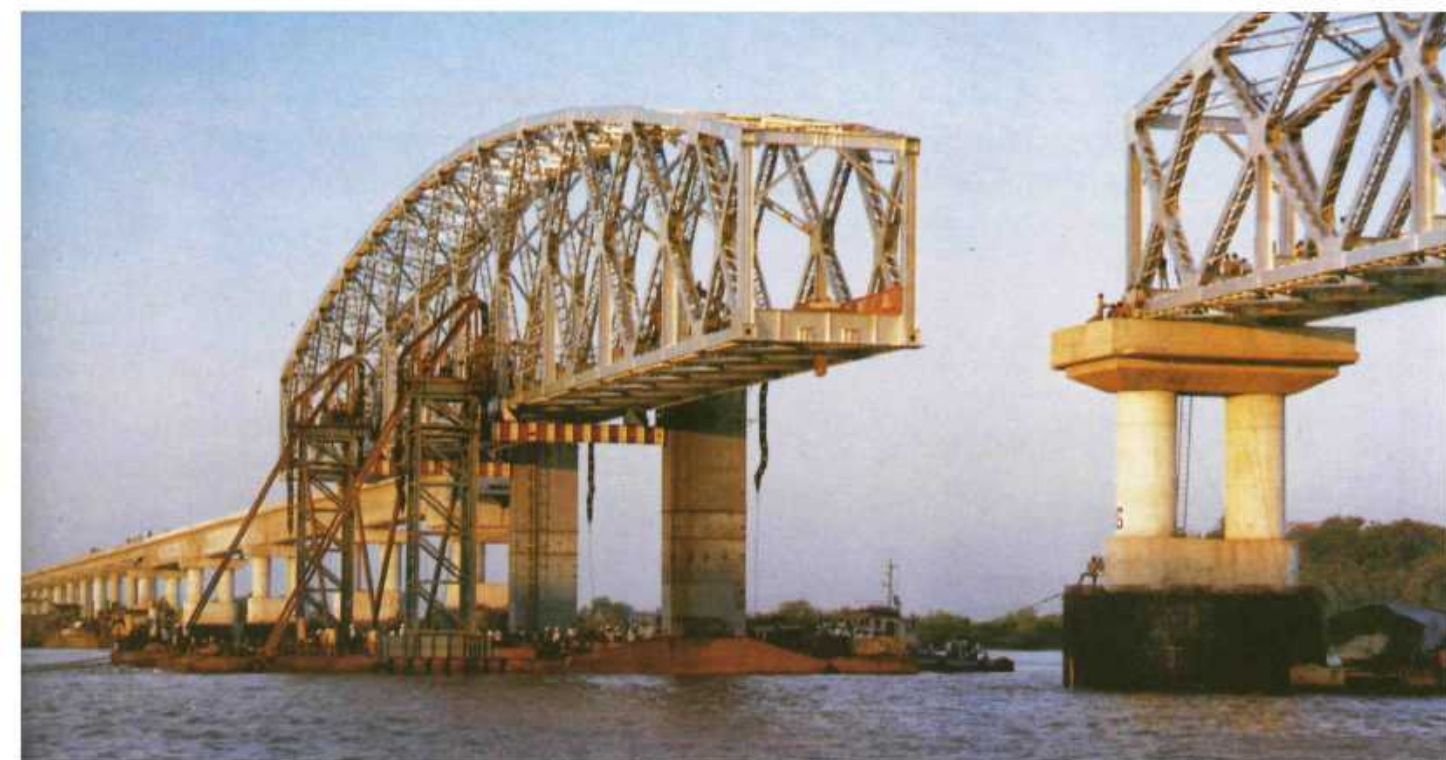
CROSS SECTION FOR W1

	MANDOVI-I	MANDOVI-II	ZUARI
Length of Bridge	946.8m	235.90m	1319.00m
Span PSC T-Girder 3 No/span	a) 2 Nos. *22.8m	8 Nos. *22.8m	30 Nos. *22.8m
PSC Box Girder	b) 6 Nos *53.5m	1 No. *53.5m	7 Nos. *53.5m
Steel Girder	c) 1 No *124.2m	—	2 Nos. *124.2m
RCC Deck Slab	d) —	—	1 No *12.0m
Foundation			
RCC Bored Piles			
1000 dia.	77 Nos.	—	58 Nos.
1200 dia.	18 Nos.	68 Nos.	58 Nos.
1500 dia.	32 Nos.	—	48 Nos.
Pneumatic Caissons			
11.0m dia.	1 No.	—	3 Nos.
9.5m dia	3 Nos.	—	2 Nos.
Superstructure			
PSC T-Girders	66 Nos. (1782 cum.)	24 Nos. (648 cum.)	90 Nos. (2430 cum.)
PSC Box Girder	6 Nos. (1782 cum.)	1 No. (297 cum.)	7 Nos. (2079 cum.)
Steel Girder of 124.2m span	1 No. (680 MT)	—	2 Nos. (1360 MT)
Material Used			
Cement		8705 MT	
Reinforcement		3587 MT	



Various innovative methods were used by AFCONS during construction of these bridges some of these are:

1. Use of R.C.C. bored piles combined with R.C.C. Caisson for bridge foundation.
2. Use of submersible pontoons for casting and sinking of caissons. Excavation and sinking of Pneumatic Caisson by cutter suction pump.
3. Precast RCCcaissons, with an in-build working chamber, pneumatically sunk - without blasting.
4. Concreting of pile cap / Junction of caisson with piles was carried out in dry condition, under compressed air.
5. 53.5mc/c span precast prestressed box girders weighing 800MT cast entirely at one stretch, with specially designed form-work.
6. Lifting and launching of above girders weighing 800MT using a specially fabricated floating hydraulic lift crane. 124.2m long steel trusses 3 nos. weighing 730 M.T. each, fabricated by railways, were lifted and placed in navigational spans by AFCONS, using this specially fabricated hydraulic lift crane.
7. All equipment required for the work including air-lock equipment, submersible barges and floating equipment etc., self-manufactured with optimum use of Indian resources.
8. 800MT Box girders were cast on the river bank at Zuari, taken on a specially designed pontoon, and towed to Mandovi bridge site by sea route (a distance of 37Km)





कोंकण रेलवे कार्पोरेशन लिमिटेड
KONKAN RAILWAY CORPORATION LTD.
(A GOVERNMENT OF INDIA UNDERTAKING)
TEL : 757 20 15 - 18 FAX : 757 24 20 TLX : 0131 1228 - KRCL - IN

BELAPUR BHAVAN,
SECTOR 11, CBD, BELAPUR,
NEW BOMBAY - 400 614

22nd December, 1995

E. SREEDHARAN
CHAIRMAN

D.O. No. KR/CO/W/Zuari

Dear Mr. Divanji,

Sub: Construction of Konkan Railway
Bridge across Zuari River

The second steel girder was hoisted and placed in position across Zuari on 19th inst, thus marking the completion of this most prestigious bridge of the Konkan Railway Project. The meticulous planning, massive mobilisation, elaborate preparations and clock-work precision with which the girder launching was accomplished would impress with any one who had witnessed this prodigious feat. I was not present on this occasion but a good many other dignitaries, including the Chief Minister of Goa State, were present and they were all full of praise. I had, however, witnessed a similar launching operation when the first steel girder was placed across this bridge.

I do not think there is any other Company in our country engaged in construction industry which could have done the Mandovi and Zuari bridges better than M/s AFCONS. Our total reliance and trust in your Organisation for accomplishing this difficult job has been fully vindicated.

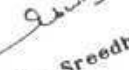
On behalf of the Konkan Railway Corporation, I have great pleasure in conveying our deep appreciation of the excellent work done by M/s AFCONS on these two bridges, which has considerably enhanced the image of this Corporation as well.

In the construction of the Mandovi and Zuari bridges, which happen to be the most prestigious bridges on the Konkan Railway project, there is one person who had outshone all others in technical and managerial competence and he is your Project Manager Mr. Abhay Kashalkar. Never cornering the limelight, but having an eye on every detail, enthusing his team of workers and engineers, ensuring the target dates for each event. I can confidently state that this Engineer is an enviable asset to your Organisation.

I would request you to particularly convey my appreciation and gratitude to Mr. Kashalkar and his team of engineers and workmen for the excellent service they had rendered to this Corporation.

Thanking you,

Yours sincerely,


(E. Sreedharan)



AFCONS/118/1997

Afcons Infrastructure Limited

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