



research bridges railways tunnelling monitoring technology management international

Giuliana Bridge

Description

The Giuliana bridge in Benghazi / Libya consists of 4 single-span foreshore bridges per lane and a three-span main structure. The foreshore bridges have a total span of 35 metres. The cross-section has the form of a double box girder with continuous deck, prestressed in longitudinal direction in the footbridges and floor slabs.

The two main structures with spans of 80-120-80 metres are haunched box girders. The main structures are prestressed in longitudinal and cross direction (deck pavement). The object was erected in the 1970s.

The structure was generally rehabilitated by Bilfinger Berger. In the course of the works great corrosion was detected at the longitudinal and cross tendons. First investigations have shown defective pressure grouting of the tendons.

The global maintenance state of the structure was analysed by the dynamic investigations with BRIMOS® . In addition statements on the condition of prestressing and recommendations for the further procedure during rehabilitation were made.

After the rehabilitation has been concluded a check with BRIMOS® is scheduled.

- Client: Bilfinger Berger AG
- Location: Bengasi, Libya
- Checking Period: 2005



BRIMOS® Services conducted:

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|------------------------------|---|---|--|--|
| Lifecycle Management: | <input checked="" type="checkbox"/> <u>Condition Assessment</u> | <input type="checkbox"/> Condition Monitoring | <input checked="" type="checkbox"/> <u>Rehabilitation Planning</u> | <input type="checkbox"/> Quality Control |
| | <input type="checkbox"/> Lifetime Assessment | <input type="checkbox"/> Traffic Analysis | <input type="checkbox"/> Environmental Influences | <input checked="" type="checkbox"/> <u>Risk Assessment</u> |
| Special Measurements: | <input type="checkbox"/> Attendant Monitoring | <input type="checkbox"/> Noise and Vibrancy | <input type="checkbox"/> Deflection Measurements | <input type="checkbox"/> Seismics |