

CONSTRUCTION METHODS



FREYSSINET

Freyssinet construction methods

With over 70 years' experience in bridge construction and an extensive portfolio of clients around the world, Freyssinet is involved in numerous large-scale design and build projects. The company has forged a global reputation for its skills and expertise.

Construction methods can be divided into two major elements, irrespective of the material used (concrete, steel, etc.): in-situ construction and prefabrication. Both types involve a broad array of techniques and resources, including carriage form travellers and self-launching trusses for in-situ construction, launching gantries for cantilever installation, cable-stayed masts for progressive installation, and assembly trusses for full-span construction, as well as incremental launching, lifting and rotation systems for moving structures into position. All of these materials and equipment are designed, analysed, supplied and implemented by Freyssinet.

Cover photograph: Tuen Mun-Chek Lap Kok Link - Hong Kong

Freyssinet

Freyssinet offers integrated hi-tech solutions in two major fields: construction and structural repair under the Foreva® label.

Freyssinet is involved in numerous projects across five continents, thereby cementing its world leadership status in its specialist areas:

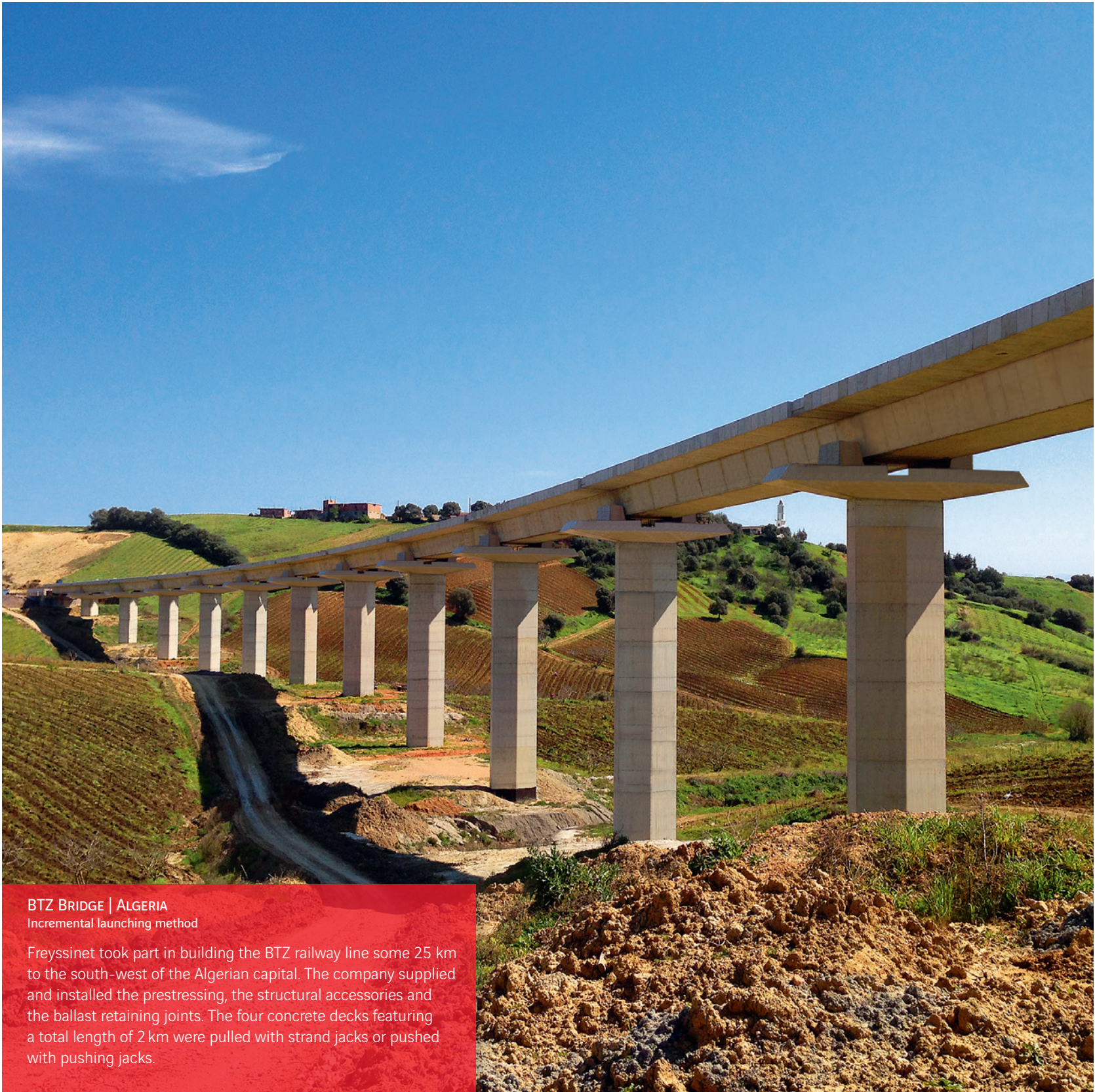
- Prestressing
- Cable-stayed structures
- Construction methods
- Structural accessories
- Structural repair and reinforcement
- Structural maintenance

These activities are applied to a wide range of structures, including civil engineering structures, buildings, skyscrapers, industrial installations, power production plants, offshore platforms, transport and sporting infrastructures, and more.

For more information, visit www.freyssinet.com



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BTZ BRIDGE | ALGERIA
Incremental launching method

Freyssinet took part in building the BTZ railway line some 25 km to the south-west of the Algerian capital. The company supplied and installed the prestressing, the structural accessories and the ballast retaining joints. The four concrete decks featuring a total length of 2 km were pulled with strand jacks or pushed with pushing jacks.



ULYANOVSK BRIDGE | RUSSIA
Heavy lifting - Full span



MUDEIREJ BRIDGE | LEBANON
Precast beams



SEHZADELER VIADUCT | TURKEY
Cast in-situ cantilever using a carriage form traveller



FERN STREET BRIDGE - GERRINGONG | AUSTRALIA
Incremental launching method



ALLONE BRIDGE | FRANCE
Bridge rotation



STRALIA



BANGKOK BLUE LINE | THAILAND
Precast segments - Span by span



HALIÇ BRIDGE | TURKEY

Balanced cantilver erection (steel deck)

Haliç Bridge in Istanbul is the fourth bridge to span the Golden Horn estuary. The structure is made from two access viaducts, a cable-stayed bridge and a swing bridge. Freyssinet designed, produced and installed the construction methods, stay cables, prestressing and bearings, and lifted the segments. The bridge is built on a historical site and will allow the authorities to extend an MRT line in a city plagued by congestion.



MEZCALA BRIDGE | MEXICO
Balanced cantilever erection (steel deck)



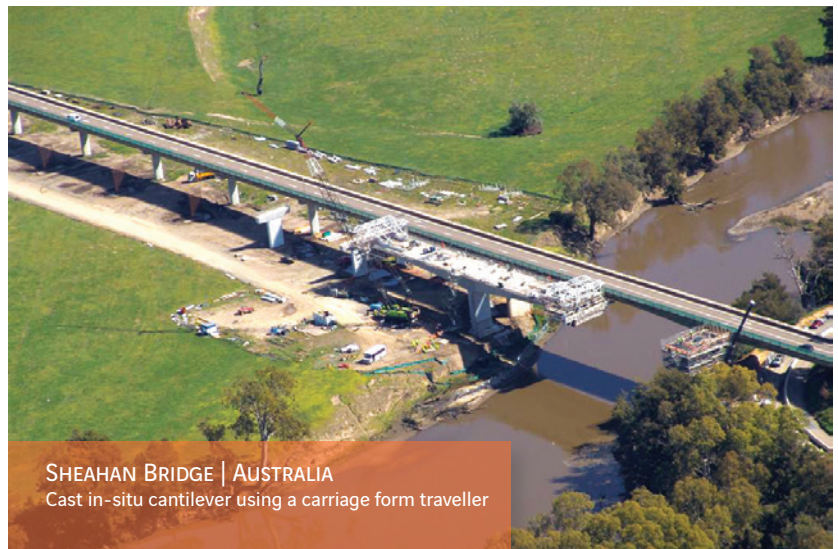
KIRIKKALE HIGH-SPEED RAILWAY LINE | TURKEY
Cast in-situ cantilever using a carriage form traveller



DEEP BAY LINK | HONG KONG
Precast segments - Span by span



LIAKHVI VIADUCT | GEORGIA
Incremental launching method



SHEAHAN BRIDGE | AUSTRALIA
Cast in-situ cantilever using a carriage form traveller



DUBAI METRO | UAE
Precast segments - Span by span



NORTH WEST RAIL LINK | AUSTRALIA
Precast segments - Span by span



IRON COVE BRIDGE | AUSTRALIA
Incremental launching method



RN150 ISCHIGUALASTO ARCH BRIDGE | ARGENTINA
Special operations



LIANTANG 3 BRIDGE | HONG KONG
Precast segments - Balanced cantilever

Freyssinet installed the deck (precast segments) and carried out prestressing by post-tensioning (over 1,500 tonnes in total). The bridge is part of a complex motorway interchange located near Sheung Shui in the north of the country.



SUNGAI PRAI BRIDGE | MALAYSIA
Precast segments - Span by span



OUM ER-RBIA BRIDGE | MOROCCO
Cast in-situ cantilever using a carriage form traveller



ISTANBUL'S THIRD RING ROAD | TURKEY
Incremental launching method



SOUTH ROAD SUPERWAY | AUSTRALIA

Precast segments - Balanced cantilever

The South Road Superway is a 4.8 km road comprising an elevated 2.8 km roadway from the Port River expressway to Regency Road in Adelaide's north suburb.

The structure of the elevated roadway features a double deck made from Precast segments - Balanced cantilevers.

Freyssinet precast and installed the segments using launching gantries and lifting equipment, as well as installing the prestressing.

• LIFTING EQUIPMENT

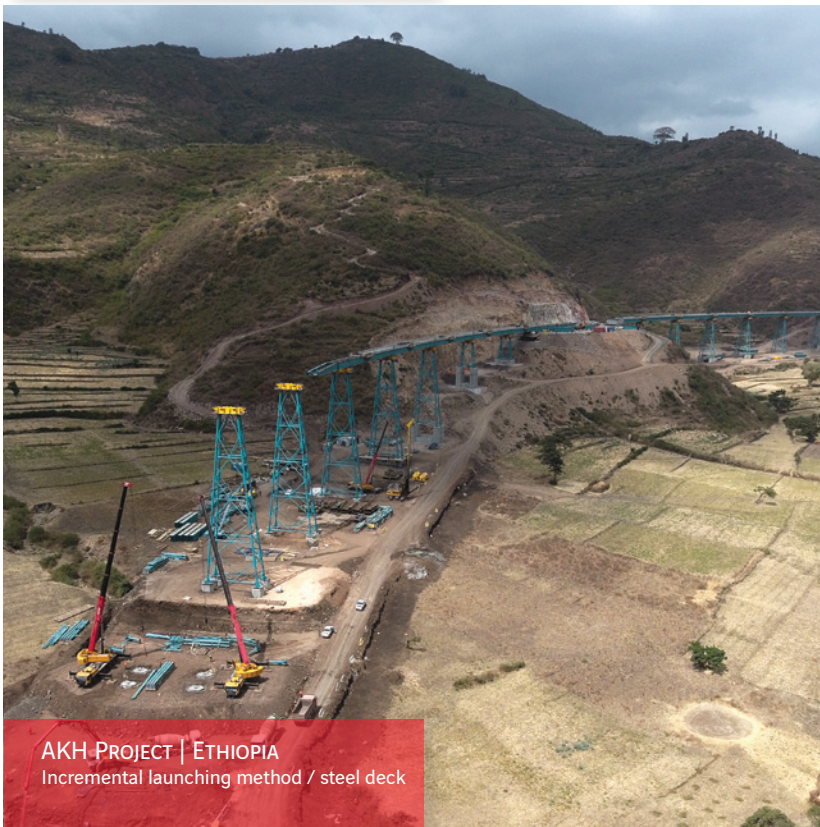
TRANSPORT INDUSTRY



HO CHI MINH CITY METRO | VIETNAM
Precast segments - Span by span



AL SAFOOH TRAMWAY | UAE
Precast segments - Span by span



AKH PROJECT | ETHIOPIA
Incremental launching method / steel deck



BRIDGE OVER THE CUBANGO | ANGOLA
Incremental launching method



EL CANTIL BRIDGE | MEXICO
Precast beams



SEOHAE BRIDGE | SOUTH KOREA
Precast segments - Span by span



BANGKOK RED LINE | THAILAND

Precast segments - Span by span

As part of the project aimed at extending the Bangkok elevated transit system, Freyssinet supplied and installed the prestressing for the segments for the Red Line (17,000 tons of prestressing) and designed the construction methods. The prestressed concrete elements are intended for the viaduct that supports 19.2 km of the line above the city's streets and buildings.



SHENZHEN WESTERN CORRIDOR | HONG KONG
Heavy lifting - Full span



MAJURA ROAD | AUSTRALIA
Incremental launching method



DAMMAM BRIDGE | SAUDI ARABIA
Precast segments - Span by span



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