

CABLE-STAYED BRIDGES



FREYSSINET

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, making it the world leader 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

Cover photograph: Russky Island Bridge - Russia





Jukseong Jeongok Bridge
South Korea
Span: 400 m



Ting Kau Bridge
Hong Kong
Span: 475 m



1st Shindae Bridge
South Korea
Span: 78 m



Øresund Bridge
Denmark-Sweden
Span: 490 m



Constantine Bridge
Algeria
Span: 245 m



Sungai Muar Bridge
Malaysia
Span: 132 m



Verdun-sur-Garonne Suspension Bridge
France
Span: 154 m



Find out more



Mohammed VI Bridge

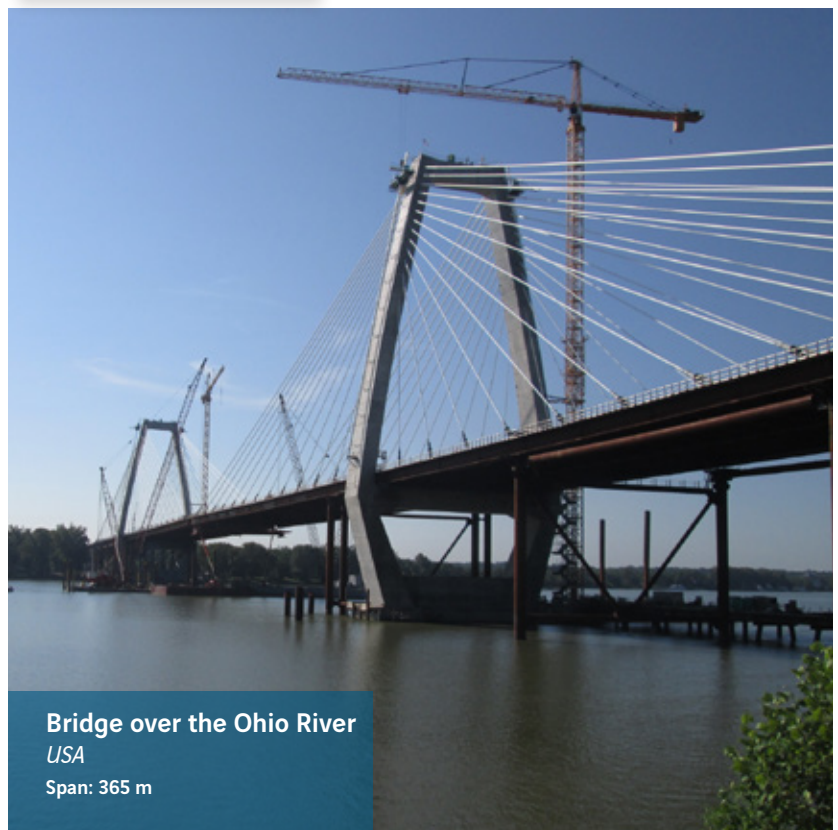
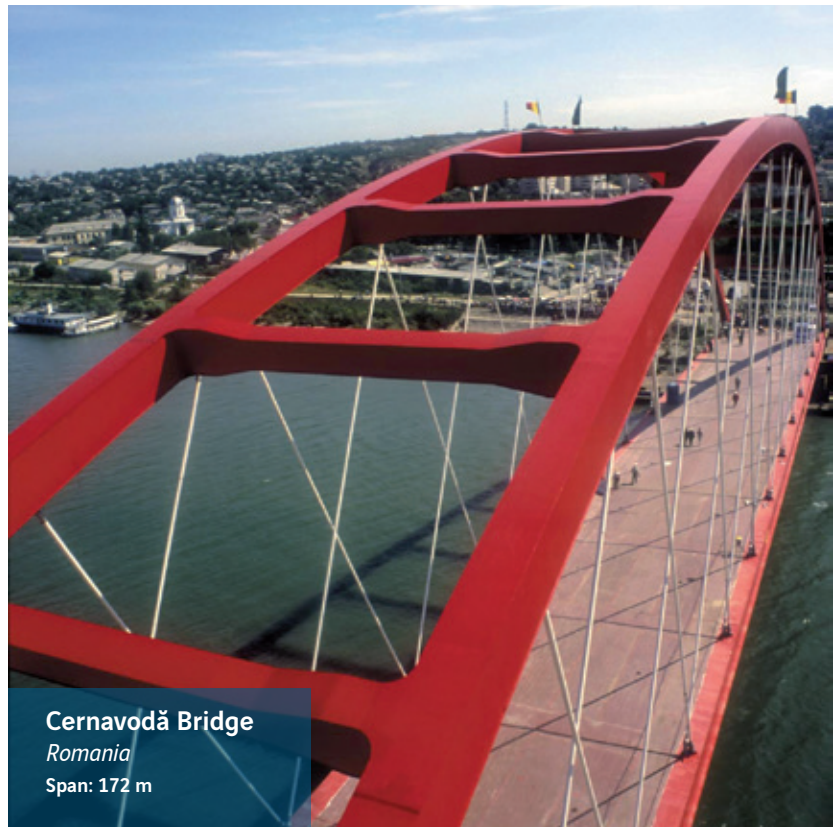
Morocco

Span: 376 m

Also known as the Oued Bouregreg Bridge, this structure is characterised by its architecture, which comprises two 200-metre high arched towers that symbolise the new gates to the cities of Rabat and Salé. The deck is supported by two sets of 20 pairs of parallel multi-strand stay cables.

Freyssinet performed the following tasks on this major structure:

- stay cable design
- stay cable and damper supply
- technical support for the installation of the stay cables and deck prestressing
- expansion joint supply and installation.

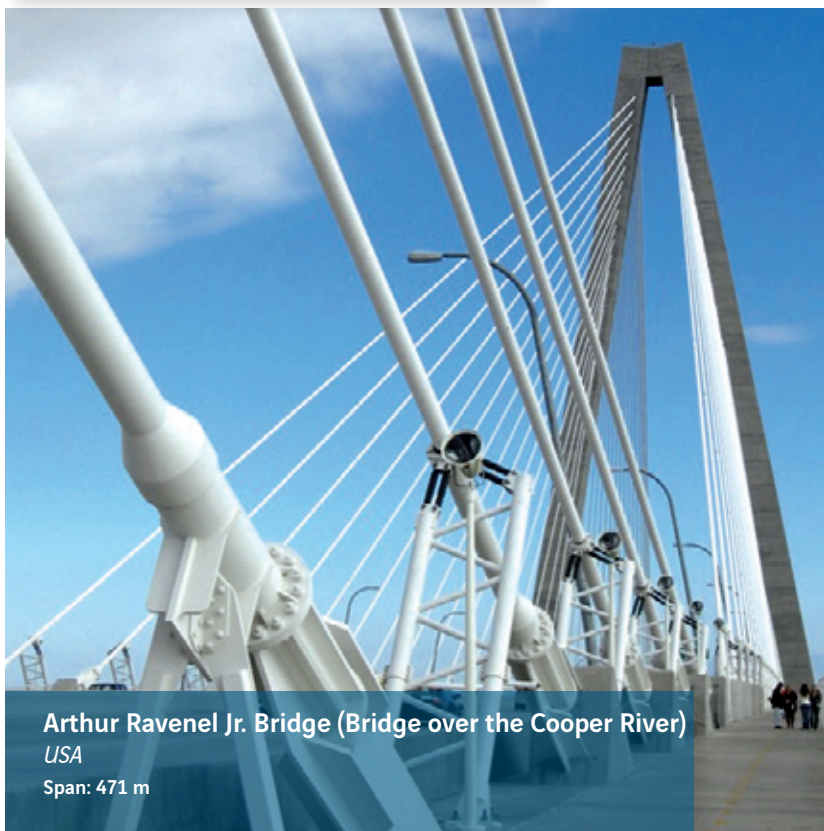




Anita Garibaldi Bridge (Laguna Bridge)

Brazil

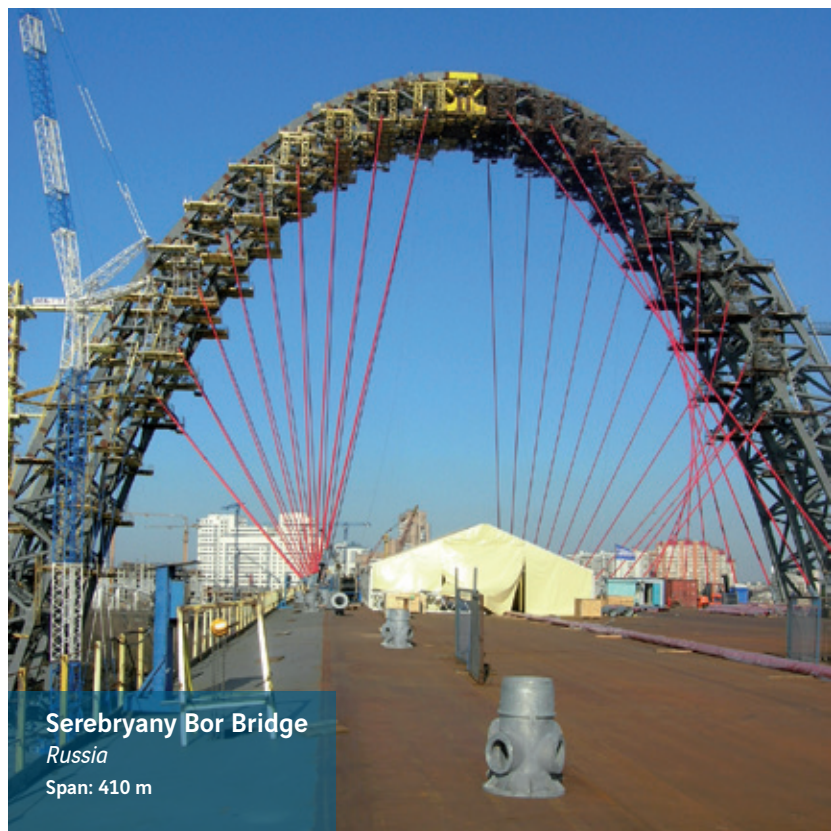
Span: 200 m



Arthur Ravenel Jr. Bridge (Bridge over the Cooper River)

USA

Span: 471 m



Serebryany Bor Bridge

Russia

Span: 410 m



Golden Horn Metro Bridge (Haliç Bridge)
Turkey
Span: 180 m



Find out more



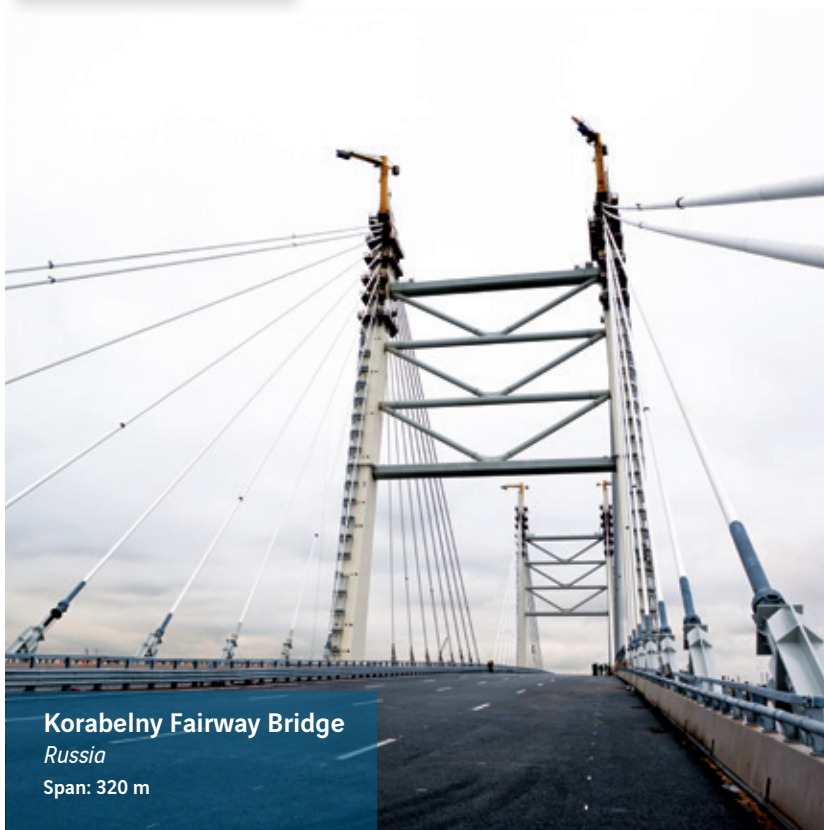
Normandy Bridge
France
Span: 856 m



Centennial Bridge

Panama

Span: 420 m



Korabelny Fairway Bridge

Russia

Span: 320 m



Zembrzyce Bridge

Poland

Span: 105 m



Bridge over the Orinoco
Venezuela
Span: 360 m



Hangyocheon Bridge
South Korea
Span: 130 m



Rion Antirion Bridge
Greece
Span: 560 m



Yavuz Sultan Selim Bridge

Turkey

Span: 1,408 m

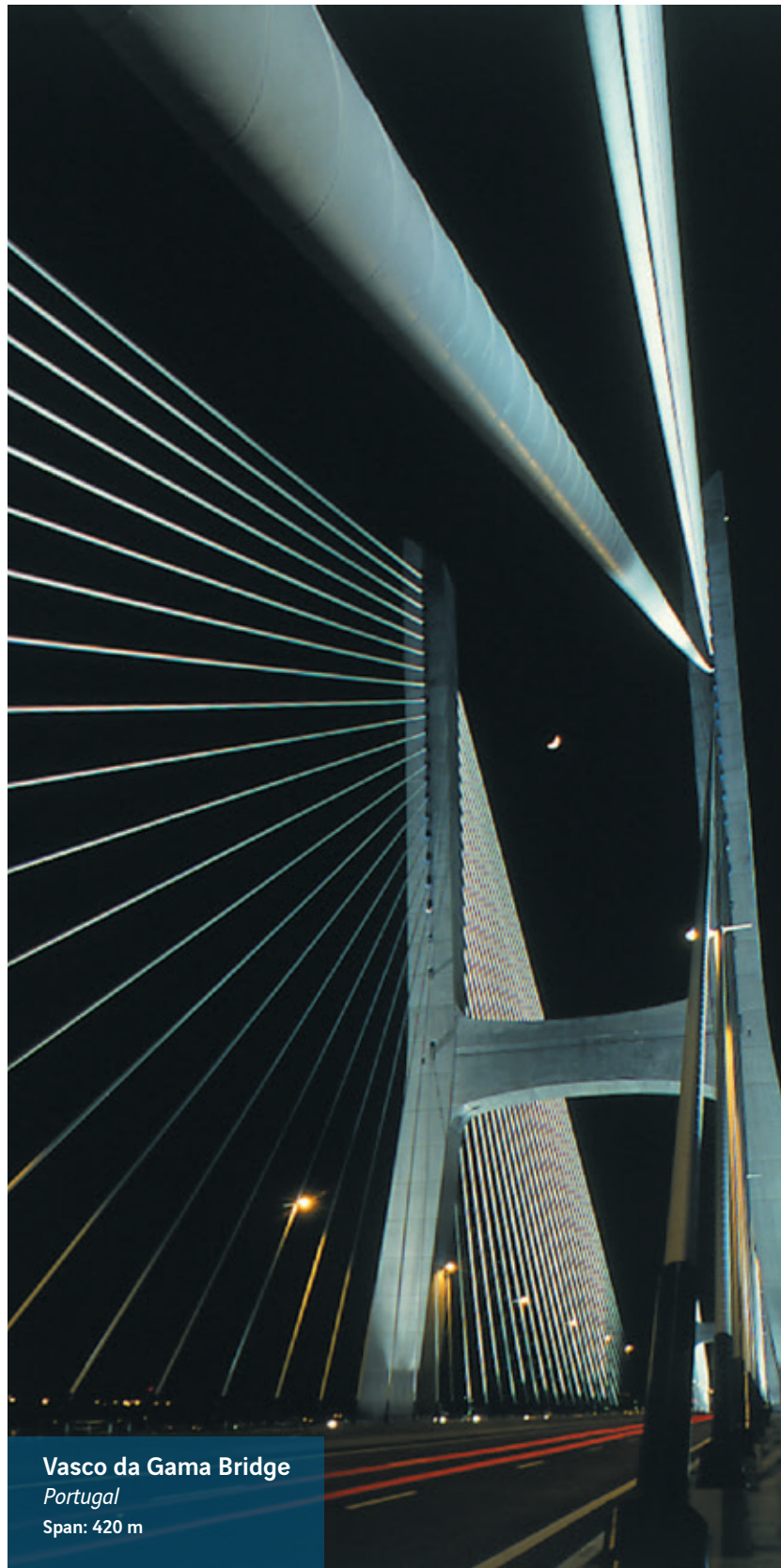
The crowning glory of the motorway bypassing Istanbul in order to relieve traffic congestion in the centre, the 2,164-m long Yavuz Sultan Selim Bridge crosses the Bosphorus to the north of the city, near the shores of the Black Sea. Freyssinet supplied and installed the 176 stay cables and dampers on this record-breaking structure.



Find out more



Video of the project





◀ Russky Island Bridge/▲ Golden Horn Bridge

Russia

Span: 1,104 m and 737 m

Freyssinet designed, supplied and installed the stay cables for the two bridges, located between Russky Island and Vladivostok and in Vladivostok city centre respectively.

For the Russky Island Bridge, Freyssinet also acted as a consultant to the Russian Ministry of Construction to approve the solution chosen for the design of the structure.

Video of the projects





Jeonho Bridge

South Korea

Span: 150 m



An Dong Bridge

Vietnam

Span: 140 m



Sungai Prai Bridge

Malaysia

Span: 185 m



La Pepa Bridge

Spain

Span: 540 m



Video of the project



Bãi-Cháy Bridge

Vietnam

Span: 435 m



Calli Bridge

Turkey

Span: 80 m



2nd Kangchon Bridge

South Korea

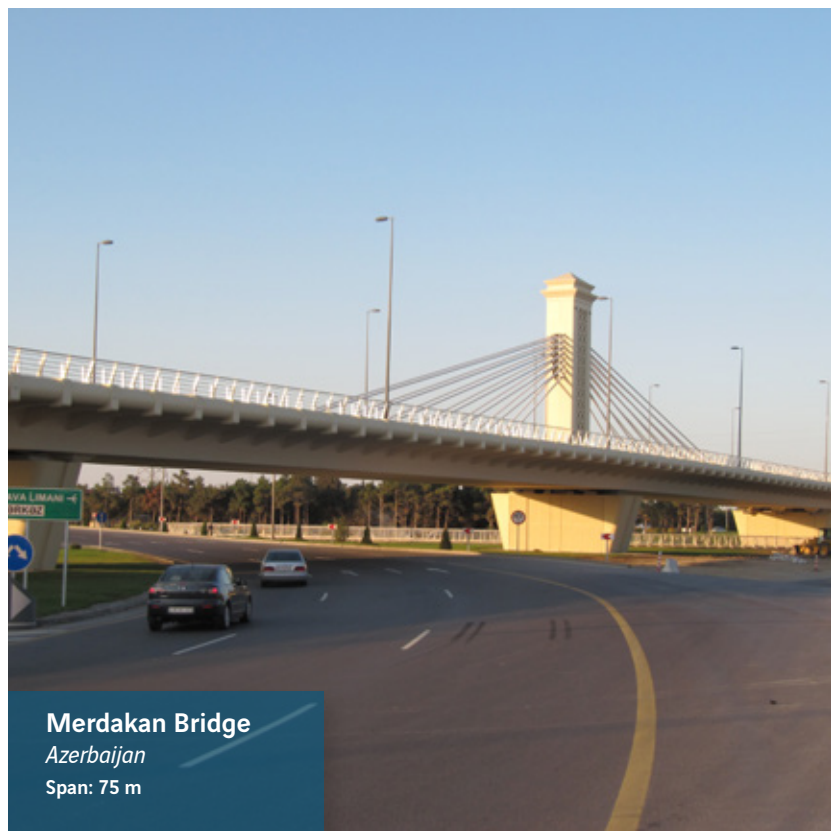
Span: 140 m



Plock Bridge
Poland
Span: 375 m



Kwangjeon Viaduct
South Korea
Span: 75 m



Merdakan Bridge
Azerbaijan
Span: 75 m

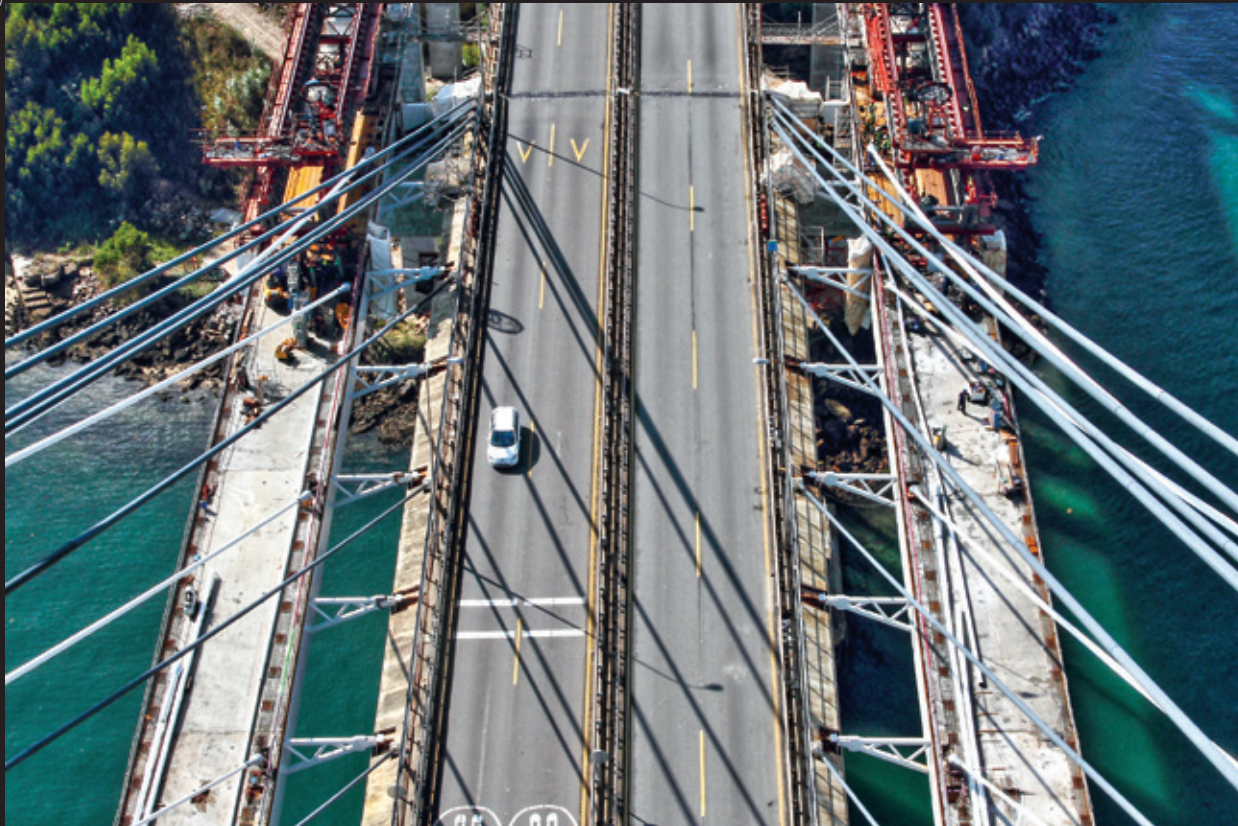


Millau Viaduct
France
Span: 342 m

REPAIR

Ewijk Bridge *Netherlands*

As part of a nationwide steel bridge renovation project, Freyssinet replaced the locked-coil cables on this structure with cohesive strand cables.



Rande Bridge *Spain*

Freyssinet supplied eighty H2000 stay cables as part of the project to widen this cable-stayed bridge, which was the largest in the world when it was built in 1981.



Agigea Bridge

Romania

Built in 1983 using the technologies of the time (parallel wires, steel inner sheaths, prestressed anchors, etc.), the bridge was showing structural damage that put it at risk of collapse. Freyssinet was able, through specialist design, to remove the existing stay cables replacing them with 160 new ones.

Penang Bridge

Malaysia

Since it was built in 1985, traffic has increased well beyond the anticipated volume. Freyssinet was therefore contracted to analyse and renovate the bridge. The project included installing and tensioning 16 temporary stay cables, cutting and removing the existing front and rear stay cables, and then supplying and installing 12 new stay cables, all without interrupting traffic flow.





ANZAC Bridge

Australia

In order to reduce vibrations due to wind and rain, Freyssinet retrofitted helical ribs onto the existing HDPE sheaths using a welding robot, without any interruption to traffic.

A method for replacing the filler was specially devised in order to strengthen the stay cable anchors.



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