FREYSSINET IN THE WORLD

Southern Program Alliance - Level Crossing Removal Project - Carrum Bridge

Melbourne, AUSTRALIA

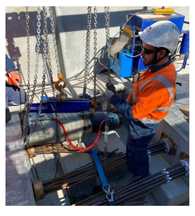
General contractor
Lendlease Engineering Acciona Coleman Rail JV

Customer/Owner
The State of Victoria, through the Level Crossing Removal Authority

Engineer
Level Crossing Removal Project

Freyssinet subsidiary
Freyssinet Australia (Melbourne)

Works period
Start date: August 2019
End date: December 2019



PROJECT DESCRIPTION

The project is part of the Level Crossing Removal Program undertaken in Melbourne, Victoria. It consists of two parallel railway bridges which are about 500 meters long each. The bridge top structures are fully precast on both piers and spans. Piers are made in two parts, a column and a crosshead, which are about 6 meters high in average. Piers are provided with 8 PT bars each, either diameter 58 mm or 75 mm. Span are made of 32 meters long U-trough provided with 6 no. of 12C15 tendons. All precast elements were installed by cranage. Global duration of the project was approximately 3 months.

FREYSSINET MISSION

Freyssinet scope is as follow:

- Supervision of installation of PT bars in the pile caps
- Installation of precast piers
- Dry packing and joint flooding between precast pier elements
- Full PT operation on bars (installation, stressing and grouting)
- Full PT operation on tendons in U-Trough (threading, stressing and grouting)

Lahlou

Morocco

General contractor
Société Générale Des travaux du Maroc (SGTM)

Customer/Owner
ONCF: Office national des Chemins de Fer (Morocco)

Engineer
Egis Rail

Freyssinet subsidiary
Freyssinet International & Cie (Rueil-Malmaison)

Others subsidiaries
FREYSSIMA

Works period
Start date: October 2015
End date: August 2016

PROJECT DESCRIPTION

The 'LGV project Kenitra – Tanger' consists in the construction of 200Km of high speed rail.

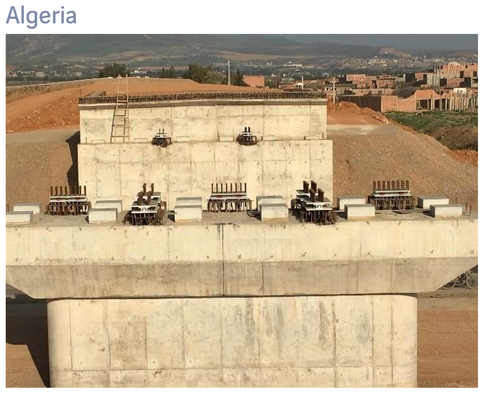
Lahlou bridge is a 404m total length crossing an existing railway. The deck is a post tensioned box girder with maximum span of 52m, overall deck width of 12.58m and 4.5m height.

FREYSSINET MISSION

Freyssinet scope of works consists in:
Supply and installation of internal and external Post Tensioning
Supply of Launching equipments: Launching nose, temporary bearings and Launching system.
Launching operations using Eberspacher system
Supply and Installation of Pot Bearings
Supply and Installation of Railways Expansion joints (Ballast retaining device)

Algeria railway bridge with Plan rectification between EL Affroun and Khémis Stations.

Algeria



General contractor
-

Customer/Owner
SYSTRA

Engineer
CCECC - OZGUN Groupement

Freyssinet subsidiary
Freyssinet International & Cie (Algérie)

Works period
Start date: July 2015
End date: August 2017

PROJECT DESCRIPTION

Algeria railway bridge with Plan rectification between EL Affroun and Khémis Stations.

FREYSSINET MISSION

In the framework of ALGER-ORAN railway project, joined team of Freyssinet Algeria, Technical Department and FPC worked together to design, manufacture and supply bridge fittings for 12 railway bridges.

The contract Freyssinet consists in supplying 285 Shear keys with a range of horizontal effort from 4000 kN to 12000 kN (unity weight up to 3 tons).

For information: welded nelson studs number: + 15 000 unity

Devices were design according to the standard EN 1337 as well as the Eurocode 8 and conform to EN 15129.

Viaduc de Marly le Roi

MARLY-LE-ROI, France

Entreprise générale
Freyssinet - ETF - Baudin - Chantiers Modernes

Client/Maitre d'Ouvrage
SNCF Réseaux

Maitre d'Oeuvre
SNCF Réseaux

Filiale Freyssinet
Freyssinet Région GPCM

Autre(s) filiale(s)
MTS

Date(s) des travaux
Début des travaux : mai 2018
Fin des travaux : septembre 2018

DESCRIPTION DU PROJET

Dans le cadre de la modernisation du réseau ferré, la SNCF procède à une campagne de remplacement des ouvrages d'art métalliques n'étant plus dimensionnés pour subir les contraintes d'exploitations actuelles, du fait de leurs vétustés. L'ancien viaduc de Gilly sur Loire est composé d'un tablier métallique treillis, en fer puddlé, d'une longueur de 287 mètres, et reposant sur 6 appuis à rouleaux (hyperstatique), . Ce dernier a dû être remplacé par un tablier bi-poutre mixte béton/acier, assemblé et lancé en parallèle de l'ouvrage existant, de sorte à ne pas interrompre le trafic.

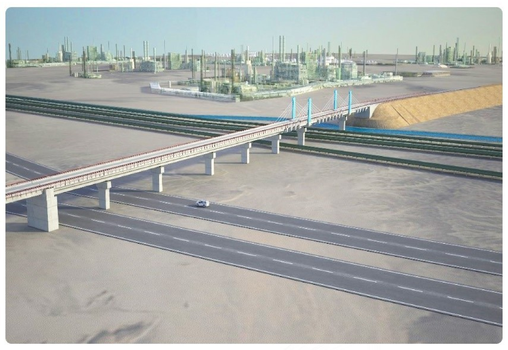
MISSION FREYSSINET

Freyssinet à été mandaté des missions suivantes:
- Dé-ripage de l'ancien tablier.
- Ripage du nouveau tablier.
- Mise sur appuis définitifs
- Dé-lancement de l'ancien tablier.
- Déconstruction et évacuation de l'ancienne structure.

Pour ce faire, les équipe Freyssinet ont dimensionnées, fournies et installées les chemin de ripage, 6 vérins avaleurs de câble HEBETEC, pour la phase de ripage, ainsi que 64 vérins de 90 tonnes et une centrales LAO, pour la phase de mise sur appuis.
Les équipes ont procédé à un ripage du tablier sur une longueur de 12 mètres, en 16 heures.
Il s'en est suivi une phase de mise sur appuis définitifs par l'intermédiaire d'un Levage Assisté par Ordinateur, afin de contrôler la descente et de ne pas induire d'efforts parasites dans la structures neuves.
Ces opérations délicates ont été réalisées sous interruption temporaire de circulation (ITC)

CTW130 SADARA & JUBAIL RAILWAY NETWORK

SAUDI ARABIA



Overview

General contractor
Yapi Merkezi

Customer/Owner
Saudi Arabian Railways (SAR)

Engineer
Yapı Merkezi & Shibh Al Jazira Joint Venture

Freyssinet subsidiary
Freyssinet Products Company (Saint Eusebe)

Others subsidiaries
Freysas

Works period
Start date: April 2022
End date: December 2022

Keeper-ballast joint

Keeper-ballast joint

PROJECT DESCRIPTION

The CTW 130 project includes the Sadara railway line, which will link the Jubail railway network and allow the transport of petroleum products from the Sadara plant to the Jubail Commercial Port (JCP) and the King Fahad Industrial Port (KFIP). This project will involve the construction of 2,400 km of rail track, making Saudi Arabia the world's second largest exporter of minerals.

FREYSSINET MISSION

With the support of FPC, Freysas was able to advise its customer and propose the most suitable rail joint for the project specifications and requirements. The ballast joint was designed according to the KRT-RB-1 specification. It is 8.4m long, with an adjustable ballast height of up to 615mm and a movement capacity of +/- 215mm. The joint was manufactured in Romania and underwent a blank assembly before delivery to ensure a quality installation.

North West Rail Link - Stay Cables & Post-tensioning Works

Australia

General contractor
Impregilo Salini Joint Venture

Customer/Owner
Transport for New South Wales

Engineer
SMEC South Africa

Freyssinet subsidiary
Freyssinet - Pôle Australie Pacifique

Works period
Start date: January 2014
End date: September 2017

PROJECT DESCRIPTION

North West Rail Link is a railway link in Sydney which would connect Epping, The Hills Centre and Rouse Hill. The rail link will reduce the congestion along the route and provide direct rail services to the Norwest Business Park, Macquarie Park, St Leonards, Chatswood, the North Sydney district and the Central Business District 5CBD). The Project is a 23 km route with 6 stations.

FREYSSINET MISSION

Freyssinet has performed the erection of the superstructure using span by span segmental erection on falsework:

* 1 406 m viaduct
* 42 spans (374 segments)

Freyssinet also supply and erect the 32 stay cables, each cable is composed of 127 strands.