

Alibeyköy and Kagithane viaducts in Istanbul

Turkey



General contractor

Gülermak / Kolin / Kalyon

Customer/Owner

Istanbul Metropolitan Municipality

Engineer

Freyssinet subsidiary

FPC ITALIA S.p.A.

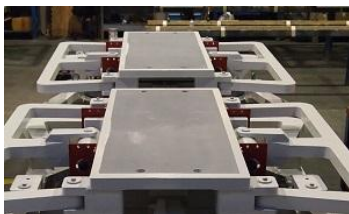
Others subsidiaries

Freysas

Works period

Start date: January 2014

End date: December 2018



PROJECT DESCRIPTION

FPC ITALIA supplied to FREYSAS the bearings equipped with seismic damping devices at high hysteresis for the projects Alibeyköy and Kagithane viaducts in Istanbul. The Alibeyköy and Kagithane viaducts are part of the new Istanbul metro line.

The spherical bearings are able to support vertical loads up to 60.000 kN; their dimensions have been reduced thanks to the use of a special high strength sliding material.

The hysteretic dampers are made by steel element shaped as "E" and "C" and fitted in the spherical bearings. The maximum seismic design displacement along the longitudinal and transversal deck directions is equal to ± 175 mm.

Some of these bearings are equipped with lock-up devices to allow the service movements and to activate the hysteretic dampers during the seismic event.

Part of the supply are also high damping rubber bearings ISOSISM® HDRB having diameter 700 mm designed according to EN 15129 and provided with CE certification.

All the tests required by the norm have been carried out in our laboratory ISOLAB. A complete bearing in full scale has been tested to verify its behavior.

FREYSSINET MISSION

Thanks to these two important projects, designed by FPC ITALIA technical department, Freyssinet has got the CE certification for ISOSISM® Displacement Dependent Devices (type DDD according to the standard EN 15129).

