

edilon)(sedra

newsletter November-December 2018

Track replacement ONCF Tunnel de Rabat Ville, Morocco:

very short possession time and optimised tunnel clearance due to Corkelast® ERS

In October 2018 edilon)(sedra successfully completed a complicated track replacement operation in the “Tunnel de Rabat Ville”, Morocco. The transition of 2 x 1.300 m ballasted track to Corkelast® ERS (Embedded Rail System) was performed in a very short possession time, while one track remained in 24/7 operation.



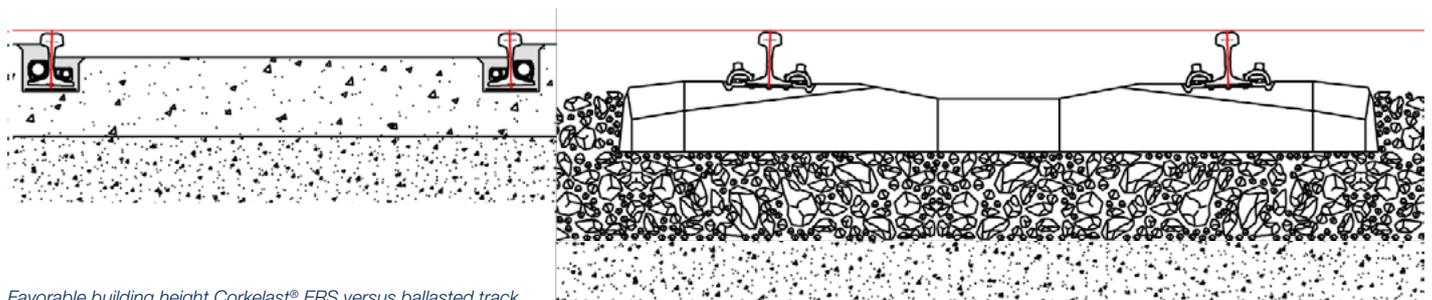
Tunnel remained in 24/7 operation during installation

The renovation of the track was part of a larger tunnel renovation in which the reinforcement of the tube structure reduced the clearance of the tunnel. In order to compensate this reduction, Corkelast® ERS was chosen as track system for the replacement of the old ballasted tracks. The system contributed to a favorable tunnel clearance by lowering the level of the rail significantly.

The concrete slab was built in only 2 weeks. Both the rail and the Corkelast® ERS were installed in only 5 days per track! ONCF was extremely satisfied with this accomplishment. The Corkelast® ERS design is in accordance with the SNCF Corkelast® ERS approval and in full compliance with EN13481-5:2012.

edilon)(sedra Corkelast® ERS

traditional ballasted track



Favorable building height Corkelast® ERS versus ballasted track

Following the successful installation of more than 80.000 m of Corkelast® ERS in tunnels worldwide, our first important Corkelast® ERS tunnel project in Morocco has been successfully realized. Another milestone for edilon)(sedra!



Construction of the 2 Corkelast® ERS tracks in Tunnel de Rabat Ville, Morocco



Renewal of tracks on steel bridge “Kirchenfeldbrücke” in Bern, Switzerland

edilon)(sedra has recently completed the renewal of rail tracks on the more than 130 years old steel bridge named “Kirchenfeldbrücke” over the river Aare in Bern, Switzerland. The order included the delivery of Corkelast® ERS system (450 m of track), rail expansion joints, steel trough construction as well as consultancy and quality control supervision.

An important reason for the track renewal and the application of Corkelast® ERS (Embedded Rail System) was the increase of the allowed axle load for the trams on the bridge from 9,6 to 10,5 t, as modern tramcars of today are heavier than in the past. Also, Corkelast® ERS allows for reduced installation height and Noise & Vibration reduction.

edilon)(sedra delivered the complete engineering together with partner ZM-I (Zilch + Müller Ingenieure GmbH):

- Special engineering for the tram track
- Static proofs
- Conceptual planning and implementation
- Planning of the bridge-expansion-joints
- Concept designs to earth the rails and steel troughs
- Concept designs for drainage

On the 15th of October 2018 the bridge was reopened for tram service and traffic, ahead of schedule.



“Kirchenfeldbrücke” in Bern, Switzerland



Installation of the Corkelast® ERS track



A tram on the new Corkelast® ERS track

Renovation Tramway Orléans: engineered product solution

One of the biggest grouting projects ever realized for European tramways

edilon)(sedra France successfully completed a large maintenance operation which took place in the summers of 2017 and 2018. Almost 16.000 baseplates were installed as part of the track renovation for Orléans tramway, France.

The track renovation was conducted within very narrow time schedules. In fact, 350 baseplates per day on average were undergrouted with edilon)(sedra Dex[®]-G. Occasionally an installation speed of 850 baseplates per day was reached.

The application of Dex[®]-G was facilitated by Socotras, an application partner of edilon)(sedra France. The new baseplates were installed in between the existing old baseplates. The drilling of the anchor holes in the concrete slab was completed by automatic drilling machines. Subsequently, the anchors were fixed and the baseplates were undergrouted with Dex[®]-G. The grouting and adhesion of the anchor bolts were realized in one action, which resulted in a substantial gain of time.



Installed new baseplates and application with Dex[®]-G for tramway Orléans

Dex[®]-G was selected because of its resistance to high impact forces caused by the busy tram traffic in Orleans. Another important argument for selecting Dex[®]-G is its easy installation without the use of a primer. Dex[®]-G can be applied in all weather conditions, from cold and wet to hot and dry.

The cooperation between the various project partners resulted in one of the biggest grouting projects ever realized for European tramways.

InnoTrans 2018: introduction of edilon)(sedra Corkelast[®] EBS-RF and Bridge Railtrack Competence Centre

The rail industry is in a state of transition, and edilon)(sedra is actively involved in shaping the mobility of the future. This became clear at InnoTrans 2018, the leading international trade fair for transport technology, which took place from the 18th to the 21st of September in Berlin, Germany. edilon)(sedra participated with a state-of-the-art stand concept in hall 25.

Interest was shown by visitors particularly in edilon)(sedra's newly launched track system Corkelast[®] EBS-RF, a Retro Fit system solution for the fast replacement of damaged and worn out "booted blocks". The basis of this system consists of a durable block with integrated elastic tray, both prefabricated under controlled conditions. As a full-service partner, edilon)(sedra provides customers with a complete service before, during and after their block track renovation projects.

Another highlight at this year's InnoTrans event was the introduction of our recently set-up Bridge Railtrack Competence Centre, located in Munich, Germany. The centre is intended to grow into a central start-up place for national and international bridge construction projects.

During the four-day event 153.421 trade visitors, from 149 countries came to the exhibition grounds. Many cutting edge investments in railway systems, and in new approaches to managing these systems, were on display in a very concentrated form.

Click on image to play video

Launching ceremony Corkelast® ERS bridge “Kienlesbergbrücke” at Ulm, Germany

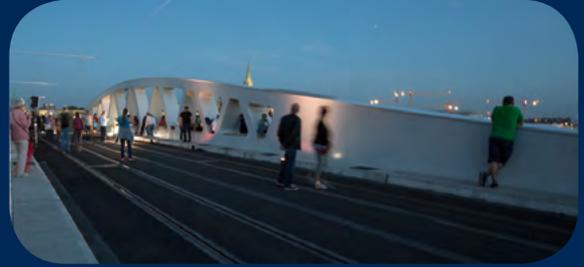


On the 12th of September 2018 the Kienlesbergbrücke at Ulm, Germany was introduced to the public with a big launching ceremony. The 270 m long steel bridge spans the railway tracks of Ulm Hauptbahnhof.

The bridge, which is only for trams, pedestrians and bicycles, is part of Ulm's new tram line 2. edilon)(sedra delivered its Corkelast® ERS (Embedded Rail System) for a double track of R153 rails in steel troughs over the entire length of the bridge. edilon)(sedra also did the engineering of the rail expansion joints. These are very important, as the total thermal expansion of this long steel bridge is 30 cm.

Under the new bridge the tunnel entrance of the new high-speed line Ulm – Stuttgart is being built. So it was a big challenge to manage two construction sites, situated directly on top of each other.

The tram service over the bridge will start on the 8th of December 2018.



Technology Forum 2018: exchange of technical know-how and experiences on “rail joints in track”

On October the 25th, the 8th Technology Forum of edilon)(sedra co-hosted with STRABAG Rail GmbH, took place in Leipzig, Germany.

A mix of around 90 participants from engineering and public transportation companies, railway authorities, universities and contractors from the DACH countries participated in the forum to exchange knowledge and experiences on the topic “rail joints in tramway tracks”.

A mixture of practical experience, technical know-how as well as creative ideas was presented and shared. The interaction amongst “durable joint sealant in tracks”, “the protection of sustainable track systems”, “low maintenance” and “the scarce financial resources” is increasingly becoming a serious point of attention for those responsible for the track.

Once again, there were lively and intensive technical discussions, which clearly underlined the relevance of the event's topic. During the breaks and evening program, to which all participants were invited, lively discussions about actual projects took place in an informal atmosphere. For example the Wooden Sleeper Lifetime Extension project for VBK (Karlsruhe Transport Authority), the deflection measurement edilon)(sedra conducted for ÜSTRA (Hannover Transport Authority) and the application of electrical isolating Editack Spray for switches and crossings for BVAG (Bremen Transport Authority) were discussed in detail.

We received enthusiastic feedback from the participants on the basis of which, the co-organizers have already declared their excitement for organizing a 9th edition of the edilon)(sedra Technology Forum next year!



Technology Forum 2018 in Leipzig, Germany

Recent projects highlighted:



When: September 2018

Where: Akkrum, The Netherlands

For whom: Prorail / Strukton Rail

Why: In order to ensure a continuous flow of traffic, maintenance must be kept to a minimum. This required a durable and vibration free railway system.

Details: Very short possession time. The renewal was done in only one weekend. The rail channels were cleaned with a state-of-the-art waterjet robot.

Swing bridge over the river De Boorne. Renewal of 2 x 77,5 m of track with Corkelast® ERS (Embedded Rail System).



When: End of October 2018

Where: Southeast of Seoul

For whom: KRNA (Korea Rail Network Authority)

Why: Test track installed for Korean approval process

Details: Length of track 40 m. Monolithic slab, with a 10 m level crossing section and a 30 m dedicated track. 1:40 inclined JIS50 N rails. 25,5 t axle load.

First edilon)(sedra Corkelast® LCS (Level Crossing System) in South Korea