Gebogen ankerrail (type A) voor bevestiging van de bovenleiding (alle 28.80m)

Kabeldoorvoeren tussen voetpaden bestaanden uit geribde PVC buizen Ø160mm om de 48m (geschrankt te plaatsen met dwarse waterafvoeren)

Gebogen ankerrail (type B) (alle 1.80m)

Toegangsdeksel Rooster 70 x 70cm

Positie kogelkopanker links Tussenafstand 30m Hoogte = 0.78m boven de spoorstaaf

Positie kogelkopanker rechts Tussenafstand 30m Hoogte = 0.78m boven de spoorstaaf

Uitvulling spooropstorten

Voorstel LocoFire Standaard opstelling generator Voorstel LocoFire Alternatieve opstelling generator in conflict zones

Kabelsleuf type LOCOBOUW 2 compartimenten (prefab element)

Toezichtput Ø630mm alle 24m

Buis HDPE Ø160mm (2 buizen voorzien in horizontale delen)

Kabeldoorvoeren tussen voetpad en spoor bestaande flexibele PVC buis Ø160mm om de 48m (geschrankt te plaatsen met dwarse waterafvoeren)

Achtervulling beton C16/20

Brandwerende bespuiting Promat Cafco Fendolite MII 26mm

DN200 Galva+Coating

DN65 RVS

Aanname van brandwerende kast Om de 59,4m

Inhoud: controleposten Y-filter+aftakking test aansluiting + afsluiter

Oversteek DN80 RVS Om de 59,4m

Aftakking 2x DN50 RVS

Kabelsleuf type LOCOBOUW 2 compartimenten (prefab element)

Afvoerbuizen HDPE Ø75mm alle 24m

Oplegstrook EPDM celrubber gesloten cellen (50 x 20)

Leuning

Opgemaakt door:

Titel: Project:

Opdrachtnemer: Hoofdaannemer:

TK-KW10-LBB-601

OPMERKINGEN:

• Wapening spoorplaat niet weergegeven

• Maten in mm.

• Dit plan is een algemeen overzichtsplan, voor actuele details wordt verwezen naar de betreffende uitvoeringsplannen.

REFERENTIES:

• Civil: TK-KW10-LBB-611 KW10 Boortunnel - Spoorplaat type C’ zonder verkanting

• TK-KW10-LBB-613 KW10 Boortunnel - Spoorplaat - Hydraulica - Principeplan - Roosters toezichtputten

• AFFS: TK-EBRA-LFI-058 Positie generator - Boortunnel

• Fireproofing: TK-KW10-LBB-100 Brandwerende bespuiting boortunnel - Type doorsnede

• Divers: TK-KW10-W&F-050 & 051 Boortunnel Tunnelsegmenten - Ankerrails voor bevestiging verlichting, brandleiding en bovenleiding

TK-KW10-WAV-001 KW10 - Hydraulica + kabeldoorvoeren
Stabirail has designed and developed a new technology for slab track construction in tunnels and railway stations. Slab track, also called ballastless track, is a new form of track construction which offers proven higher performance in service and a longer life than ballasted track. This technology enables a faster and more efficient slab track construction.

The long design life and minimal life cost is lower than that of traditional ballasted track.

Working method

Stabirail has designed and developed a unique method for milling concrete blocks so that the rails can be assembled accurately and directly on the concrete.

In this method 3 machines are used consecutively, starting with the Concrete Milling Machine.

This new technology to mill concrete rail beds is designed to work with millimeter accuracy. It’s a continuous process in which the entire concrete blocks are milled simultaneously. The entire machine is operated by a 3D system and is capable of working on parabolic transitional curves and transitional slopes.

The diamond discs are water cooled to prevent dust formation. The cooling water is provided by a 10,000-litre capacity tanker. After the sludge is separated, the cooling water is reused. This machine can operate completely autonomously.

Following the concrete milling machine, comes the Drilling Train.

As the drilling is carried out with a water-cooled diamond drill, there is no dust formation. The last train, the Anchoring Train, consists of two parts, first is the anchoring unit, the second one, the driving unit.

The drilling unit includes a generator, water tank, air compressor and a hydraulic crane, so this machine can also operate autonomously.

SLAB TRACK SOLUTION OF STABIRAIL COMBINES ACCURACY AND DURABILITY

Stabirail has designed and developed a new technology for slab track construction in tunnels and railway stations. Slab track, also called ballastless track, is a new form of track construction which offers proven higher performance in service and a longer life than ballasted track. This technology enables a faster and more efficient slab track construction.

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“SLAB TRACKS MAY PROVE TO BE THE DOMINANT DESIGN IN FUTURE HIGH-SPEED RAILWAYS.”

Georgios Michas, Division of Highway and Railway Engineering

The complete Stabirail equipment consists of:

- Concrete Milling Machine with filter press (waste water recycling);
- Diamond Drilling Train;
- Anchoring train;
- Tanker (10,000 litres water and 2500 litres diesel);
- Lorry with water tank.

Efficiency (*):

<table>
<thead>
<tr>
<th>Machine Type</th>
<th>Max. Depth (mm)</th>
<th>Max. Width (m)</th>
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<tbody>
<tr>
<td>Concrete Milling Machine</td>
<td>10 mm</td>
<td>10 m</td>
</tr>
<tr>
<td>Drilling Train</td>
<td>150 mm</td>
<td>8 m</td>
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<tr>
<td>Anchoring Train</td>
<td>300 mm</td>
<td>12 m</td>
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(*): based on limestone concrete

References:

<table>
<thead>
<tr>
<th>Year</th>
<th>Project Location</th>
<th>Track Length (m)</th>
<th>Number of Rail Anchors</th>
<th>Rail Switches</th>
<th>Number of Rail Anchors</th>
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<tbody>
<tr>
<td>2004</td>
<td>Antwerp Central Station</td>
<td>8,3</td>
<td>53</td>
<td>484</td>
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<td>2009</td>
<td>Diabolo tunnel (Zaventem)</td>
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<td>2013</td>
<td>Liefkenshoek-rail tunnel</td>
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<td>564</td>
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<td>2014</td>
<td>Shuman-Josaphat tunnel</td>
<td>4,2</td>
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