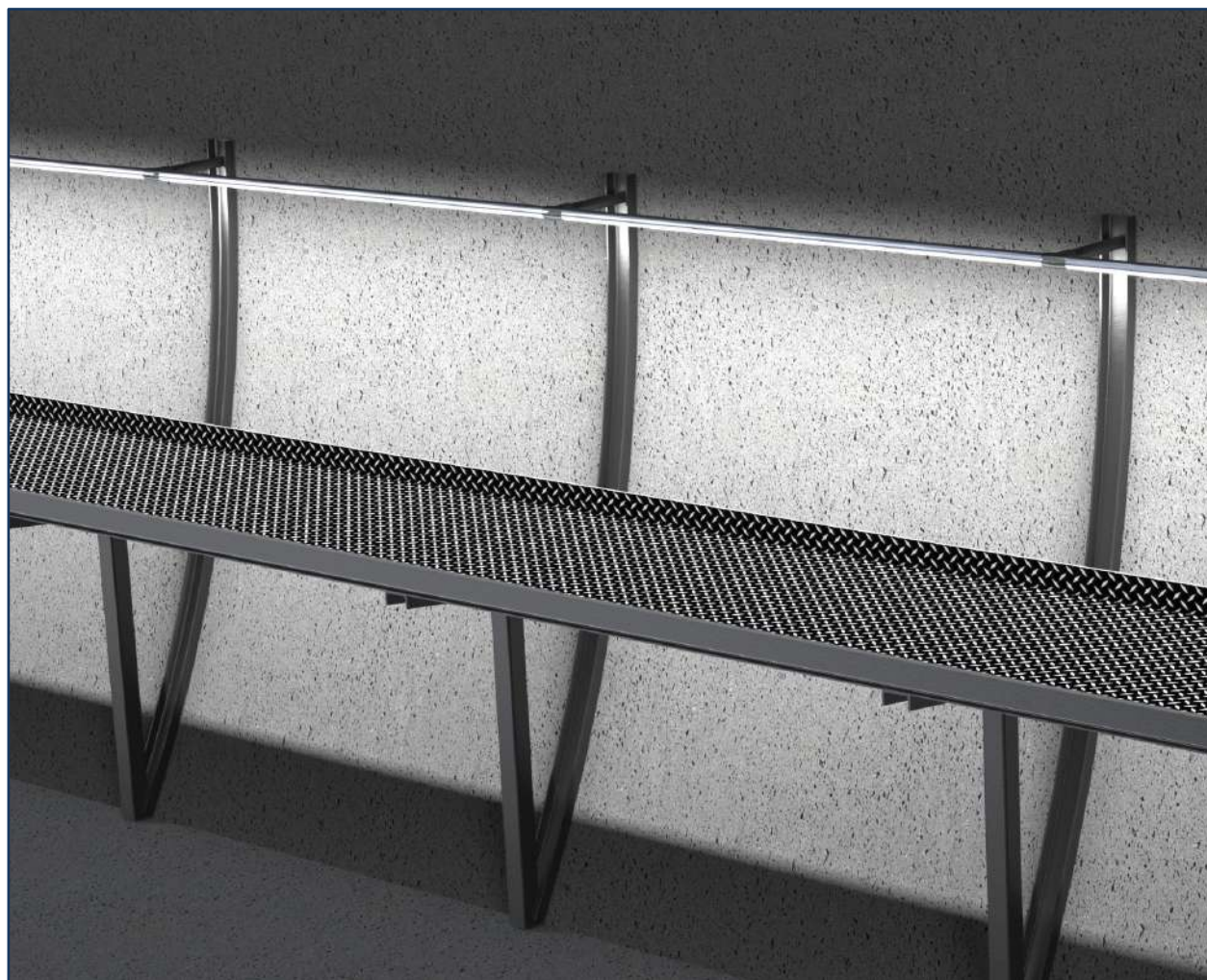




HANDRAIL ILLUMINATION SYSTEM FOR EVACUATION ROUTES FOR RAILWAY TUNNELS

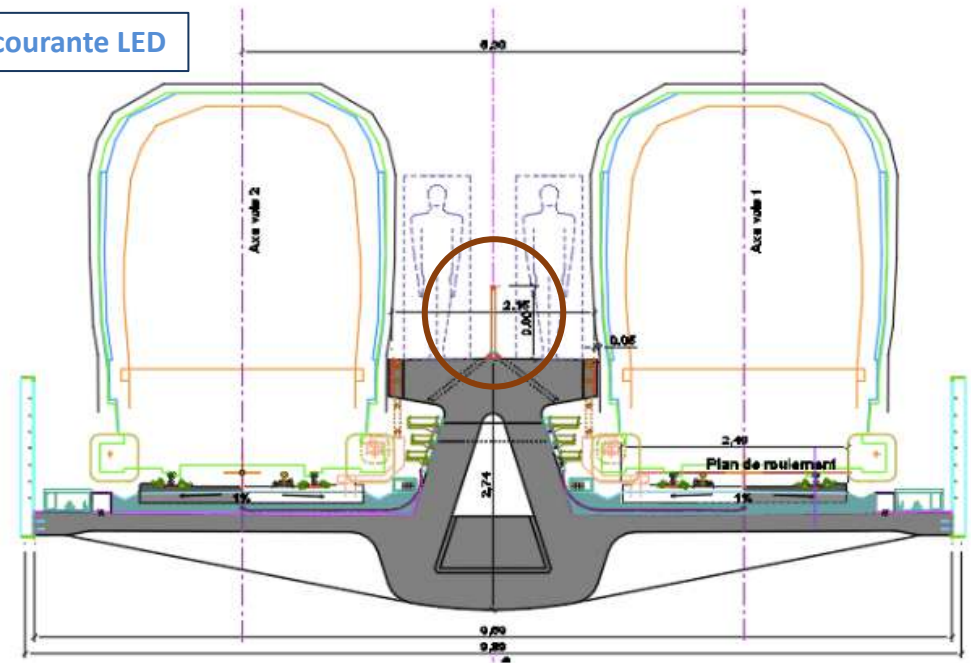
General view. Design of the project possible to adapt by technical requirements of each tunnel.



WE PROVIDE:

- Design
- Project preparation
- Materials
- Tests
- Assembly
- Preparation of documentation for delivery
- Logistics

Main courante LED



Main courante LED



HANDRAIL ILLUMINATION SYSTEM FOR EVACUATION ROUTES FOR RAILWAY TUNNELS

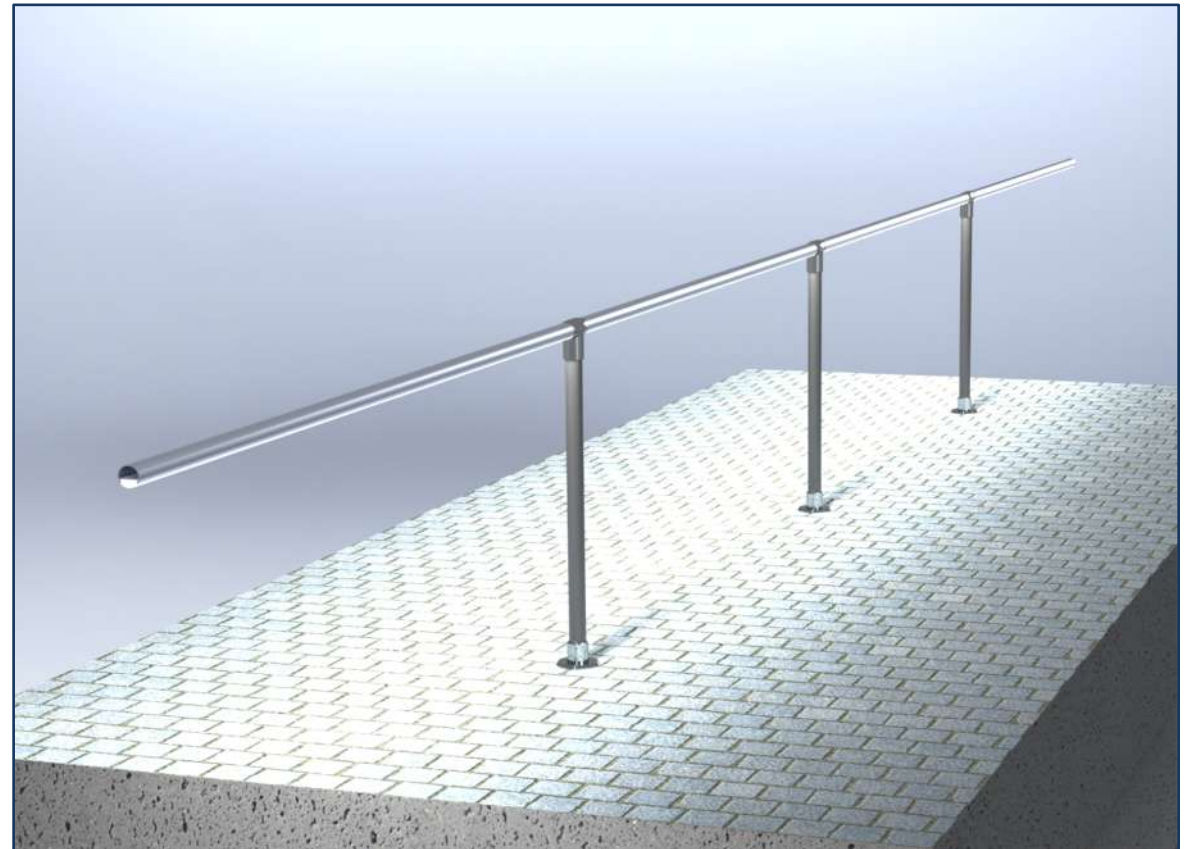
Placing an escape route on the viaduct between trains

THE MAIN:

- Low glare rating
- Brightness control
- Quick lamp replacement without dismantling the handrail
- Life cycle - about 100 kh
- The sealed luminaire design protects the LEDs from external influences and ensures a long luminaire life

HANDRAIL DESIGN:

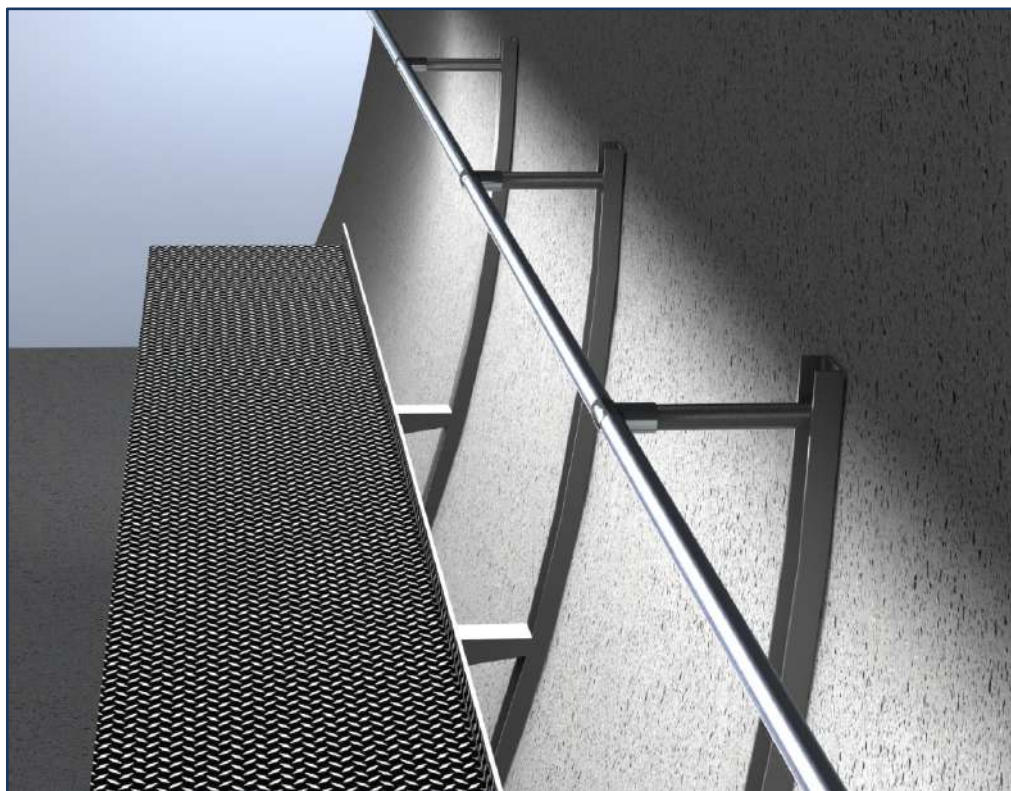
- Segment length - 2 meters
- Lamp length - 1 meter
- Lamp supply voltage - 24V
- Lamp connection - parallel to 24V bus
- Power supply location – junction box
- Lamp replacement time – not more 10 minutes





HANDRAIL ILLUMINATION SYSTEM FOR EVACUATION ROUTES FOR RAILWAY TUNNELS

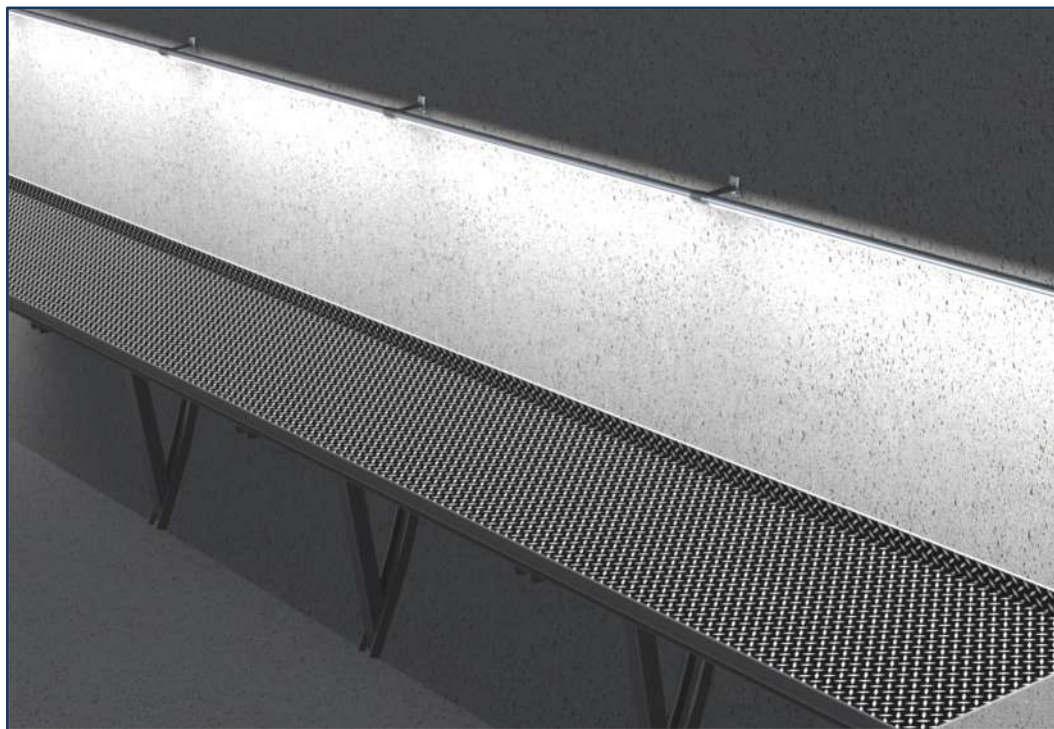
Installing a handrail along the tunnel wall on beams





HANDRAIL ILLUMINATION SYSTEM FOR EVACUATION ROUTES FOR RAILWAY TUNNELS

Installing the handrail along the tunnel wall on brackets





HANDRAIL ILLUMINATION SYSTEM FOR EVACUATION ROUTES FOR RAILWAY TUNNELS

Luminaire. The main.

SPECIFICATIONS:

- Lamp length: 1 meter
- Lamp power: 4W
- Luminous flux: not less than 520 lm
- Lamp supply voltage: 22V – 30V
- The efficiency not less: 130 lm / W
- IP rating: IP65
- Life cycle: about 100 000 hours
- Luminous flux: 90% after 50,000 hours

THE DESIGN:

- Luminaire design: a printed circuit board with LEDs is mounted on an aluminum base and covered with a light-diffusing polycarbonate cover.
- Mounting: 1 luminaire is fixed in 3 points by quick fastening device.
- LEDs - Lumileds.
- Reliability: LEDs are connected in parallel in series. Failure of one LED leads to the extinction of 10 cm of the handrail.

