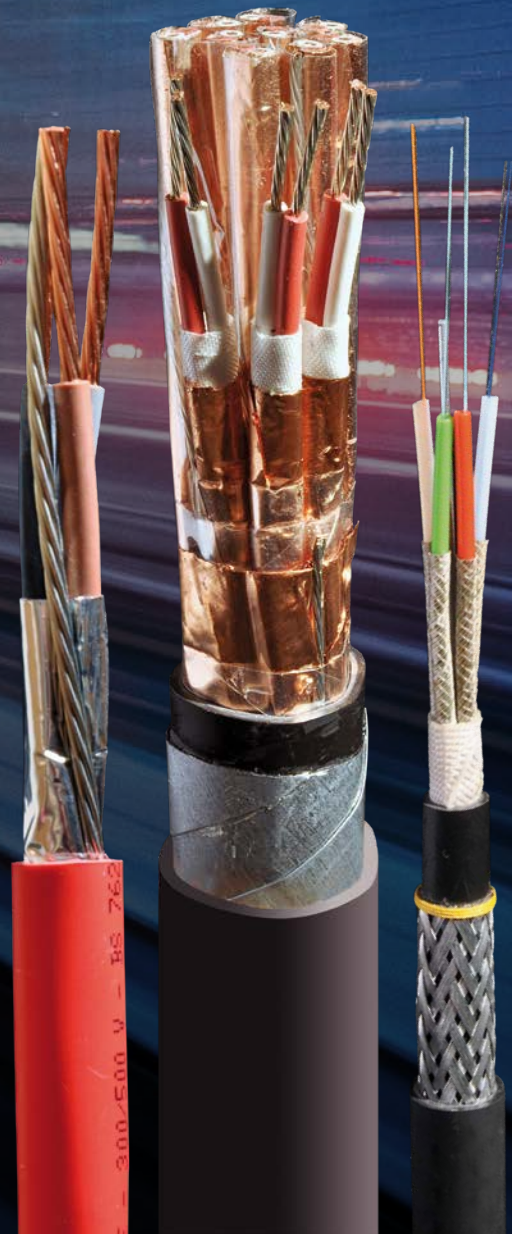




Conducting Value

RAILCEL

Special Cables for Railway Applications



About Us

CAVICEL is an innovator in the design and manufacturing of copper and fibre optic special cables for specific applications.

CAVICEL has been producing special cables for over 60 years, with always the same goal: quality and reliability.

With its skilled staff and its solid know-how **CAVICEL** proposes itself as a useful partner for every problem concerning the transmission of any optical or electrical signal. Our Headquarters and Factory are based in Pioltello, close to Milan, for a 100% Made in Italy production. In 2013 we opened the Middle-East regional branch in Dubai, with the goal to get closer to our clients in that area and to provide them with faster assistance, in line with their requests.

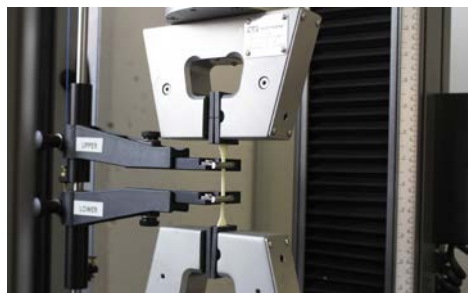
Our Mission

- To supply cable market with special products that are recognised for quality, performances and innovation.
- To anticipate and understand our customer's requirements and support them with innovative, cost-effective cable solutions.
- To constantly seek quality in all activities in order to achieve a full satisfaction for all people involved.

Our Production

CAVICEL production can be divided in following groups:

- **FIRECEL** Fire resistant cables, used in security systems;
- **INCOCEL** Instrumentation, power and control cables;
- **OPTICEL** Fibre optic cables;
- **SPECIAL CABLES** designed and manufactured with different characteristics meeting the required needs in the most appropriate way;
- **RAILCEL** Special cables for railway applications.



References

| Project | Country |
|---|-------------------------|
| MM - Metropolitana Milanese | Italy |
| TAV - Linea ad Alta Velocità | Italy |
| Metro University Riyadh | Kingdom of Saudi Arabia |
| Haramain High Speed Rail Project | Kingdom of Saudi Arabia |
| Mecca Metro | Kingdom of Saudi Arabia |
| Ryadh Metro | Kingdom of Saudi Arabia |
| RTA - Dubai Metro | UAE |
| RTA - Dubai Tram | UAE |
| Doha Metro | Qatar |
| New Delhi Metro | India |
| Bangalore Metro | India |
| Jaipur Metro | India |
| Hyderabad Metro | India |
| Navi Mumbai Metro Rail | India |
| Santos - Light rail transit system | Brasil |
| MTRC - Mass Transit Railway Corporation | Hong Kong |
| Lantau Fixed Crossing | Hong Kong |

Fibre optics for railway application

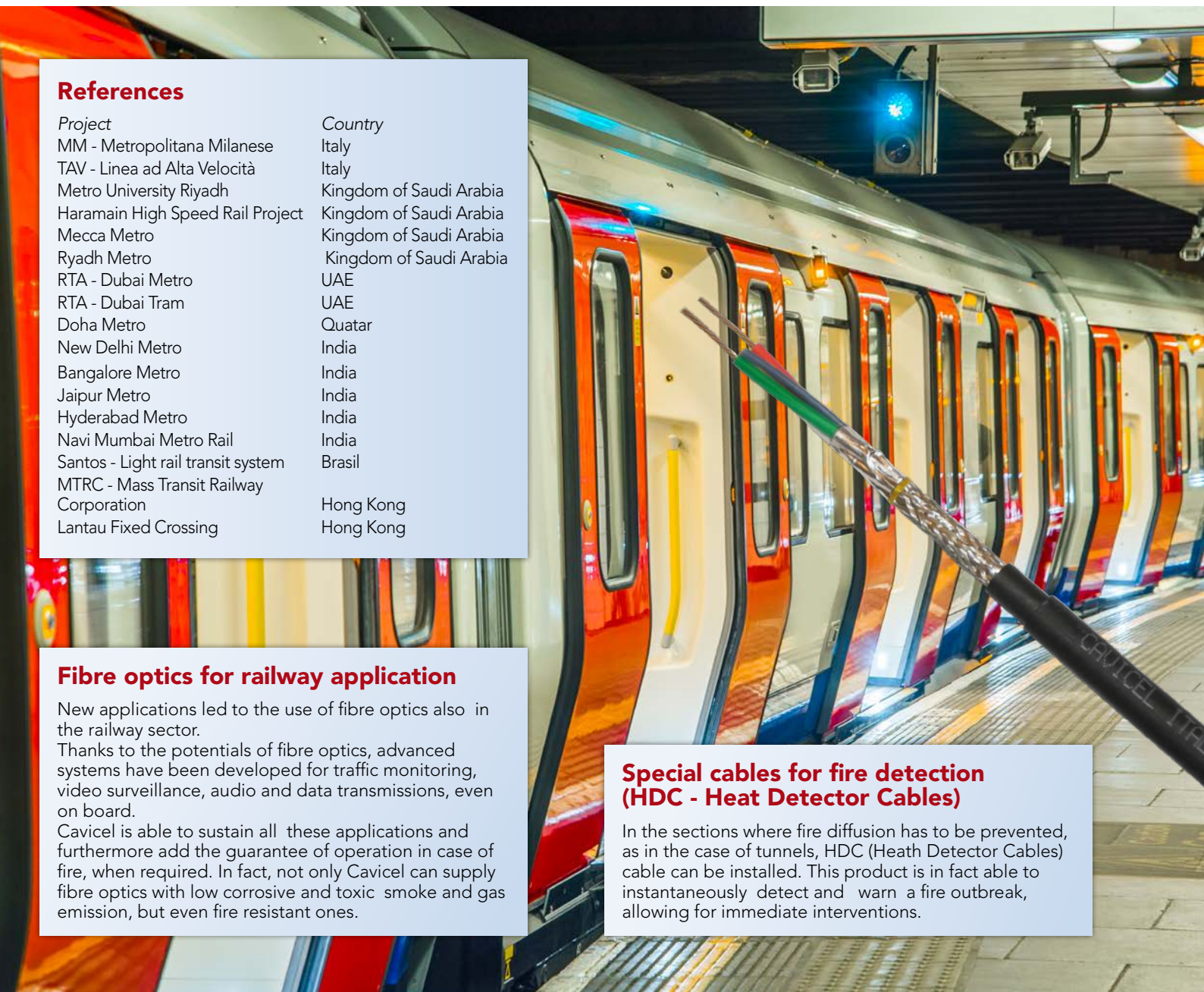
New applications led to the use of fibre optics also in the railway sector.

Thanks to the potentials of fibre optics, advanced systems have been developed for traffic monitoring, video surveillance, audio and data transmissions, even on board.

Cavicel is able to sustain all these applications and furthermore add the guarantee of operation in case of fire, when required. In fact, not only Cavicel can supply fibre optics with low corrosive and toxic smoke and gas emission, but even fire resistant ones.

Special cables for fire detection (HDC - Heat Detector Cables)

In the sections where fire diffusion has to be prevented, as in the case of tunnels, HDC (Heat Detector Cables) cable can be installed. This product is in fact able to instantaneously detect and warn a fire outbreak, allowing for immediate interventions.



Cavicel's proposal for the railway sector

In the range of Special Cables production, Cavicel proposes different typologies of products suitable for installation in railway sector: signalling, stations, safety and alarm systems, fire alarm cables in tunnels, .. These different cables share the same careful product design process, leading to quality and reliability certified by our laboratories.

Signalling cables

- Electric cables, also armoured, for fixed installation in signalling and safety systems with LSZH compound
- Electric cables for emergency and safety systems, fire resistant, flame retardant, with LSZH compound
- Armoured and not armoured telecommunication cables
- Flexible multicore cables, shielded and not shielded

Fire / Safety cables

Safety requires more and more attention and the design of each system always has to grant lives and implants' safety.

Also for railway applications cables need to be designed and developed both for guaranteeing passive safety (non-propagation of fire, low smoke emission, absence of toxic gases - LSZH) and for the active one, in case the system efficiency had to be guaranteed even in case of possible fire.

Cavicel, is able to design and manufacture fire resistant cables, both copper and fibre optics, that meet following standards: IEC 60331-25, EN 50200, NF-C-32-072 CR1 - C1, BS 6387 CWZ, IEC 60332, IEC 60754-1/2, IEC 61034-2.





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CAVICEL SpA

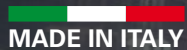
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CaviceL firmly believes in the importance of the quality of its products and it undertakes itself to produce them using clean technologies for the respect and the protection of the environment.

All information contained in this brochure is believed to be accurate. Specifications can change at any time, according to technical developments and market changes.

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