

## **Thales signed two new contracts for modernizing the Madrid-Seville High-Speed line**

*Thales has been active on the high speed market in Spain for more than 30 years  
and is considered as a benchmark technology company*

- Thales will be in charge of renewing the signalling installations and train protection systems as well as equipping the Madrid-Seville High-Speed line with the Level 2 ERTMS system.
- Thales has also been awarded the renewal of the track circuits for the Madrid-Seville high-speed line and the La Sagra-Toledo branch.
- This renovation will give the Madrid-Seville High-Speed line greater capacity, adapt its systems to European interoperability standards and modernize its equipment to improve availability and reliability.
- These two contracts represent a total budget of nearly 98 million euros (excluding VAT).



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**Thales has been awarded two important contracts for the renovation of the Madrid-Seville High-Speed line 30 years after it first opened. The renovation of the line will enhance the line's capacity, as well as adapting the systems to the European interoperable standards. The equipment will be modernized, improving the availability and reliability of the line – ensuring greater comfort for the passengers. Once upgraded the line will also facilitate the access for other operators after liberalizing the rail network**

The first contract affects the renewal of the main signalling installations (electronic interlockings) on the line and equipping them with the ERTMS Level-2 system, implementing European standards that will allow for train movement by different operators, which the liberalization of rail traffic makes essential.

With an execution period of 52 months and a budget of nearly 80 million € (excluding VAT) financed by European Union funds, the contract includes the replacement of the current interlockings with other latest-generation electronic interlockings, integrating the management of the existing train protection system (LZB) and the new ERTMS Level 2.

### **Renovating without affecting the service**

This is precisely one of the cornerstones of renewing the interlockings, which will be carried out while the High-Speed line remains in service without affecting the movement of passengers. It will be done while fully guaranteeing all safety, security and operating features, with the LZB system remaining in commercial operation before, during and after the commissioning of the new ERTMS system. The contract also includes the renewal of the copper networks for the systems that detect fallen objects on the tracks.

### **100% Spanish-designed track circuits**

Moreover, with a budget of almost 18 million euros (excluding VAT), Thales will be responsible for replacing the track circuits (1,306 in total) for this same High-Speed line to substitute the now-obsolete FTG-type ones currently in place. The Thales TTC track circuit allows for the installation of 16 units on each frame, liberating space in the technical rooms. This space will then be used for installing the new ERTMS interlockings and equipment.

Designed by the Thales R&D team in Spain, these TTC circuits have been tested on UIC track gauges (standard: 1,435mm), Iberian (1,668 mm) and metric as well as with high-speed overhead voltage (typically 25 KVca), conventional (3 KVcc) and metric (1.5 KVcc). The development of these circuits marks a watershed in Spanish rail network, as this is a perfectly exportable Spanish product of broad functionality.

### **A lengthy and harmonious relationship with the high-speed**

Thales started its relationship with the Madrid-Seville High-Speed line long before 1992, the year in which the first Spanish High-Speed AVE line came into service. It was equipped with a signalling system based on electronic technology for a high-speed network operated by the company. Since then and until today, Thales has pioneered the introduction of different Train Signalling and Control units and systems, developing technological capabilities that have allowed it to make headway in foreign markets such as Turkey, Egypt, Morocco, Algeria and Mexico.

The continued collaboration in the development of the ADIF high-speed network has given great satisfaction to Thales professionals.

*“We are very pleased that Thales has signed two important contracts for the renovation of the Madrid-Seville High-Speed line 30 years after it first opened. Thanks to Thales technical expertise, the renovation of the line will help to adapt the systems to the European interoperable standards as well as enhance the line’s capacity for the benefit of the passengers.” – **Dr. Yves Joannic, Managing Director of Thales Main Line Signalling***

*“For us it is a source of pride to continue providing our technology and diverse expertise on the Madrid-Seville High-Speed Line. Since we built it more than 30 years ago, we have helped connect people by ensuring an excellent travel experience for passengers, reducing their travel times compared to other means of transport while enjoying the convenience and comfort that train travel always entails”. - **Fernando Ortega, Managing Director for Transport, Thales Spain***

### **About Thales**

Thales (Euronext Paris: HO) is a global high technology leader investing in digital and “deep tech” innovations — connectivity, big data, artificial intelligence, cybersecurity and quantum technology — to build a future we can all trust, which is vital to the development of our societies. The company provides solutions, services and products that help its customers — businesses, organisations and states — in the defence, aeronautics, space, transportation and digital identity and security markets to fulfil their critical missions, by placing humans at the heart of the decision-making process.

Thales has 81,000 employees in 68 countries. In 2020, the Group generated sales of €17 billion.

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