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## **ETCS Will Cover Hundreds of Additional Kilometres of Czech Railway Lines Soon**

Správa železnic continues to implement the single European Train Control System (ETCS) on its network. It will soon be acquired by a part of the Third transit corridor, section Pilsen (excl.) – Cheb, where the work has moved from the preparatory phase to implementation. A total of 111 km of the railway line will be covered. The work continues intensively also on the sections Praha-Uhřetěves – Votice and Kralupy nad Vltavou – Praha – Kolín.

The installation of the system ETCS level 2 itself in the section Pilsen (excl.) – Cheb should be completed in the first half of next year. It will be followed by the 2nd stage of the construction, which deals with the construction of station interlocking system in the Cheb station for the facility of ETCS connection and a new open line interlocking system in the section Cheb – Františkovy Lázně. Its completion is planned for the year 2022.

The preparation for construction of the section Český Brod – Praha-Běchovice – Praha-Uhřetěves is currently underway on the line Kralupy nad Vltavou via Praha to Kolín, ETCS will cover 37 km of the line within this construction this year. The work itself is going to start in a few weeks. Another 75 km will be installed in the remaining section in 2022 – 2026. Work goes also on the Fourth corridor in the section Praha-Uhřetěves – Votice, where a total of 55 km of the line will be covered. It should be finished next year.

ETCS covers currently 255 km of railway lines administrated by Správa železnic, another 206 km between Břeclav and Petrovice u Karviné have entered test operation and 108 km between Přerov and Česká Třebová will be added this year. Project preparation is currently underway for several other sections. The National Implementation Plan envisages that trains not equipped with an on-board part of the ETCS system will not be admitted on the corridor lines from 1 January 2025.

The need to introduce a single European Train Control System (ETCS) was requested particularly by the fact that there are currently several different train interlocking systems in the Member States of the European Union. In addition to fundamental differences in construction and technical solutions, they show also a different level of safety ensuring of railway traffic. Their main disadvantage is that trains in international transport must be equipped with various types of equipment that communicate with the train interlocking system of the state in whose territory are they currently located. One common system will eliminate this unsatisfactory state.

Another indisputable advantage of the ETCS system is that it allows reliable and continuous control of train running. The technology used monitors whether the train is moving in a precisely defined section of the line. For example, if the driver does not respect the Stop signal, the system will detect the error and the train can stop safely. It also supervises obedience to the maximum permitted speed in the relevant section and the maximum

permitted speed of the train. When it is exceeded, the safety device intervenes in the steering of the vehicle. Before starting operational or emergency braking, however, it first warns the locomotive driver to make him able to reduce the speed by changing the manner the vehicle is driven, or eventually stop the vehicle, and thereby averts the intervention of the system.

Správa železnic applies ETCS to meet the requirements of national regulations in terms of infrastructure equipment with the necessary interlocking system. In connection with the legal regulations of the Czech Republic a condition applies to investment projects co-financed from EU funds. It says that, in the case of modernisation of the line for the speed higher than 100 km/h, there is always an obligation to secure it by ETCS. It is currently being installed the Level 2 on the lines of Správa železnic. This level requires the use of data transmissions in the GSM-R radio railway network, which is comparable to the GSM mobile network with functions and modifications for railway.