

## **Janusz Poliński: Automatic Coupling of Rolling Stock. Part I – History of the Development of the Automatic Coupler**

This article presents a historical outline of the evolution of automatic couplers worldwide. The development of rail transport and the associated growing demand for rolling stock, is connected with the need for frequent coupling and uncoupling of wagons. The frequent operation of the screw coupler was hard and dangerous work for railway staff, hence the search for solutions to improve this process and guarantee increased safety. The automatic coupling became such a solution. Due to the high strength of the coupler, it was possible to increase the capacity of the wagons and thus the train capacity and length. The article describes the problem of automatic couplings for rolling stock and the evolution of coupling design development, which is a consequence of technological advances and the possibility of using new materials. Technical solutions of couplings are also presented, such as: Jenny, Wilson, Scharfenberg and many others, as well as interesting solutions of mechanisms eliminating manual work in connecting screw couplings used in traction vehicles during shunting works, including a device designed in Poland. Various solutions for automatic couplers, most of which are not compatible with each other, are also outlined. Readers interested in the subject-matter are offered interesting films illustrating the content discussed. A description of the development of a unified automatic coupling design for European railways is omitted in this article, as this will be the subject of Part II of the article.

**Keywords:** rail transport, connecting rolling stock, automatic coupler