

Janusz Poliński: Automatic Coupling of Rolling Stock. Part II – European Coupler for Freight Rolling Stock

Despite many years of work on developing the design of the automatic coupling, the activities carried out in Europe, did not lead to the widespread elimination of the screw coupling with buffers. Until the First World War, the work was purely theoretical, and between the wars various manufacturers tested their own designs. Due to shortage of good designs, the UIC was unable to agree on a solution for European railways. In 1935, the Soviet Union decided to introduce the SA-3 coupler, and the replacement process continued until 1956. After the Second World War and the reconstruction of European railways after the devastation of the war, it was not until 1956 that the UIC set up the “Automatic Couplings” committee. Work in this area was carried out in both Eastern and Western Europe. Efforts to develop a European automatic coupling, led to the development of three designs for rail freight rolling stock. These were designated solutions: AK69, C-AKv and Z-AK, for which only limited areas of application have so far been found. The anticipated successive reductions in greenhouse gas and pollution emissions, provided the basis for an increased role for the railways in the future of European transport. For this reason, a great deal of work has been launched on the design of the automatic digital coupling (DAC), which will soon replace the screw coupling. This section of the article outlines the European activities of the past, as well as the status quo of the current work, which should culminate in the widespread use of DAC coupling to connect rolling stock.

Keywords: rail transport, automatic coupler, digital automatic coupling (DAC)