

The invention relates to the field of welding, namely to equipment for resistance butt welding of rails, and can be used both for repairing railroad tracks in the field and for welding individual rails in hard-to-reach places. The rail butt welding machine contains a welding current source, two electrically isolated clamping devices, each of which includes a pair of two-armed levers with a synchronization mechanism. The latter are installed with the ability to rotate relative to each other around a common axis of rotation. Each pair of arms is pivotally connected to a clamping hydraulic cylinder at one end, and clamping and current-carrying jaws are fixed at the opposite ends of the arms. The machine has a hydraulic cylinder for moving the clamping devices for melting and precipitation, comprising a body and a rod, with one clamping device fixed on the body and a second clamping device fixed on the rod with the possibility of translational movement relative to each other along the axis of the hydraulic cylinder located in the vertical plane of symmetry of the pair of levers of each clamping device. The pincer clamping devices are additionally connected to each other by means of two guide axes and two bushings, coaxially fixed with the possibility of relative axial movement on each of the two pairs of levers, symmetrically with respect to their vertical plane of symmetry in a horizontal plane lying above the axis of the displacement hydraulic cylinder, the guide axes and bushings being electrically isolated from one of the pairs of levers. The invention provides unloading of the rod and the housing of the hydraulic displacement cylinder from the bending moment arising from the force during rail pulling, melting and settling during welding, and thereby provides a high level of accuracy and stability of rail centering during melting and settling without changing the established optimal technological process.