

The invention relates to the field of welding, specifically to equipment for contact butt welding of rails, and can be used both for repairing rail tracks in the field and for welding individual rails in hard-to-reach areas. The machine for contact butt welding of rails comprises a welding current source, two clamp devices, electrically isolated from one another, each of which includes a pair of double-arm levers with a synchronization mechanism. The latter are mounted so that they can rotate relative to one another about a common axis of rotation. Each pair of levers is hinged at one end to a clamping hydraulic cylinder, and clamping and current-conducting jaws are secured to the opposite ends of the levers. The machine has a hydraulic cylinder for moving the clamp devices, comprising a housing and a rod, wherein the first clamp device is mounted on the housing, and the second clamp device is mounted on the rod, with the ability to move one relative to the other along the axis of the displacement hydraulic cylinder, located in the vertical plane of symmetry of the pair of levers of each clamp device. The clamping devices are additionally connected to each other by means of two guide shafts and two bushings, wherein each of the guide bushings is secured to a two-armed lever by means of an intermediate disc capable of changing position in a circular direction relative to its longitudinal axis, wherein each intermediate disc is rigidly secured to the double-arm lever and encircles the guide bushing along its outer diameter, and the fastening elements securing the guide bushing to the intermediate disc are positioned at equal distances from the longitudinal axis of the guide bushing and at equal distances from one another. Technical result: relieving the load on the piston rod and the housing of the movement hydraulic cylinder from the bending moment caused by the pressing force during the rail welding process, without compromising their alignment, which expands the functional capabilities of the machine for butt welding of rails due to the high precision and stability of rail centering during welding without altering the established optimal technological process.