

20 microns When studying the protective layers on the PMT-3 device it was established that the microhardness of the  $\alpha$ -solid solution is 350-200 HV, the microhardness of the complex silicide on the surface of the steels is 1100-1000 HV. Conducted tests of SHS coatings for corrosion resistance showed an increase in this index by 1.5-1.8 times compared with the diffusion analogue.

## INCREASING THE LEVEL OF PHYSICAL AND MECHANICAL PROPERTIES OF COLD-ROLLED STEEL OF THE BRAND DC01 IN ORDER TO ENSURE ITS REQUIREMENTS EN 10130 IN THE CONDITIONS OF PJSC "ZAPORIZHSTAL"

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**Purpose.** Increasing the level of physical and mechanical properties of cold-rolled steel.

**Methodology.** To ensure the compliance of the mechanical properties of the rolling stock a production technology has been developed that includes the smelting of steel with a restriction on the content of reinforcing elements, hot-rolled strips for hot rolling without cooling by water, heat treatment of c / k rolls in gas hoods.

**Findings.** At present, the cold rolled steel of the brand DC01 manufactured in the ZHP-1 PJSC "Zaporizhstal" does not fully comply with the requirements of EN 10130: 2006. The main technical characteristics that are not met in the manufacture of rolled products are the mechanical properties of rolled products (higher values for the "yield point" parameter). The level of compliance of the mechanical properties of rolled stock with the requirements of EN 10130: 2006 was 63.5%. The average yield strength was 274 MPa at the maximum required 280 MPa.

In order to ensure the compliance of the mechanical properties of the rolling stock with the requirements of EN 10130: 2006 on PAO Zaporizhstal, a production technology has been developed that includes the smelting of steel grade DC01 with a restriction on the content of reinforcing elements (carbon max 0.10%, manganese 0.20-0.40 %), sulfur max.0.03% and phosphorus-max.0.025%), hot-rolled strips for hot rolling without cooling by water, heat treatment (annealing) of c / k rolls in gas hoods. "Ebner" or stoves with HN-x-shielding gas according to the regime of steel grade 08UY.