

Plasma Hardening of Frame Saw Teeth Proves Superior in Tests

In sawmill operations, frame saws made of 9KhF steel are normally used. To increase their wear-resistance electrocontact hardening, hardening in a field of high frequency currents, and stellite facings are used. This traditional method has proved to be inadequate in a production situation. Under maximal operating conditions, it is often found necessary to regrind a saw. This interferes with the rhythm of production and results in losses of time.

Co-workers of the "Kitoiles" Association and a scientist at the Irkutsk Polytechnic Institute have made an experimental investigation of the use of plasma for hardening the teeth of frame saws. About 80 saws were tested on a TchPR-2 tool grinding machine and a GN-5 plasmatron. The tests showed that by treating the saw teeth with a plasma jet, there is an approximate threefold to fourfold increase in their hardness.

This means that the steel requirement of an enterprise due to the increase in useful life is decreased commensurately. The estimated economic benefit derivable from the introduction of the plasma hardening process is about 40,000 roubles a year.

Lesnaya promyshlennost'

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