

Induction Heat the plough discs

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering induction melting and induction surface treatment applications
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Heat the plough discs Objective To heat the circumference of plough discs before hot rolling (sharpening) process

Material Flat Boron steel discs, OD 460 to 710 mm (18 to 28") thickness 3.2 to 10 mm (8/64 to 25/64")

Temperature 725°C 1335°F

Frequency 75 kHz

Equipment Power of 120kW induction heating system using 2 work heads, switching system, 4 specially-designed coils, chiller system

Process In a PLC system, each of two rolling machines is equipped with a remote work head and with a rotating platform where the disc is held horizontally and held in position by a central nonmagnetic

plate 100 mm less than the disc diameter. The 250 mm (10") heating coil is positioned over the blade, rotationally

ahead of pressure rolls. This heats the entire edge of the disc.

After a few seconds of heating, the edge reaches the required temperature and the disc is made to turn at 30 rpm. The

pressure rolls close, forming the sharp edge profile. The final edge is obtained after two turns of the disc.

Results/Benefits Induction heating provides a much more rapid process compared to cold-rolling; the desired profile is achieved after a few seconds, compared with a few minutes.

The metallurgical quality of the finished edge is higher, since the process effectively hardens the material. The equipment and process lend themselves to robotic automation. heat the plough discs

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