



HEAT TREATMENT

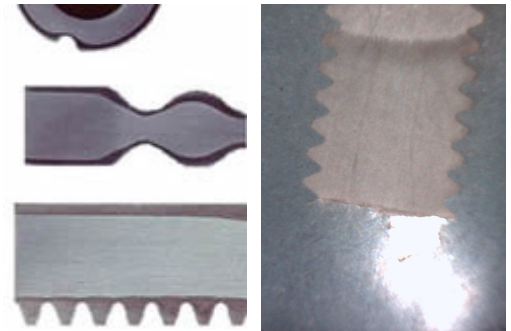
INDUCTION HARDENING

Description

Heat treatment done on the surface of a determined area of steel parts. This treatment provides surface hardening and at the same time optimum ductility to resist the mechanical efforts that the part experiences during its use.

It consists of these steps: Heating to produce austenization of the material, cooling to generate martensite and tempering to release tensions.

Electromagnetic induction heating is used to produce a faster heating of the surface without altering the properties of the rest of the part



General properties

The part treated behaves as a composite material, with a core with high resilience and a surface with high hardness

- Possibility of induction hardening of a specific area
- Absence of deformations
- It provides high abrasive wear resistance and avoidance of galling
- Improves fatigue resistance.
- It preserves the mechanical characteristics of the core.
- High productivity induction hardening lines.
- Technology adapted to small and medium size series.
- Fasteners length up to 150 mm and diameters up to 12 mm.
- Minimum length under heat up to 14 mm
- Thickness of induction hardened surface from 3/10 mm to 6 mm.

Uses

Optimum treatment for thread forming screws and thread drilling screws

THIS TREATMENT IS APPLIED DIRECTLY IN LINE OR IN COMBINATION WITH PREVIOUS AND SUBSEQUENT APPLICATIONS.

GALOL S.A. offers the possibility to reduce logistic costs between the different operations of manufacturing of the part.

Material and hardness obtained

Materials	Hardness HRC mini. (1)
XC 38	52
XC 42	54
XC 55	59
40Mn6	55
38Cr2	53
42Cr4	56
38CrMo4	55
50CrV4	59
38B3	53
38CrB1	53

The values of the table correspond to the minimum hardness obtained in the induction hardened after removing the decarburized layer and before tempering



Application on Taptite screws

Standards and specs

- FORD WD 952
- PSA S21 1102

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