Gas nitriding R.NIT+®

Process description:

R.NIT+®

Nitrogen is deposited on the surface during gas nitriding R.NIT+®. Nitrogen is provided in the form of ammonia gas.

The process is performed in shaft and hood-type furnaces within a temperature range between 500°C and 600°C. Due to the chemical decomposition of the ammonia at the component, the nitrogen diffuses into the surface and a diffusion zone and bonding layer are formed.

GASOX®:

Post-oxidation can be performed to achieve an improved corrosion protection or for an improved run-in behaviour.

This is used in the following sectors:

→ Mechanical engineering, precision components, tool manufacturing, automotive industry, plastic injection moulding technology, etc.

Materials:

→ Low to medium-alloyed steels are nitridable

Key features:

→ Wear protection
→ Increased corrosion resistance
→ Smallest dimensional change

Surface hardness:

→ Material dependent
→ Low to medium-alloyed steels are nitridable

Nitriding hardness depth and bonding layer thickness:

→ Controllable in series according to your specifications (on request), or use our practical standard processes.

See schedule list www.rubig.com - Heat Treatment - Gas nitriding.

Maximum component dimensions:

→ 1,500 mm x 2,400 mm

For which purpose is this method mostly used:

→ Wear protection
→ Increased corrosion resistance

Cycle duration:

→ See schedule list

Process duration:

→ Dependent on the nitriding hardness depth

See schedule list www.rubig.com - Heat Treatment - Gas nitriding.

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Ideal surface condition before treatment for best results:

→ Should be free from grease, oils, processing aids or drawing and casting marks as well as grinding carriage (vibratory grinding)

Necessary information:

→ Material
→ Surface hardness
→ Nitriding hardness depth
→ Bonding layer thickness
→ Oxide layer thickness
→ Possible preliminary treatments
→ Possible covering areas
→ Must protect areas before nitriding (covering)

Important:

→ Advance notice is advisable in order to ensure a smooth process.

Contact:
RÜBIG Sales
+43 (0) 7242 / 660 60
ht.vertrieb@rubig.com

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