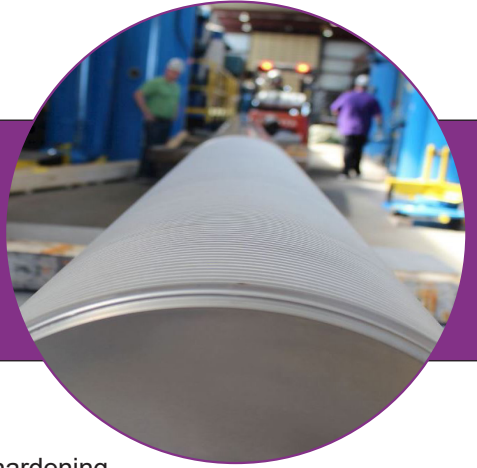


Why Your Long Parts Should be Ion Nitrided in a Vertical Vessel



Various heat treat methods are available to enhance wear resistance and provide surface hardening on long parts such as screws, shafts and rolls. Choices are often restricted due to process equipment size limitations. Flame hardening or induction hardening is often chosen but frequently cause distortion due to the high temperatures used and the fact that most are processed horizontally. Additional straightening operations are then required after processing, in addition to post-heat treat machining.

Given proper material selection, ion (plasma) nitriding is considered by many to be the best treatment for these parts. Long parts are suspended vertically, heated and cooled slowly, resulting in high surface hardness with little to no distortion.



Benefits of Ion Nitriding

In addition to the above benefits that are specific to long parts, ion nitriding also offers numerous improvements to parts of any size:

- Extends part/tool life
- Selective hardening possible
- Reusable masking (vs. coatings or other treatments)
- Adds performance, fatigue strength and endurance
- Enhances surface lubricity
- Reduces erosion
- Increases material flow in molds and dies
- Improves corrosion resistance
- No post-process machining -- no distortion
- Improves wear resistance
- Precise and versatile
- Environmentally friendly process (free of toxic salts, ammonia and other toxic gases)

Exceeding Customer Expectations

Advanced Heat Treat Corp.'s Monroe, Michigan facility specializes in the ion nitriding of very *long* parts. The image above shows the longest part AHT has ever ion nitrided. This particular part was 378" in length, 13.7" in diameter and weighed roughly 15,850 lbs. The part was so large that a hole had to be made in the roof and a crane was used to carefully place this long part into the nitriding vessel. (Watch the video at www.ahtcorp.com).

Heat treatment for long parts is offered in Michigan.
Visit www.ahtcorp.com or contact your AHT representative to learn more.