

密封箱式气体氮化炉生产线 Chamber Retort Furnace Plant

概 述

爱协林箱式氮化炉生产线, 由箱式带罐氮化炉, 真空清洗机(中国专利号: ZL01201770.1), 预氧化炉, 进出料车及备料台等设备共同组成. 采用 $\text{NH}_3+\text{N}_2+\text{CO}_2$ 氨基气氛. 采用氢分析仪和PE系列氮势控制仪进行氮势控制, 并配备渗氮专家系统软件, 全部过程由计算机控制, 工艺参数精确, 自动化程度高, 操作环境好.

适用于对齿轮, 工模具等零件的氮化, 氮碳共渗处理. 零件外观呈银灰色, 变形小, 质量稳定.

带罐氮化炉:采用带罐氮化炉并配有工艺氮气和安全氮气, 既保证良好的工件外观质量, 又保证设备的安全运行. 工件在氮化炉中完成氮化后, 可获得具有高硬度, 高耐磨性和抗咬合性能的银灰色光亮表面, 外观质量好, 硬度均匀, 变形小且规律性强.

软氮化炉配有供气系统, 工艺 $\text{NH}_3+\text{N}_2+\text{CO}_2$ 氨基气氛以及安全氮气均由电磁阀和流量计控制, 氢分析仪, PE系列氮势控制仪和渗氮专家软件系统可测定, 控制, 计算并显示炉内氮势, 以实现氮化过程的精确控制.

真空清洗机:全部清洗过程自动进行. 清洗液在真空环境下自然沸腾, 产生大量气泡, 增强了对各种油污的清洗能力. 清洗结束后真空干燥, 进一步净化了工件表面. 对于一些有孔穴沟槽的零件, 清洗和干燥效果尤佳.

预氧化炉:工件预处理在预氧化炉中进行, 经过预氧化, 渗层均匀性好, 渗层深度增加.

控制系统:通过计算机进行全过程控制, 并在显示屏上显示工序过程, 工艺参数, 有强大的软件支持, 可进行质量管理, 故障诊断, 数据存贮, 工艺存贮.



Introduction

Nitrocarburizing has acquired increasing significance especially by means of steam oxidation. The result of this heat treatment is a wear resisting oxidation layer which is similar to hard chrome plating and also shows a comparably good corrosion resistance.

A desirable secondary effect is the black or anthracite coloured piece parts surface.

This treatment requires furnaces with a gastight steel retort. The heating can be done electrically or with industrial gas burners. The chamber retort furnace, especially designed for that purpose, offers all the conditions for an economic heat treatment with reproducible results:

- High temperature uniformity
- Strong gas circulation
- Less requirement of process gas
- Programmable heat treatment process
- Controlled oxidation layer by means of lambda probe
- Extremely high cooling rate through rapid indirect cooling system

This furnace line shows all the advantages of vertical retort furnaces, but neither needs pits nor hoists. It can be charged easier and integrated into existing AICHELIN chamber furnace lines.

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氮化炉型号规格及主要参数表 Technical Data

氮化炉供气系统 Gas Supply System

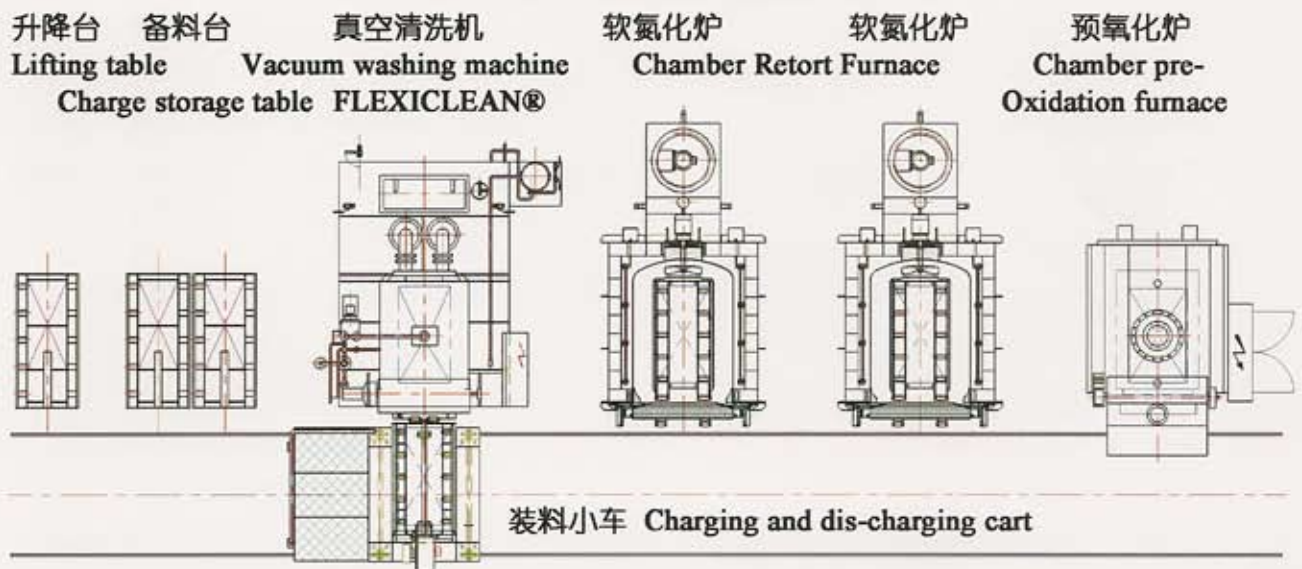
型号 Type	工作区尺寸 size of charges 长L×宽W×高H	最大装载量 gross charge
2	900×550×500mm	350kg
3	1100×600×650mm	650kg
4/1	1300×700×650mm	1000kg
4/2	1300×700×850mm	1000kg
5/1	1500×900×650mm	1500kg
5/2	1500×900×850mm	1500kg

其他特殊规格型号可根据要求制作。
Special sizes on demand.



气体软氮化生产线布置图

Project Layout of Chamber Retort Furnace



氮化后工件外观
The parts after Nitrided



氨裂解炉及其控制装置
Ammonia Cracker Oven

