LabTech India

Bright Annealing of Stainless Steel

LabTech Analytical Pvt. Ltd.

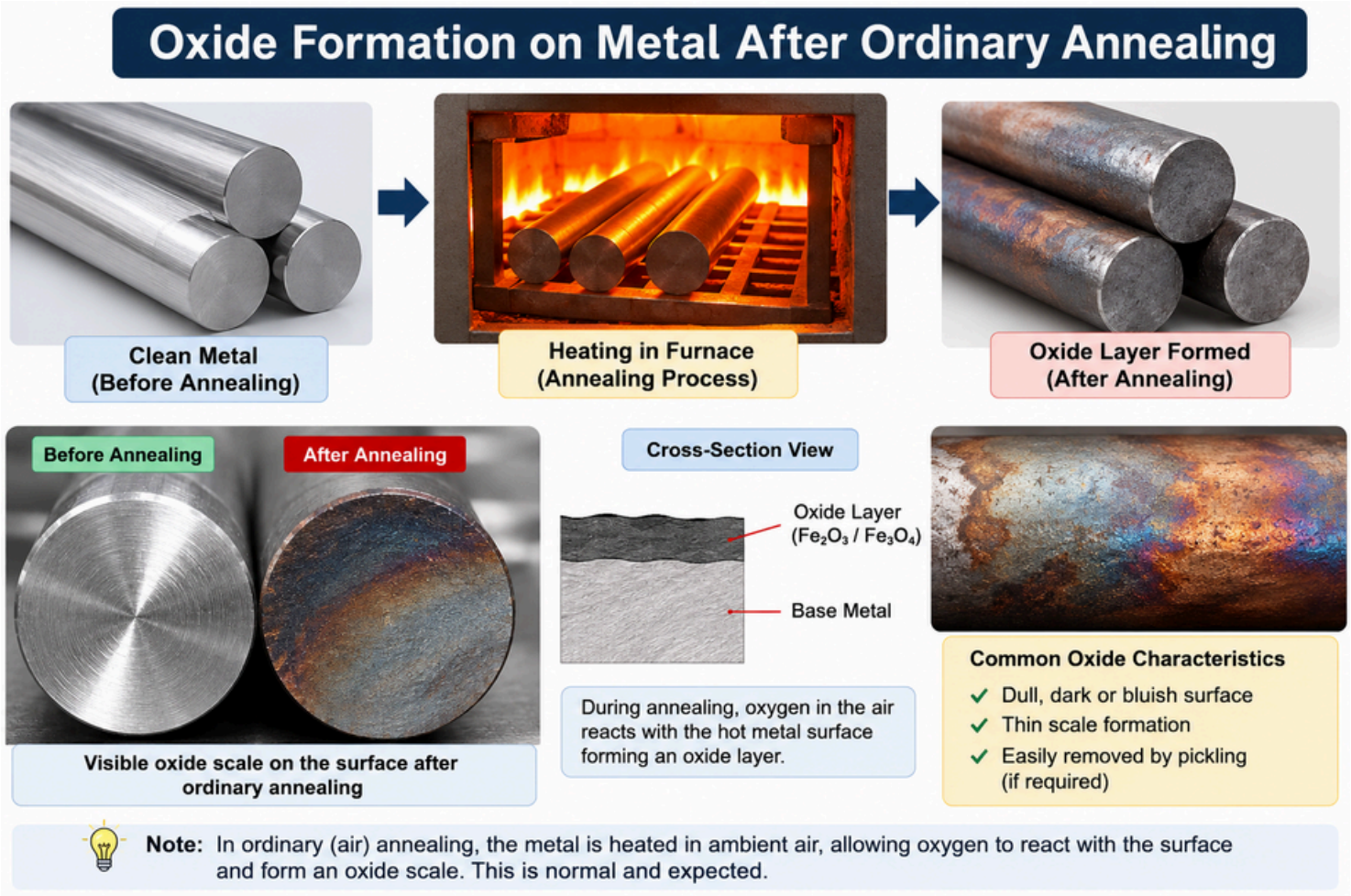
1st Floor, GB-47, Rajdanga Main Road, Sector E, East Kolkata Township, Kolkata, West Bengal 700 107 GST NO: 19AAFCL6947B1ZD
Email: india@labtechindia.co.in

Introduction:

The phenomenon of introducing significant internal stress by applying mechanical deformation forces during the forming and fabrication of metals, such as rolling, drawing, and bending, is called work hardening and is used to increase material strength and hardness. But this process also reduces the ductility and toughness, which makes metal more prone to cracking. To restore ductility and structural integrity, a heat treatment process called **Annealing** is performed.

Ordinary Annealing

Ordinary Annealing creates oxide scale on the surface of the metals which turns it black.



LabTech Analytical Pvt. Ltd.

1st Floor, GB-47, Rajdanga Main Road, Sector E, East Kolkata Township, Kolkata, West Bengal 700 107 GST NO: 19AAFCL6947B1ZD
Email: india@labtechindia.co.in

Bright Annealing

Bright annealing addresses the challenge of the formation of an oxide layer by performing the heat treatment within a sealed, protective oxygen-free furnace in the presence of high-purity hydrogen, nitrogen, or a mixture of the two gases, which prevents oxidation and ensures a clean and bright surface of the metal, thereby eliminating the need for secondary cleaning. This process is carried out under conditions of extremely low moisture content to further ensure surface quality.



LabTech Analytical Pvt. Ltd.

1st Floor, GB-47, Rajdanga Main Road, Sector E, East Kolkata Township, Kolkata, West Bengal 700 107 GST NO: 19AAFCL6947B1ZD
Email: india@labtechindia.co.in

LabTech Range of Products

Hydrogen Gas Generator from ErreDue S.P.A



Sirio Hydrogen System

ErreDue develops and manufactures Ultra-pure hydrogen generators with PEM & Alkaline technology and has PSA/TSA drying technology. Powered simply by electricity and deionized water or Alkaline Solution

Specifications:

- Flow rate from 0.5Nm3/hr to 200Nm3/hr
- Available on PEM & Alkaline Technology
- Output gas purity up to 99.99999%
- Output gas pressure is 15 bar (optional 30 bar)
- Colour touchscreen
- Ethernet - Modbus TCP/IP connections available
- Average power consumption is 4.6kW/m3



Image Source: LinkedIn

ErreDue also provides a containerized solution for field deployment for use at the customer site without the need for any other civil work. Such 5 gas generation systems can be installed and connected to get the total output of 5MW (5 X 200 Nm3/hr = 1000 Nm3/hr)

LabTech Analytical Pvt. Ltd.

1st Floor, GB-47, Rajdanga Main Road, Sector E, East Kolkata Township, Kolkata, West Bengal 700 107 GST NO: 19AAFCL6947B1ZD
Email: india@labtechindia.co.in

LabTech India

LabTech Range of Products

Nitrogen Gas Generator from ErreDue S.P.A

Specifications:

- PSA-based technology
- Flow rate from 10Nm3/hr to 500Nm3/hr
- Output gas purity up to 99.9995% (Patented Technology with Saturn)
- PLC Control Panel included
- Best Suitable for Industrial Process like MAP Packaging, Inertization, Thermal treatment of metals, etc.
- RS485 & Ethernet connections available



Venus Nitrogen System



Saturn Nitrogen System



Containerized On-site nitrogen production plant at the Brembo plant in Thailand with a total capacity of 100 Nm3/hr

Image Source: LinkedIn

LabTech Analytical Pvt. Ltd.

1st Floor, GB-47, Rajdanga Main Road, Sector E, East Kolkata Township, Kolkata, West Bengal 700 107 GST NO: 19AAFCL6947B1ZD
Email: india@labtechindia.co.in

LabTech India



Addresses & Contacts

Reg. Office: GB-47, Rajdanga Main Road, Nabapally, Sector-E, East Kolkata Township, Kolkata-700107
Email: support@labtechindia.co.in
MOB: +91 87807 42729
Branches: SURAT & BANGALORE