

# **ALNAT P**



Protective atmosphere solutions for all treatments of ferrous and non ferrous metals

The heat treatment operation of semi-products as coils, strips, wires and finished parts in ferrous and non ferrous metals is carried out under **ALNAT P** Nitrogen-Hydrogen protective atmospheres solution with major benefits:

- $N_2$ - $H_2$  or Ar- $H_2$  atmosphere with very low  $H_2O$ ,  $CO_2$  or  $O_2$ .
- Large range of  $H_2$  concentration and flow-rate
- Optimisation of the  $H_2$  content and total flow-rate
- Upgrade of your process performance
- Minimal capital expenses and maintenance
- Easy installation and operation
- Furnace safety management with Nitrogen



## A high quality atmosphere

- Nitrogen is produced with either **FLOXAL Apsa**, an on-site cryogenic unit or is trucked and then stored outdoors in a cryogenic vessel.
- Based on the precise mixing of Nitrogen and Hydrogen, **ALNAT P** produces a large range of atmosphere compositions and flow-rates.
- The high quality of those two gases gives a high purity mixture with very low H<sub>2</sub>O, CO<sub>2</sub> or O<sub>2</sub> contents to get a highly reducing atmosphere.
- Spiking the atmosphere with propane or natural gas allows a non decarburising atmosphere.

## Adapted to many metal heat treatments

- For annealing, neutral hardening, tempering, brazing and sintering
- For semi-products and finished parts in ferrous and non ferrous metals
- In batch-, pit-, pot-type furnaces, continuous belt, roller hearth furnaces
- In vertical and horizontal vacuum furnaces for cooling
- Bright annealing in bell and continuous furnaces with high content H<sub>2</sub> atmospheres



## Customized installation

- Engineered and designed to your specific needs
- **ALNAT P** panel supply for multi-furnace or single furnace
- Preventive and corrective Air Liquide maintenance
- Consulting and training on gas handling and safety
- Automatic nitrogen safety pipeline and procedures



## Extended ALNAT offers

- **ALNAT Expertise** to qualify the performance of your furnaces with upgrade proposals
- **ALNAT Control** to monitor your heat treatment operations
- **ALNAT Performance:**
  - Complete process control to optimize the quality and flow-rate of the atmosphere delivered to your furnaces
  - On-line atmosphere analysis (O<sub>2</sub> / H<sub>2</sub>O)
  - Telemetry for remote monitoring and reporting
  - Technical coaching to reach performance



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