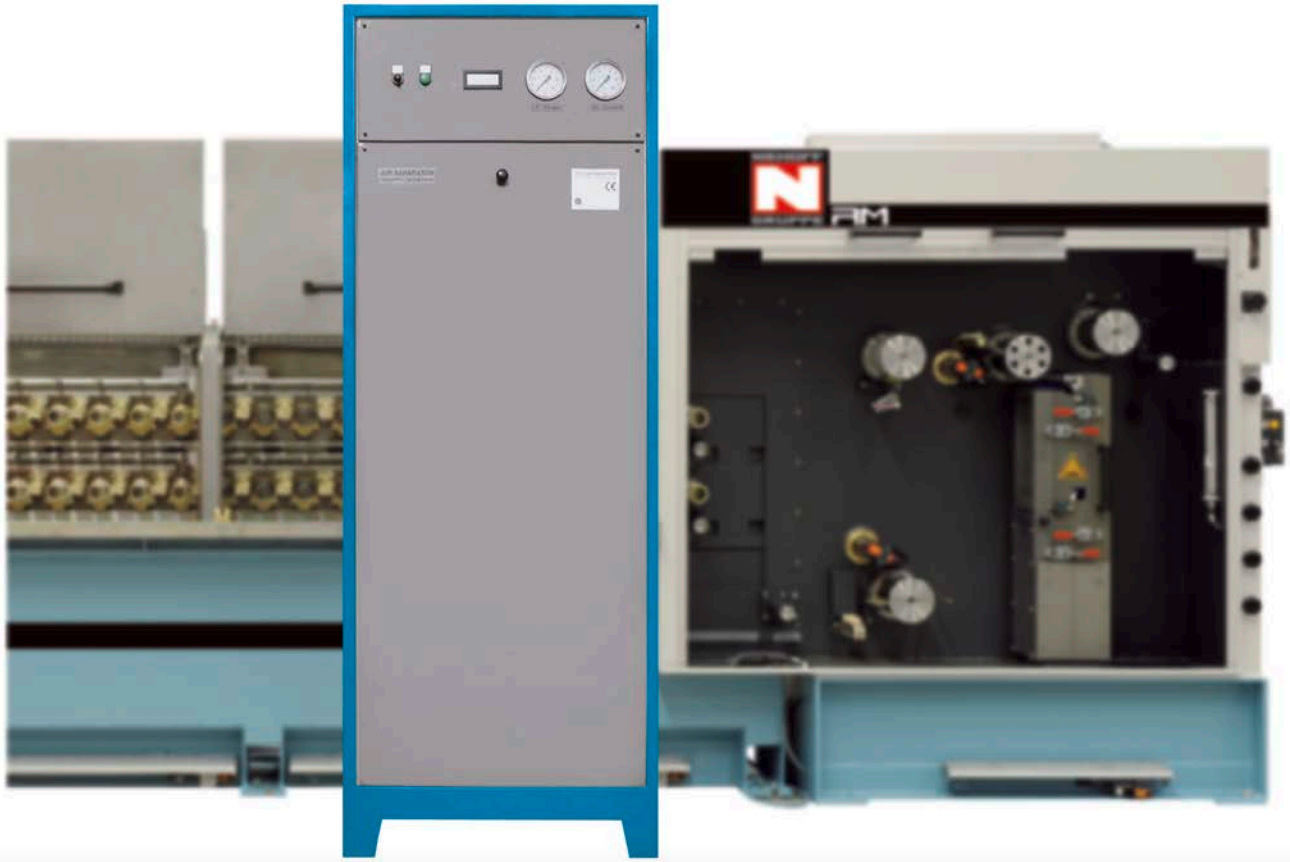


Air-Separator

For a safe and economical supply of inert gas

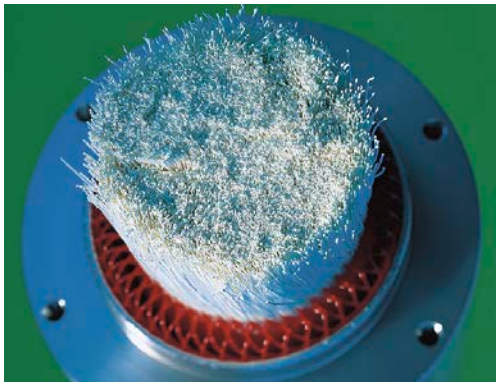
Expertise, Customer Driven, Service – in Good Hands with NIEHOFF

NIEHOFF GRUPPE

Air-Separator

Your profit

- far lower investment costs and overheads compared to the use of steam.
- availability of nitrogen guaranteed at all times.
- generation of nitrogen on demand – no need for storage.
- users are independent from gas suppliers – no more orders for nitrogen.
- the machine can be controlled from a central unit and supply several annealers simultaneously.
- the Air Separator generates nitrogen with exactly the purity you require.



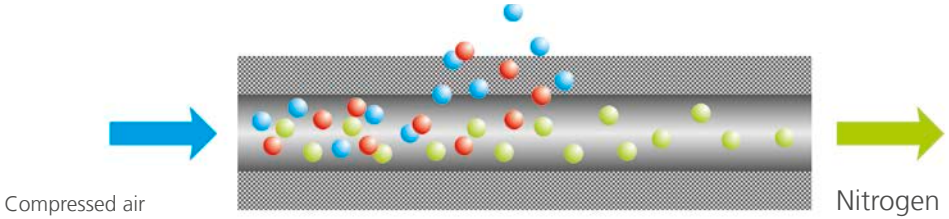
The annealing process

An inert atmosphere is required during the annealing of wire in order to prevent the wire surface coming into contact with air. Without this protective atmosphere, the surface would oxidize and the wire would be rendered useless. It is vital to provide the protective atmosphere at the right place, in the required quantity and with the correct specifications. Steam or nitrogen are normally used as the protective atmosphere for continuous annealers. The drawback with steam is that it consumes a great deal of energy – and hence money – and needs to be stored. Nitrogen is an attractive alternative. It is available in large amounts – air consists to 78 % of nitrogen – and is easy, safe and cheap to filter out of the air using the Air Separator

The mode of operation

The Air Separator exploits a scientific phenomenon: Pressurized gases react in different ways when they flow through an oxygen-permeable hollow fiber that acts like a membrane. While oxygen, hydrogen and carbon dioxide molecules diffuse through the wall of the fiber and return to the ambient air, the nitrogen particles remain in the hollow fiber and can be collected and stored at the end of the fiber. The gas decomposition module of the Air Separator has thousands of such hollow fibers.

The Air Separator is suitable for all wire annealers



www.niehoff.de

Maschinenfabrik NIEHOFF GmbH & Co. KG
Walter-Niehoff-Strasse 2 · 91126 Schwabach, Germany · Phone +49 9122 977-0 · Fax +49 9122 977-155 · info@niehoff.de