DryLyte® TECHNOLOGY

The First Dry Electropolishing System

DLyte is a polishing system for metal parts that require high performance or superior finishing. A revolutionary dry electropolishing that is based in a solid media.

A revolutionary Dry Electropolishing Technology

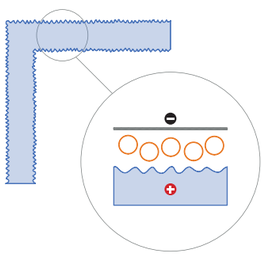
***Dry**Lyte*® new patented technology for grinding and polishing metals by ion transport using free solid bodies. A revolutionary dry electropolishing that is based in a solid media.

DLyte is a polishing system for metal parts that require high performance or superior finishing.

Unlike traditional polishing systems, DLyte system **obtains consistent finish** avoiding any marks on the surface, patterns such as those generated by machining, and is **able to process complex geometries without generating micro scratches on the surface.** DLyte **respects the tolerances of the piece, delivering a mirror finish.**

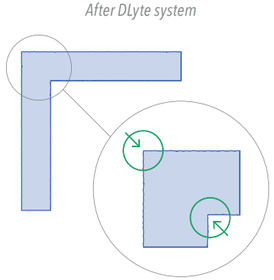
How it works

Before DLyte system

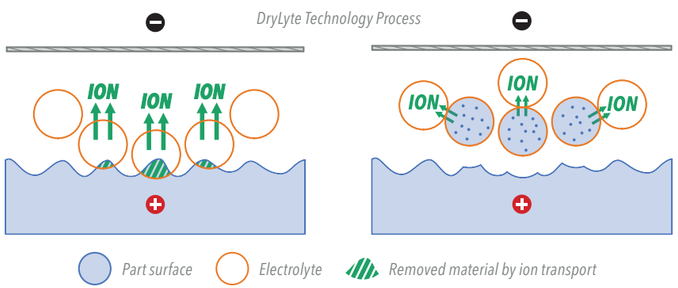


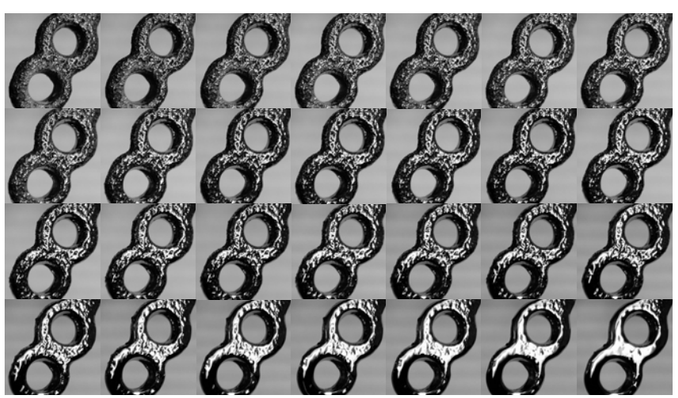
"The process extracts the material only from the peaks of the roughness, it does not round the edges but penetrates the internal cavities of the piece to which annot be accessed mechanically".

After DLyte system



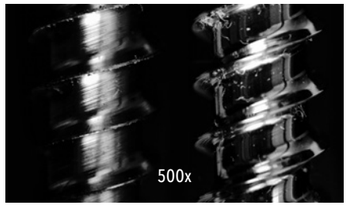
DryLyte Technology Process





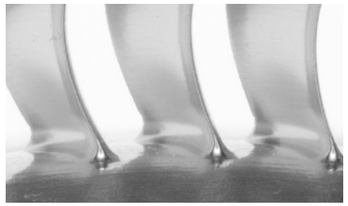
Macro sequence of a DryLyte Technology Polishing Process.

Benefits of the technology

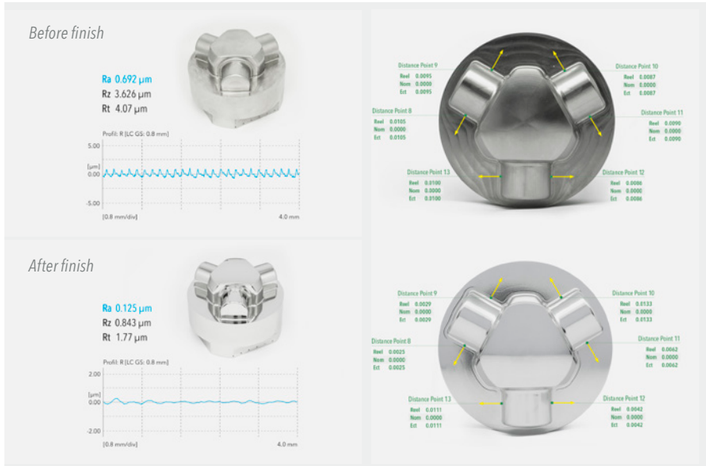


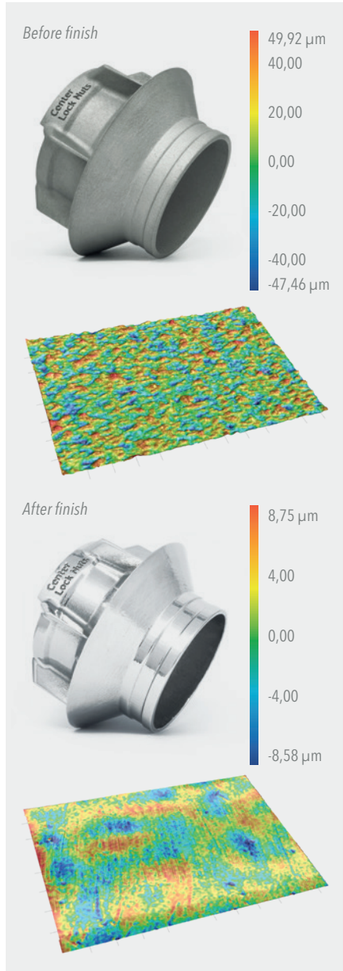
Achieves homogeneous results across the surface and eliminates micro-scratches. The system works efficiently at micro and macroscopic level.

Respects the tolerances and preserves the initial shape, even the cutting edges. It is not rounding the edges as there is no abrasion of the surface.

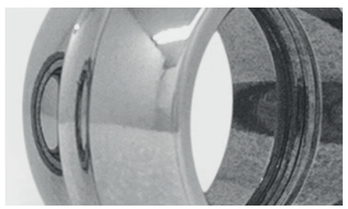


Ra under 0,05 µm. The improvement of the surface quality from 10 µm to 0,8 µm in rotor blade turbines improves the efficiency, reducing the turbine inlet temperature with the associated turbine durability increase.

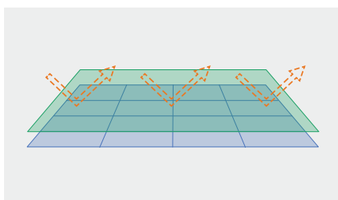




Additional benefits of the technology



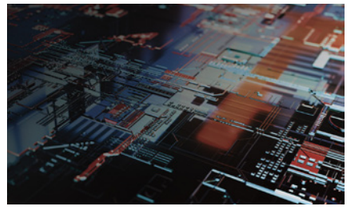
Enhances negative surface skewness (rsk) which increases the surface bearing contact area (allowing uniform lubricant film distribution) improving the bearing ratio and reducing the friction between the pieces.



Avoids generating grinding texture patterns, improving wear and fracture resistance, and improving fatigue resistance. Isotropic surfaces.

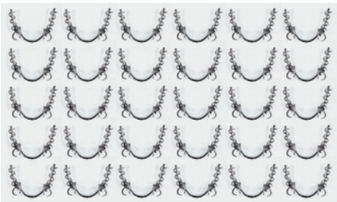
Process & Production benefits of the technology

Fully automated polishing to a mirror finish in one step. Mechanical surface finishing requires several steps to achieve mirror finishing and liquid electropolishing generally reduces surface roughness readings of a non-electropolished surface by only 50 percent.



Ability to process without programming (especially important for AM). DLyte does not need geometry-specific programming as it is required with CNC high-precision grinding equipment.

Traceable industrial process. DLyte software ensures completely traceable recording of process parameters and electrolyte used in each batch.



Reproducibility and homogeneity. DLyte process guarantees stable results among different batches within the electrolyte media lifespan. There is no wear as it occurs with abrasive particles.

Controlled costs and predictable lead times. The replacement of the current manual treatment allows cost monitoring and predictable lead times.

Clean, none-hazardous and easy waste management. Abrasive processes lead to extremely dusty and noisy environment.

Easy waste management and Low waste and water consumption

Most abrasive finishing processes such as grinding, deburring or polishing are wet processes. Water and other chemical agents are the carriers for resultant removal of media and metal fines. The resultant process water requires a closed-up system to recycle the water and a waste treatment machine to compress the solid waste.

Liquid electropolishing installations require removal of electrolyte sludge regularly and careful handling and adherence to health and safety regulations. Disposal of used liquid electrolyte and sludge is usually handled by specialized services to ensure compliance with environmental regulations. Disposal of used post-dip citric acid may also require hazardous waste disposal, since the metal by-products change the chemical nature of citric acid.

DLyte system does not require closed-up system to recycle water and sludge waste treatment machinery with the corresponding space, labor, water and environmental license costs savings. The disposal of the dry electrolyte is handled by Standard services.

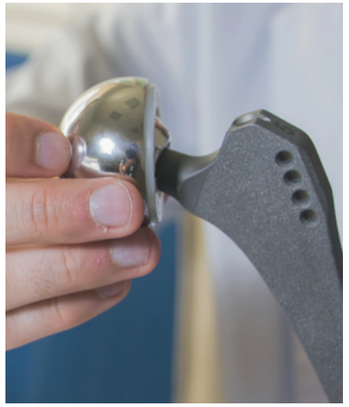
BETTER RESULTS THAN OTHER PROCESSES | BIOCOMPATIBLE POLISHING PROCESS | INCREASES RESISTANCE TO CORROSION

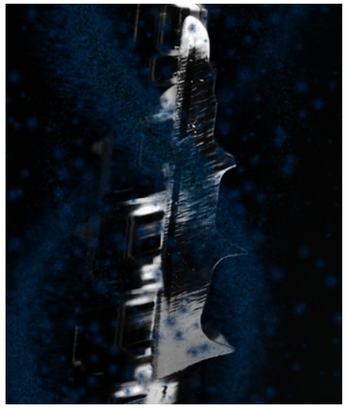
Proved Biocompatibility

The Medical and Dental Device sectors require clinically proven processes and products which guarantee their compliance with the most demanding safety regulations.

The manufacturer must ensure that the devices meet all appropriate requirements and in particular perform a risk/ benefit analysis and evaluate the biocompatibility and toxicity of the materials used.

DLyte has proven the Biocompatibility of the products processed with DLyte System.



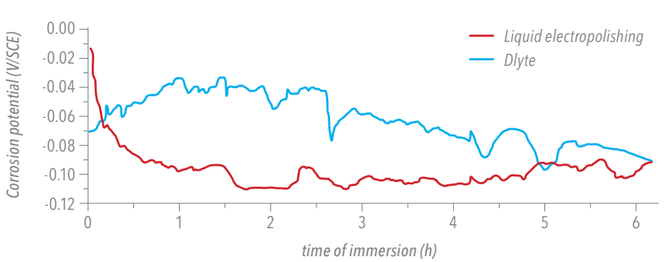


The product can be considered non-cytotoxic. The study has been made according to the specifications of standard UNE-EN-ISO 10993-5:2009.

Corrosion resistance

The corrosion resistance of a piece of equipment is dependent not only on the selection of the most suitable alloy but also upon the correct treatment of the material. Many applications require a surface treatment to be performed after polishing to comply with the corrosion resistance requirements.

DLyte is the unique system able to remove roughness and improve the corrosion resistance of the metal pieces at the same time reducing the number of processes required in the manufacturing process. **DLyte achieves better corrosion resistance than liquid electropolishing.**



DLyte®

The New Concept of Polishing

The only automated system that improves the results of hand polishing. DLyte allows polishing of casting, sintered and milling parts.

DryLyte es una tecnología controlada digitalmente por medio de un potente software que permite ajustar los parámetros de manera precisa para adaptarse a las necesidades de pulido de cada pieza y/o material. Todos los sistemas DLyte funcionan con tecnología DryLyte.

From small to large productions

According to polishing needs, production quantities or piece dimensions, DLyte offers a unique solution to meet the needs of the Dental industry. The entire product range allows automation of the polishing process ensuring high scalability production.

All DLyte machines incorporate a package of added services, you can also expand these services

Trainning and Consulting

Waranty Extension Package

Full Service Package

Software Updates

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