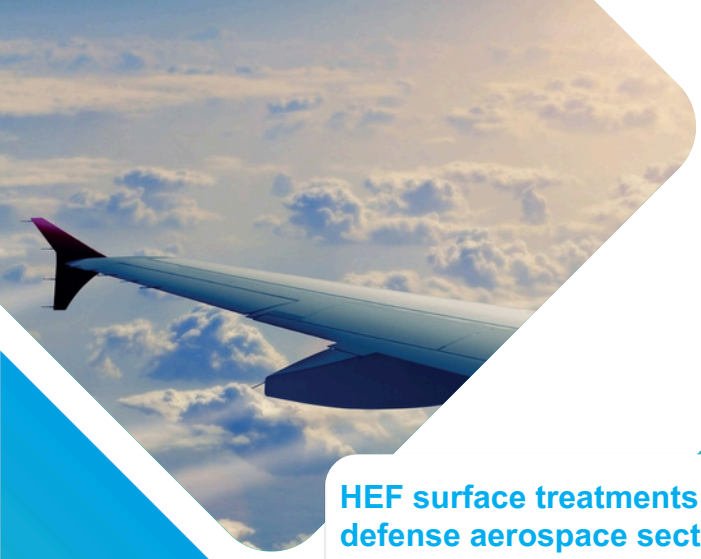
HEF®

NORTH AMERICA | Surface materials engineering

Defense Aerospace



HEF surface treatments and coatings for the defense aerospace sector

HEF offers its experience across the various treatment stages of aerospace components, including quality control procedures, the design of optical components, and the application of surface coatings.

HEF develops disruptive technologies to meet the challenges of the aerospace industry's ecological transition, and continuously invests in research and development to meet the performance demands of both civil and defense (land and air) onboard applications.

Our extensive technology offerings at the service of the defence and defense aerospace industries:

- Ionic Liquid Nitrocarburizing (CLIN™)
- Vacuum deposits (PVD – PECVD…)
- Optical components
- Photolithography and glass engraving
- Surface texturing by laser
- Functionalized powders
- Glass cutting

Our markets

Civilian weapons

We offer a wide range of advanced surface treatments and coatings designed specifically to enhance the performance and durability of firearms.

Space

HEF has the industrial capacity to meet the specific optical needs of the space market: mirrors for astronomy, optical components on board satellites. Photolithography steps can be combined with these treatments to produce localized coatings.

Military aerospace

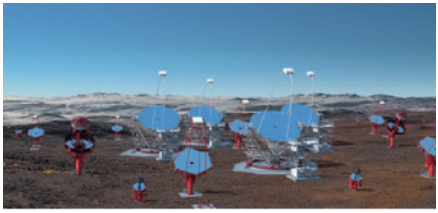
We also develop optical solutions and coatings for optronic equipment and sights on helicopters and military aircraft. The use of lasers (texturing, cutting) completes our offer of innovation combining technology and precision. We can meet both unitary and industrial needs.

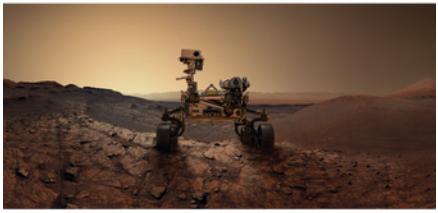
Military land and sea

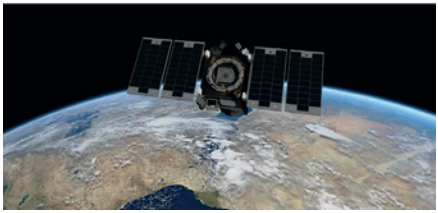
The technologies developed by HEF meet the growing need to optimize the surfaces of components (especially optical components) to improve the performance, durability and reliability of our customers' equipment. Surface functionalization through laser micro- and nano-texturing improves various aspects of the materials and provides precise modifications on a micro and nano scale (adjustment of wettability, coating texturing, frost resistance and hydrophobicity).

References:

Realization of large metal mirrors as part of the **CTA (Cherenkov Telescope Array)** project which consists of networking several dozen telescopes dedicated to gamma astronomy.
Participation in the development of the laser head for the famous **Perseverance Mars Rover**.
Supplier of optical components that will be integrated into satellites of the future **Japetus** constellation, dedicated to earth observation.
Participation in the design of the seismometer on the **InSight** probe sent to Mars.







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