REM Surface Engineering

The ISF® Process for Aerospace Gears & Bearings

REM

Extend component life during a loss of lubricant event, increase resistance to scuffing, and reduce contact fatigue with REM's ISF® Process. The ISF Process creates a smooth, isotropically micro-textured surface which results in improved component performance, lower operating temperatures, and reduced noise and vibration. In the Aerospace Industry, component failure is not an option, so talk to REM today about how we can upgrade your aerospace gears and bearings.

Aero Hinge Pins

Typical Aerospace Applications

- Main and Intermediate Transmission Gears
- Turbine Engine Power Gears
- Main Transmission Bearings
- Airfoils
- Helical Gear Shafts
- Blisks
- Stator Rings
- Tail Rotor Gears
- Flight Actuator Components
- Rotor Hinge Pins
- Generator, Hydraulic and Fuel Pump Gears
- Fuel Transfer Components

ISF Aerospace Part Performance Benefits

- Increase Loss of Lubricant Operating Life
- Increase Scuffing Resistance
- Increase Power Density Allowable
- Increase Bending Fatigue Resistance
- Reduce Contact Fatigue
- Reduce Friction
- Reduce Operating Temperature
- Reduce Vibration and Noise
- Extend Time Between Maintenance
- Repair Lightly Damaged Components

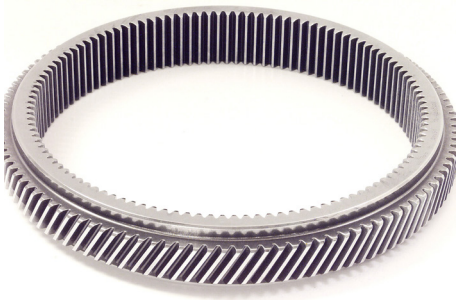
Don't Accept any Less than REM

www.remchem.com
REM QMS is certified to ISO 9001:2015 and AS9100:2016 Rev D

Gear Finishing and the ISF Process

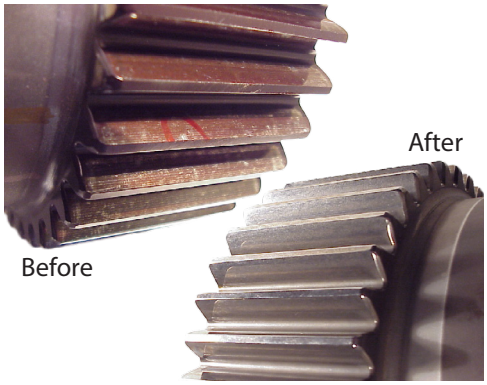
Aerospace gears and bearings have complex geometries, tight tolerances and high speed, load, and efficiency requirements. Part durability is critical to both operating safety and fleet sustainment costs.

REM's ISF® Process improves aerospace gear and bearing performance by reducing friction, removing surface stress raisers, and creating an optimal low roughness, isotropic surface texture. These characteristics result in parts that have increased load carrying capacities, enhanced lubricant retention properties, lower operating temperatures, and many other benefits. Aerospace gearboxes that utilize the ISF® Process have been shown to exceed sixty (60) minutes of operating life in a full loss of lubricant simulation without sustaining component failures.



Flight critical aerospace components treated by the ISF® Process have been successfully flown for over fifteen (15) years. The process is proven to be metallurgically safe, able to maintain tight geometric tolerances, robust and repeatable, and capable of meeting high volume production demands.

REM Refurbishment Program



In addition to the many performance benefits of the ISF® Process, it has been proven to be an optimal method of repairing used, lightly damaged aerospace gears.

Technical studies have validated that used, damaged gears repaired via the ISF Process meet or exceed the performance of new, non-ISF Processed components. Utilizing a robust machine controlled process such as the ISF® Process is an upgrade over existing manual/hand-work practices in both quality and capability. By salvaging these otherwise scrap components, maintenance costs can be significantly reduced thereby reducing overall fleet sustainment costs.

REM Surface Engineering | 60 YEARS ESTABLISHED 1965

REM Surface Engineering
325 W Queen Street
Southington, CT 06489 USA
Phone: (860) 621-6755
Fax: (860) 621-8822
Email: sales@remchem.com

REM Surface Engineering
2107 Longwood Drive
Brenham, TX 77833 USA
Phone: (979) 277-9703
Fax: (979) 277-0309
Email: sales@remchem.com

REM Surface Engineering
8912 Mississippi Street
Merrillville, IN 46410 USA
Phone: (860) 736-1477
Email: sales@remchem.com

REM Surface Engineering, GmbH.
Siemensring 68d
D-47877 Willich, DE
Phone: +49 2154 82070-0
Email: sales-eu@remchem.com

www.remchem.com
REM QMS is certified to ISO 9001:2015 and AS9100:2016 Rev D