

INNOVATORS IN
TECHNOLOGY

技术的创新者



**Metal Improvement
Company**

Subsidiary of Curtiss-Wright Corporation

金属改进公司

Aerospace applications

航空领域里的应用



Enhancing the performance of metals
and materials

改善零件性能 延长零件寿命

Metal Improvement Company
is a subsidiary of Curtiss-Wright
Corporation

MIC是Curtiss-Wright集团旗
下的子公司

航空领域里的应用

Metal Improvement Company (MIC), established in 1945, is a global organisation specialising in metal and material treatment services which enhance performance and extend the life of critical components, prevent premature failures and enable component designs to achieve their maximum performance.

MIC has over 60 operating divisions in USA, Canada, Europe and Asia and can provide on site processing worldwide.

MIC's markets include aerospace, automotive, power generation, chemical processing, oil and gas, medical and general engineering.

Approvals: FAA, CAA, NADCAP and BS EN ISO 9001:2000 plus other specific company/industry approvals as appropriate.

成立于一九四五年的MIC是一家专门从事金属表面处理和提供相关服务的全球性公司，其服务能改善关键零件的性能和延长它们的寿命，并能防止零件早期失效，使这些零件达到其最大的设计潜能。

MIC在美国、加拿大、欧洲及亚洲设有60多家分公司，并能在世界任何地方提供现场加工服务。

MIC的市场包括航空、汽车、发电、化工、石油及天然气、医疗及一般工程领域。

所获得的认证有：FAA, CAA, NADCAP, BS EN ISO 9001:2000, 以及其它公司及行业认证。



The aerospace industry

The aerospace industry demands high performance from lightweight materials capable of withstanding extreme loads often in an aggressive environment. Surface treatments can extend these performance characteristics by protecting the surface from external damage and extending the cyclic performance.

CONTROLLED SHOT PEENING

Controlled shot peening is generally a cold working process where the component's surface is bombarded with small spherical particles to yield the base material, relieving prior manufacturing stresses and inducing residual compressive stresses tailored to suit the base material and application. The applied stress is reduced, enabling better dynamic performance and damage tolerance.

SUPERFINISHING

Superfinishing of components is critical in applications of metal to metal contact such as gears and bearings. Generally applied after the controlled shot peening process to remove surface asperities resulting in reduced wear, macro and/or micro-pitting, noise and operating temperatures.

SHOT PEEN FORMING

Shot peen forming is the preferred method of forming complex aerodynamic contours. This dieless process is ideal for forming wing skins and empennage panels. An extension of this approach will also correct complex parts distorted during machining and/or heat treatment.

LASER PEENING

Laser peening can introduce residual compressive stresses in all metallic materials up to 5 to 10 times deeper than other conventional cold working techniques with virtually no surface damage. This clean and extremely controllable process is a production tool of significant benefit where product performance is critical.

航空工业

航空工业对其零件有很高的要求，不但要求零件材料轻，而且要求它们能够在极其恶劣的环境下承受极端的载荷。借助于保



COATINGS

Selection of the appropriate coating can enable the use of less expensive materials, improve part life and reduce maintenance costs. MIC provides solid film lubricants that protect against adverse operating conditions, impingement coatings for an ultra thin surface, conformal coatings for sealing delicate objects and shielding coatings for electronic devices.

HEAT TREATMENT

MIC specialises in the thermal processing of metallic components to relieve stresses, improve overall strength, ductility and hardness. This includes techniques of vacuum heat treatment, induction hardening, isothermal annealing, atmosphere normalising, carburising, carbonitriding and ferritic nitro carburising.



涂料

选择好合适的涂料可以减少对昂贵材料的使用，改善零件寿命，降低维护成本。MIC的硬膜润滑涂料能对不利工作环境提供保护，冲击涂料可形成超薄涂层，融合涂料可封闭精细的零件，以及针对一些电子零件的屏蔽涂料。

热处理

MIC专业热处理工艺能使金属零件释放应力，改善整体强度、延展性及硬度。有关工艺包括真空热处理、感应硬化、恒温回火、常温时效、炭化、氮化等。

APPLICATIONS

应用场合





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金属改进公司

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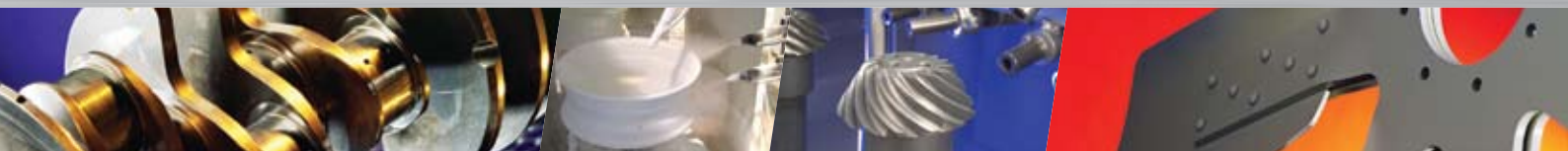
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SHOT PEENING ■ SHOT PEEN FORMING ■ LASER PEENING ■ COATINGS ■ HEAT TREATMENT

喷丸 ■ 喷丸成形 ■ 激光喷丸 ■ 喷涂 ■ 热处理