INNOVATORS IN TECHNOLOGY

Metal Improvement Company

Subsidiary of Curtiss-Wright Corporation

Peentex

Architectural finishing

Enhancing the performance of metals and materials

www.metalimprovement.co.uk

CURTISS WRIGHT

Peentex - beautiful and functional finishes

Metal Improvement Company (MIC) is a global organisation specialising in surface technologies to enhance performance and extend the life of critical components, enabling component designs to achieve their maximum potential.

MIC offers a quality controlled and cost effective service, working in partnership to meet its customers' needs.

Established in 1945, MIC has over 65 divisions operating in Europe, USA, Canada and Asia with on-site processing worldwide. In 2003, MIC added speciality coating capabilities to its services portfolio and today has coatings divisions in Europe, Asia and Ireland as well as E/M Coating Services facilities in the UK and USA developing and applying a wide range of engineered coatings.

MIC division approvals include: FAA, AS9100, NADCAP, ISO 9001:2008 plus other specific OEM, company and industry approvals as required.

Metal Improvement Company is a subsidiary of the Curtiss-Wright Corporation, a diversified international provider of highly engineered products and services to the Motion Control, Flow Control and Surface Technology industries

www.curtisswright.com

CURTISS WRIGHT

Peentex is a decorative textured finish applied by controlled shot peening which enhances surfaces in architectural applications both aesthetically and practically.

Why choose Peentex finishes?

Metal Improvement Company has been providing creative and individual Peentex finishes to the construction and architectural design industry for over 60 years.

Peentex offers a range of benefits in addition to texture and beauty and can be used to enhance metal, glass, wood and acrylic sheeting.

Controlled shot peening has long been associated with engineered surface finishing of metals including steels, stainless steels, aluminium, titanium and copper alloys. It forms an essential part of the manufacturing process used within the engineering industry to improve wear and corrosion resistance and prevent premature fatigue failures.

The benefits

The Peentex process when used on metal, substantially improves wear and scratch resistance, ease of cleaning and also provides some resistance to written graffiti and stickers.

This makes Peentex an ideal application for 'high traffic' and aggressive environments.

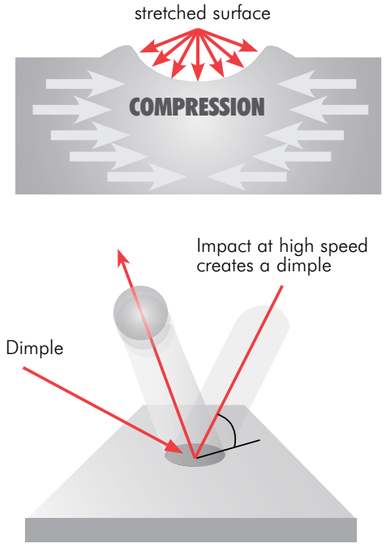
The surface produced provides a finish which diffuses direct light and glare thus disguising fingerprints and mild blemishes. The finish is also non-directional so ideally suited for jointed and welded frames and structures. Applying Peentex directly to welded joints disguises the unsightly weld bead giving a more uniform appearance.

The peening action is a dimpling process and not a cutting or abrasive (blasting) process, consequently, peening hardens the metal surface. The harder surface will prolong life and reduce corrosion giving the metal a higher degree of wear and damage tolerance. This aspect is particularly useful when Peentex is applied to internal and external cladding where durability is a key requirement.

We are able to accurately control and repeat the peening technique to produce a range of different textures creating highly decorative designs and finishes. One excellent example of our work is the Dublin Spire, erected in December 2003 (photographed on the cover and below) where the ground level section was peened to create a mirrored pattern with stunning reflective qualities. The remainder of the structure was uniformly peened to improve its resistance to environmental conditions.

The process

Controlled shot peening is the bombardment of a surface with small high quality spherical media in a technically defined and controlled way. Each piece of media striking the material acts as a tiny peening hammer imparting a small indentation into the surface. The local plastic deformation of material around the small indent creates a reactive action from the material core thus resulting in a beneficial surface/sub-surface compressive residual stress.



Peentex finishes are achieved by a combination of controlled shot peening and glass bead peening.

A range of media including steel, chrome steel, ceramic and glass can be used to produce the desired finish. The degree and consistency of texture depends on the base material and condition, size of media, media material and the energy that the media possesses at the point of impact with the substrate.

In order to achieve consistency across the work piece, stringent process and quality control procedures are used to achieve the same results time after time. It is this process quality control that results in a uniform and repeatable Peentex finish.

APPLICATIONS

- Street furniture
- Internal & external fittings
- Hand rails
- Countertops, reception desks, etc.
- Internal and external cladding
- Curtain wall
- Metal and glass decoration
- Sculptures and monuments
- Signage and nameplates
- Welded bridges and structures
- General construction

BENEFITS

- Harder surface finish on metals
- Improves wear/damage resistance
- Improves scratch prevention
- Makes surfaces easier to clean
- Resistance to written graffiti and stickers
- Disguises fingerprints and mild blemishes
- Non directional finish
- Prolongs life
- Resists corrosion
- Ideal for high traffic areas
- Protects against aggressive environments
- Creates highly decorative mirror designs and finishes

MIC MARKETS INCLUDE:

- **Aerospace**
- **Architectural**
- **Automotive**
- **Chemical & food processing**
- **General & structural engineering**
- **Marine**
- **Medical**
- **Military**
- **Off-road & earth moving equipment**
- **Oil, gas & petrochemical**
- **Power generation**
- **Railways**

MIC SERVICES INCLUDE:

- **Controlled shot peening**
  induces engineered residual compressive stresses
- **Shot peen forming**
  creates curvature and corrects distortion
- **Laser peening**
  induces deeper residual compressive stresses
- **Engineered coatings**
  improves performance, prevents corrosion and aids lubricity
- **C.A.S.E. (isotropic finishing)**
  removes surface asperities reducing friction
- **On-site processing**
  provides services on customers' own premises
- **Peentex (architectural finishing)**
  creates decorative and aesthetic texturing
- **Surface texturing**
  applies a textured engineered finish
- **Peenflex mouldings**
  protects against processing and handling damage

EUROPEAN CORPORATE OFFICE

Metal Improvement Company
Hambridge Lane, Newbury
Berkshire RG14 5TU, UK
Tel: +44 (0)1635 279621
Email: eurosales@metalimprovement.com
Web: www.metalimprovement.co.uk

USA COMPANY HQ

Metal Improvement Company
80 Route 4 East, Suite 310
Paramus, New Jersey 07652, USA
Tel: +1 (201) 843 7800
Email: info@metalimprovement.com
Web: www.metalimprovement.com

PARENT COMPANY HQ

Curtiss-Wright Corporation
10 Waterview Boulevard, 2nd Floor
Parsippany, New Jersey 07054, USA
Tel: +1 (973) 541 3700
Web: www.curtisswright.com

Metal Improvement Company
Subsidiary of Curtiss-Wright Corporation

design/production: www.publicityproject.co.uk