

UMBRA SPECIAL PROCESSES

UMBRA HAS BEEN WORKING IN THE AEROSPACE FIELD FOR MORE THAN 25 YEARS.
WE OFFER THESE KIND OF SERVICES TO ALL COMPANIES INVOLVED IN AEROSPACE, WITH WARRANTY OF

QUALITY
TECHNOLOGY
RELIABILITY



ALL PROCESSES ARE NADCAP APPROVED
(MERIT WAS GRANTED FOR ALL SERVICES)

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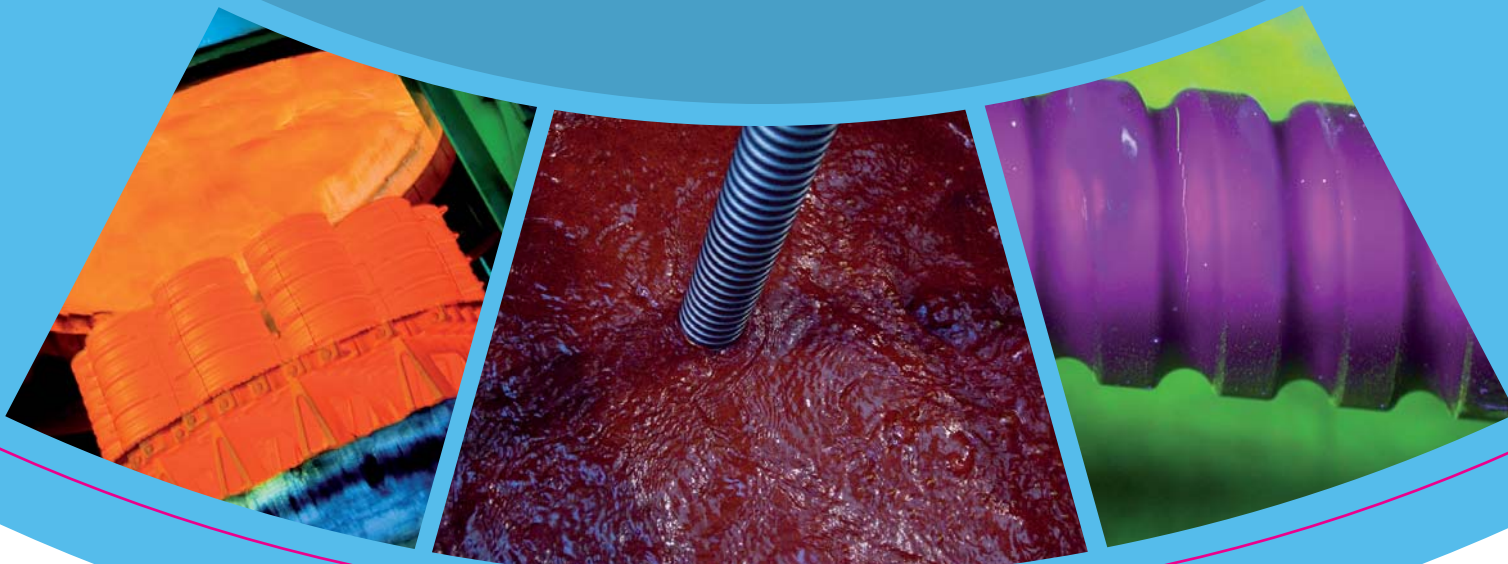
Foligno

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UMBRA GROUP
- AEROSPACE -

SPECIAL PROCESSES



HEAT TREATING

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INTERNATIONAL SPECS

Steels- AMS 2759 & AMS-H-6875
Low alloy Steels- AMS 2759/1 & AMS 2759/2
Stainless and PH Stainless Steels- AMS 2759/3
Stainless Martensitic Steels- AMS 2759/5
Gas Nitriding- AMS 2759/6
Gas Carburizing- AMS 2759/7

OTHER CAPABILITIES

Chemical Analysis of Steels - Impact Testing
Room Temperature Tensile
Metallography
Near Surface Examinations - Microhardness
Near Surface Examinations - Diffusion Coatings
Near Surface Examinations - Intergranular Attack/Oxidation
Brinell Hardness
Rockwell Hardness
Vickers Hardness/Microhardness

CUSTOMER SPECS

Heat Treat of Alloy Steels - BAC 5617
Heat Treat of Corrosion Resistant Steel - BAC 5619
Carburizing of Steel - BAC 5641
Nitriding of Steel - BAC 5640
Induction Hardening - BAC 5620
Low pressure carburizing - UMBRA spec.
Vacuum Heat Treating - UMBRA spec.

CHEMICAL PROCESSING

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INTERNATIONAL SPECS

Anodizing - AMS-A-8625
Anodizing -MIL-A-8625
Cadmium Plating - AMS-QQ-P-416
Chromium Plating - AMS 2406
Chromium Plating AMS-QQ-C-320
Conversion/Phosphate Coatings - MIL-C-13924
Copper Plating -Internal Specification
Silver Plating - Internal Specification
Surface Treatment/Passivation - QQ-P-35
Surface Treatment/Passivation - AMS-2700
Surface Treatment/Passivation - AMS-QQ-P-35

OTHER CAPABILITIES

Paint Application - Internal Specification

CUSTOMER SPECS

Adhesion Tape Testing - Internal Specification
Adhesion Bend Testing (Metallic Coatings) - Internal Specification
Coating Weight Testing - Internal Specification
Thickness Verification of Magnetic,
Eddy Current and XRF Machines- Internal Specification
Adhesion Testing Heat and Quench- Internal Specification
Hydrogen Embrittlement Testing- Internal Specification
Porosity- Internal Specification
Metallographic Testing- Internal Specification
Microhardness Testing- Internal Specification
Corrosion/Salt Spray Testing - Internal Specification
Water Immersion/High Humidity Testing- Internal Specification
Taber Wear Testing- Internal Specification
Solution Analysis- Internal Specification
Cadmium Plating - BAC 5701
Copper Plating - BAC 5722
Etch Inspection of Ground or Machined Steel Parts - BAC 5436

NON DESTRUCTIVE TESTING

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INTERNATIONAL SPECS

Magnetic Particle Inspection ASTM E 1444
Liquid Penetrant Inspection ASTM E 1417

OTHER CAPABILITIES

Eddy Current Inspection
Conductivity Testing

CUSTOMER SPECS

Magnetic Particle Inspection - BAC 5424 / BSS 7040
Liquid Penetrant Inspection - BAC 5423 / BSS 7039
Etch Inspection of Ground or Machined Steel Parts - BAC 5436
NDI Personnel Certification Level 3 Magnetic - NAS 410
NDI Personnel Certification Level 3 Penetrant - NAS 410