Company Profile

NM

Niigata Metallikon Industries Corporation

Web Site www.nii-meta.jp

CERTIFIED JQA MANAGEMENT SYSTEM
JIS Q 9100
ISO 9001

JQA−AS0084
JQA−QMA14415

Eco action 21
Register No.0002995

Company Profile

Name:	Niigata Metallikon Industries Corporation
Established in:	1950
Capital:	10 million yen
President:	Noboru Izutsu
Head office factory:	2642, Minatomachidoori Ninocho, Chuo-ku, Niigata City
Banker:	Daisi Bank, Sumiyoshicho Branch
	Hokuetsu Bank, Niigata Branch
	Taiko Bank, Ohgata Branch
	Shoko Chukin Bank, Niigata Branch
	Japan Finance Corporation, Niigata Branch

Corporate History

September 1950	Establishment as a company named "Minato Mekki".
August 1953	The ex-president, Kichiji Izutsu, learned Metallikon style processing for a year from KATO. METL. SPRAYING. GUN. INDUSTIAL. COMPANY LTD. in Tokyo.
January 1961	Minato Mekki was reorganized as "Niigata Metallikon Industries Corporation".
April 1961	Anodizing service has started.
uly 1961	A new plant was built in Shimokido.
January 1962	Shimokido Factory was expanded.
April 1962	Chromium plating service (for industrial use) has started.
1967	Minato-machi factory and Suehiro factory were united with Shimokido Factory.
July 1969	An Ohkuma-made universal grinder (1.5m) was installed.
December 1971	New buildings; White factory, meeting room and rest room were constructed.
1972	Heavy duty coating service has started.
May 1972	Stainless steel spraying service (thermal spray) has stared.
September 1975	Factories and office building was reconstructed.
March 1978	Noboru Izutsu became president.
September 1979	Technological tie-up with Dow Corning Corp. about Molykote
January 1980	Full-size shot blast equipment was installed.
March 1980	Capital increased to 10 million yen.
September 1981	Technological tie-up with JAPAN KANIZEN co., ltd. about electroless nickel plating.
February 1982	Ceramic spraying and Plasma spraying service has started.
July 1983	Automatic zinc plating machine was installed to the Shimokido Factory.
December 1983	A new factory was constructed (Zaimokucho Factory).
August 1994	A painting factory was established in Zaimokucho Factory.
August 1995	Automatic plating equipment (Cu, Ni, Cr, Ni-P, and Sn) were installed to Shimokido Factory
October 2000	Plating work transferred from Hitachi, Ltd.
August 2001	Blackening equipment was enhanced.
July 2003	Automatic electroless nickel plating equipment was installed.
October 2003	Trivalent chromium plating service has started.
July 2004	The Second Painting Factory was constructed.
September 2004	The nickel-boron plating equipment and the nickel-teflon plating equipment have been strengthened of "the Shimokido-first-factory".
September 2006	"Unleaded electroless nickel plating" is begun by "the Shimokido-first-factory".
December 2006	"trivalent chromate" is begun by "the Shimokido-first-factory".
May 2007	"Unleaded nickel-teflon plating" is begun by "the Shimokido-first-factory".
May 2008	"Unleaded nickel-boron plating" is begun by "the Shimokido-first-factory".
October 2008	ECO ACTION 21 certification (0002995)
May 2009	The company got "Contractor's License".
August 2011	The company got certification of JIS Q 9100 and ISO 9001. "JIS Q 9100"(Certification number JQA-AS0084),"ISO9001"(Certification numberJQA-QMA14415)
April 2012	"High Velocity Oxygen Fuel" is begun by "the Shimokido-thirdt-factory".
October 2013	"Shot peening" is begun by "the zaimokucho-factory".
February 2014	Aluminum surface treatment of aircraft equipments started at Shimokido-first-factory.
September 2015	A large-scale tin plating equipment was installed to "the Shimokido-second-factory".
April 2016	Plating and painting equipment was constructed in NSCA Factory.
August 2016	A gold-copper plating (pink-gold plating) equipment was installed to "the Shimokido-second-factory".
August 2016	A plating equipment for plastics was installed to "the Shimokido-second-factory".
March 2017	A large semi-bright silver plating equipment was installed to "the Shimokido-second-factory".

Services

[Electroplating]
・silver plating(semi-bright / bright)　・copper plating
・tin plating (semi-bright / bright)
・nickel plating (bright nickel plating, black nickel plating)
・zinc plating (trivalent colored chromate, trivalent bright chromate, trivalent black chromate)
・zinc - nickel alloy plating
・chromium plating, trivalent chromium plating, hard chromium electroplating, hard chromium plating
・gold plating　・satin plating　・gold-copper plating (pink-gold plating)
[Plating on plastics]
[Lead-free solder plating]
・SnCu solder plating
tin lead plating
[Lead-free electroless nickel plating]
・lead-free electroless nickel plating
・nickel boron plating
・nickel teflon plating
[Anodizing]
・white anodizing
・colored anodizing
・hard anodizing
[Chemical conversion coating on aluminum]
・chromium-free coating
・trivalent chromium coating
・hexavalent chromium coating
[Conversion coating on iron]
・phosphating
・blackening
[Electropolishing]
・electropolishing of stainless steel and titanium alloys
[Thermal spraying]
・HVOF
・metallikon spraying
・metal powder spraying
・ceramic coating
・plasma spraying
・nylon spraying,
・Rokide® spraying
・build up spraying of Stellite® and aluminum bronze
[Blasting]
・sand blasting
・steel shot
・steel grid
・cut wire
・glass beads
[Shot peening]
・Shot peening
[Painting]
・baking
・melamine coating,
・acrylic coating
・fluoric coating
・corrosion-resistant coating (nylon, tetrone)
・powder coating
・Molykote®
[Polishing]
・buffing
・cylindrical polishing

●Nickel teflon plating

Nickel Teflon coating is a lubricant, water repellent and incoherent coating.
It is low frictional, heat conductive and strong against corrosion and wear.
This coating also works well for noise reduction and preventing static electricity.

●Nickel boron plating

The hardness of this coating is above 700Hv when deposition, 800Hv when heat-treated at 200℃, and even at 400℃, this coating does not soften. As nickel boron is harder than Ni-P at 200℃, this processing is often applied to aluminum alloys. This coating causes little abrasion to either the surface itself or the chromium plated/nitride surface when slided up against each other.

●Lead-free nickel plating

Strong resistance against corrosion and wear, often applied to shafts or bearings.
Chemical resistance and heat resistance greatly improve when a specific type of stainless steel is thermal sprayed.

●Zinc plating

This coating method is widely applied to various types of parts, especially light electrical parts or automotive parts such as bolts and nuts, as it is incredibly resistant to corrosion.

●Trivalent zinc chromating

The hexavalent chromating is gradually replaced to trivalent plating,
which is a more environmentally friendly method.
This process is applied after zinc plating treatment, and improves corrosion resistance.
The appearance of the coating is similar to that of bright chromate.

●Anodizing

Anodizing is a type of finishing that makes the part corrosion-resistant.
It also works well to obtain a good looking surface.
Widely used for processing automotive parts.

●Hard chromium plating

Good resistance to wear.
This treatment is usually used for processing industrial hydraulic pistons and molds.

●Trivalent chromium plating

Hexavalent plating is gradually replaced to a more environmentally-friendly trivalent plating.

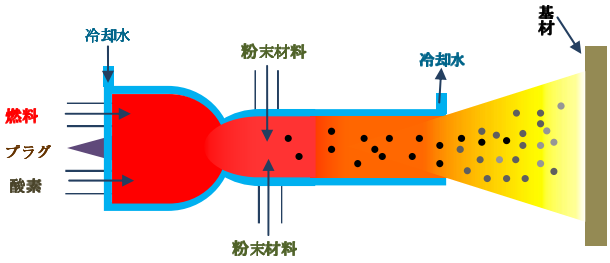
●Phosphating

Hexavalent plating is gradually replaced to a more environmentally-friendly trivalent plating.

●HVOF

◆What is HVOF?

It is a type of thermal spraying that, by making a high pressure inside the spray gun, injects melted materials to the substrate at a high speed.



◆And what is so good about it?

It makes a very hard, dense and uniform coating that is resistant to wear and corrosion, less-porous and less-oxides.

This processing method can form a wide range of coating thickness appropriate for the purpose.

●Ceramic coating

Because this coating is well-resistant to heat, corrosion and wear, it can be applied not only to metals but to glasses and potteries.

●Blasting

This processing is widely used to protect factory buildings from corrosion.

●Molykote®

Molykote® is a type of processing that makes a coating of molybdenum disulfide, which reduces friction and as a result, it is amazingly resistant to wear.

●Painting

We have many types of paint coating services.　Below are some of the examples of painting methods:

• **Acrylic coating**

Acrylic coating is one of the leading technologies in the coating industry.
It is known for its great color retention ability when exposed outside.
Both baking method and air drying method can be used for this processing.

• **Urethane coating**

When urethane coating is applied to a product, it forms a coating that is resistant to weather, chemicals and abrasion.
The coating is very hard but flexible, and often used for automobiles, aircraft and other vehicles.

• **Melamine coating**

Melamine coating is a type of coating usually applied to metal hardware.

• **Epoxy coating**

Epoxy coating is not strong against weather, but it provides superior adhesion, resistance to chemicals and salt, and usually used as primer for machines and automobilesto obtain a good resistant to corrosion.

Process Equipment

Shimokido First Factory

Equipment name	Application	Size / number
Automated plating equipment (Cu, Ni, Cr, Ni-P, Sn)	Copper plating	3500L (1600×2100×1200)
	Ni plating	3500L (1600×2100×1200)
	Cr plating	1200L (1600×700×1200)
	Ni-P plating	1800L (1600×1100×1200)
	Sn plating	2300L (1600×1400×1200)
Automated zinc plating equipment		4500L (1800×2400×1200)
Manual zinc plating equipment		1500L (300×600×900)
Hoisting anodize equipment		5000L (4500×900×1300)
Manual anodize equipment		1500L (2000×900×900)
Hoisting electroless Ni plating equipment		1500L (1500×1000×1200)
Hard chromium plating equipment	No. 1	4000L (2700×1000×1500)
	No. 2	1500L (2000×900×900)×2
	No. 3	360L (600×600×1000)
Silver plating equipment		550L (1100×500×1100)
Phosphating equipment		600L (1500×650×800)
Blackening equipment		800L (1500×900×1000)
Buffing equipment	Buffing lathe	2
	Automatic type buffing machine	1

Shimokido Second Factory

Equipment name	Size
Plating equipment for plastics	1000× 700× 400
Gold-copper plating (pink-gold plating) plating equipment	1000× 700× 400
Tin (semi-bright / bright) plating equipment	2400×1700× 500
Semi-bright silver plating equipment	2400×1200× 500
Nickel plating equipment	600× 500× 700
SnCu solder plating equipment	600× 500× 800

Inspection equipment

Inspection equipment
Thickness meter
X-ray fluorescence
electromagnetic
eddy current
Hardness meter
micro Vickers
Rockwell
Surface roughness meter
Micrometer
Dial gauge
Digital vernier caliper

Automatic electrostatic coating machine

Process Equipment

Shimokido Third Factory

Equipment name	Application	Number	Remarks
Thermal spraying equipment	HVOF	1	
	Arc spraying	1	
	Gas spraying	3	
Engine lathe	Thermal spraying	1	Φ600×3000
Blasting machine	Manual blasting	1	4m×4m×16m
	Automated blasting	1	4m×2.5m×16m
Painting equipment	Work area		70m × 18m
	Hoisting machine	3	2.8t × 3

Zaimokucho Factory

Equipment name	Application / detail	Number	Remarks
Thermal spraying equipment	Plasma spraying	2	
	Arc spraying	3	
	Gas spraying	2	
Lathe	Lathe	1	Φ400×1200
	Lathe	1	Φ800×4000
Blasting equipment	Manual blasting	1	Max: 4000 × 8000
	M Table anual blasting (small parts)	2	
	Table	8	
	Table (aluminum oxide only)	2	
	Conveyor (aluminum cutwire)	1	
Cylindrical grinding machine	Cylindrical grinding machine	4	Full length:2000
Coating line equipment	Automatic electrostatic coating machine	1	Max: 2000 × 1800
	Small paint coating machine	2	

Process Equipment

NSCA Factory

	Equip name ／Application／size
	Automated aluminum surface treatment equipment
	Sulfuric acid anodize 4100L(3500×900×1500)
	Boric - sulfuric acid anodize 4100L (3500×900×1500)
	Hexavalent chromium chem film) 3650L (3500×800×1500)
	Trivalent chromium chem film 3650L (3500×800×1500)
	Paint booth Width: 4.4m
	Painting drying furnace room Temperature range:Up to 200℃
	Laboratory

Inspection equipment

NSCA Factory

	Equip name	Description
	Atomic Absorption Spectrophotometer AA-7000F (Made by SHIMADZU CORPORATION)	BKG: deuterium lamp or self-reversal Measurable range: 185.0 – 900.0nm monochromator: Czerny-Turner mount (aberration correction type) Diffraction grating: 1800 per 1mm Focal distance: 300nm
	Fume hood (Draft chamber) CBZ-Sc12-H1-S (Made by Shimazu RIKA Corporation)	Dimensions: W1200×D750/800×H2250mm Top plate: Ceramic
	Hydrogen embrittlement testing machine	Dimensions: W1150mm×D655mm×H2301mm Test load in tensile: 100kN Test area: W600mm×H1190mm Crosshead speed: 1μm/h to 100mm/min Crosshead speed accuracy: <0.01% von Vnom
	Salt water spray test machine STP-90V-4Z	It complies with "MIL-DTL-5541F". Sample size : 100×50×1mm Size inside the device W900×D600×H400mm

【Quality Management System】

QMS	ＪＩＳ　Ｑ　９１００
Scope of registration	・Surface treatments (chemical conversion coating for aluminum alloys, zinc plating) and painting for aircraft parts and defense products parts ・Thermal spraying and blast processing for generator parts
Register No	ＪＱＡ－ＡＳ００８４
Registered date	2011 / 8 / 5

QMS	ＩＳＯ９００１
Scope of registration	・Surface treatments (plating, thermal spraying and blast processing, painting) of metallic parts
Register No	ＪＱＡ－ＱＭＡ１４４１５
Registered date	2011 / 8 / 5

【Environment Management System】

EMS	Eco action 21
Register No.	０００２９９５
Registered date	２００８ 年１０ 日１０ 日

【Business License】

License type	Painting business in ordinary construction business
License No.	No. 43207 licensed by the governor of Niigata