Directory of Aerospace Enterprises in the Chubu Region, JAPAN
**MRJ (Mitsubishi Regional Jet)**

- The new aircraft made in Japan will soon be flying around the world.
- The first test flight was successfully completed on 11 November 2015.
- The first delivery is expected in 2018.

**Airframe**

- 35% of the Boeing 787 airframe is manufactured by Mitsubishi, Kawasaki and Fuji Heavy Industries, Ltd.

**Forward Fuselage (Composite)** by Kawasaki

**Wing Box (Composite)** by Mitsubishi

**Center Wing (Composite)** by Fuji Heavy Industries, Ltd.

**Main Landing Gear Wheel Well (Composite)** by Kawasaki

**Wing Fixed Trailing Edge (Composite)** by Kawasaki

**H-II A/B**

Mitsubishi Heavy Industries, Ltd. is H-IIA/B launch vehicle manufacturer and launch services provider.

**Engines**

- The Trent XWB and Trent 1000 are engines of Rolls-Royce’s Trent series.
- Mitsubishi Heavy Industries Aero Engines, Ltd. and Kawasaki Heavy Industries, Ltd. have participated in these programs as risk-sharing partners.

**Seats**

- Toyota Boshoku jointly developed with All Nippon Airways the Boeing 787 economy class seats for domestic flights.

**Equipment**

- Nabtesco:
  - Elevator Power Control Unit, Aileron Power Control Unit, Actuator Control Electronics
- Sinfonia Technology:
  - Linear servo actuator for the launch vehicle
- Tamagawa Seiki:
  - Sensors and motors for aircraft

**CFRP**

- TORAY supplies CFRP prepreg material exclusively to Boeing.
<table>
<thead>
<tr>
<th>No</th>
<th>Company Name</th>
<th>Functional Component, Equipment</th>
<th>Part Machining (Engine)</th>
<th>Composite Processing</th>
<th>Electric Cables/Harness</th>
<th>Tooling, Jigs, GSE</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AERO INC.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Aerospace IIDA</td>
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<tr>
<td>3</td>
<td>AIKOKU ALPHA CORPORATION</td>
<td></td>
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<td>4</td>
<td>AKEVONO INDUSTRY CO.,LTD.</td>
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<td>5</td>
<td>APC AEROSPECIALTY INC.</td>
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<tr>
<td>6</td>
<td>Asahi Kinzoku Kogyo Inc.</td>
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<tr>
<td>7</td>
<td>Chubu Nihon Maruko Co., Ltd.</td>
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<tr>
<td>8</td>
<td>CHUO ENGINEERING CO.,LTD.</td>
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<td>9</td>
<td>CHUOZUKEN. CO.,LTD.</td>
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<td>10</td>
<td>CRE Co.,Ltd.</td>
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<td>11</td>
<td>Daichi System Engineering Co., Ltd.</td>
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<td>12</td>
<td>DAIKI SANGYO Co., Ltd.</td>
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<td>13</td>
<td>Enomoto BeA Co., Ltd.</td>
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<td>14</td>
<td>FUJI MACHINE WORKS, LTD.</td>
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<td>15</td>
<td>HIKARI MANUFACTURE CO., LTD.</td>
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<td>16</td>
<td>HODEN SEIMITSU KAKO KENKYUSHO CO., LTD.</td>
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<td>17</td>
<td>KAI AERO-EQUIPMENT MFG.CO., LTD.</td>
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<td>18</td>
<td>Ishigane Seki CO., LTD.</td>
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<td>19</td>
<td>ITO SEIMITSU CO., LTD.</td>
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<td>20</td>
<td>Kakamigahara Aero Equipment Co., Ltd.</td>
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<td>21</td>
<td>KANEFUSA CORPORATION</td>
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<td>22</td>
<td>KATO MANUFACTURING CO., LTD.</td>
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<td>23</td>
<td>Kondo Machine Corporation</td>
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<td>24</td>
<td>KOSAKA IRON WORKS, LTD.</td>
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<td>25</td>
<td>Koyama Chemical Co., Ltd.</td>
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<td>26</td>
<td>MATSUIRA CO., LTD.</td>
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<td>27</td>
<td>Weissner Machinery Works Co., Ltd.</td>
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<td>28</td>
<td>WEIRA Corporation</td>
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<td>29</td>
<td>Wazuhcraft CO., LTD.</td>
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<td>30</td>
<td>Mizuno Machinery Co., Ltd.</td>
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<tr>
<td>31</td>
<td>MIZUNO METAL WORKS CO., LTD.</td>
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<tr>
<td>32</td>
<td>NABELL CORPORATION</td>
<td></td>
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</tr>
</tbody>
</table>
01 Company Profile

AERO INC.
株式会社 エアロ

CERTIFICATION
JIS Q 9100, JIS Q 9001, JIS Q 14001

WEBSITE
http://www.aeross.jp

Outline of Business

- Construction and assembly of aircraft
- Painting of aircraft
- Design and production of assembly jigs

Our Strengths

- Concentrating AERO’s skills and knowhow
  AERO’s collective skills and expert knowledge all come together in assembly, the company’s core business. The quality of aircraft comprising tens of thousands of parts and components is supported by the assembler’s sense of mission in aircraft construction, along with skills developed through constant improvements.

- Dedicated paint booth helps shorten delivery times and reduce costs
  Upon noticing productivity losses in the transport part of “assembly-transport-painting” in outsourced painting jobs, we immediately purchased customized painting booths designed especially for painting aircraft bodies. This reduces the time between the assembly and painting stages while lowering costs.

- Global standard quality assurance
  Before establishing any of our quality maintenance check systems, from human resources training to improve skills and awareness to decisions on work procedures designed to ensure uniform quality, we acquired certification of JIS Q 9100 and JIS Q 9001, the global benchmarks for quality standards, superseding other quality management systems based on rigid rules.

Facility & Equipment

- Paint Booth
  Manufacturer: SAICO (Italy)
  System: Downdraft spray booth
  Dimensions: Sanding booth 6200mm×6700mm
  Paint booth: 6200mm×6700mm, 8200mm×6700mm
  Drying booth: 15200mm×6700mm

Organization

Employees: 500

Chairman
Yoshiteru Nishimura

President
Noriyuki Wada

Vice President
Noriharu Nishimura

Quality Assurance Department

Sales Department

General Affair Department

Company Profile / Contact

Representative: Noriyuki Wada, President
Capital: US$208,333
Major Customers: MHI, FHI, KHI

Address: 2-65-27 Kusunoki, Yatomi, Aichi 498-0066, Japan
TEL: +81-567-66-3501
E-mail: contact@aeross.jp
Outline of Business

Aerospace IIDA is a cooperative organization represented by the company “NEXAS”, consisting of small and medium-sized companies, and conducted a deep and remarkable study through over 600 working teams and formed a new world-class industrial cluster in 2006.

In order to undertake large work projects, trust among the companies is very important, which is built through team working. Above all, under the quality assurance system backed by JIS Q 9100, Aerospace IIDA is steadily winning contracts for manufacturing aircraft parts.

Our Strengths

The representative company NEXAS has overall responsibility for quality assurance of products according to JIS Q 9100. Completion of the base plant for the aerospace industry cluster enables us to perform machining processes and special processes (such as heat treatment, surface treatment, and non-destructive testing) and sub-assembly work by establishing an intra-regional integrated manufacturing system.

Facility & Equipment

<table>
<thead>
<tr>
<th>Facility &amp; Equipment</th>
<th>Max. Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-axis machining center</td>
<td>4000×1500×1000</td>
</tr>
<tr>
<td>Machining center</td>
<td>4200×3000×1500</td>
</tr>
<tr>
<td>NC compound lathe</td>
<td>614×250×2060</td>
</tr>
<tr>
<td>Electric discharge</td>
<td>550×350×320</td>
</tr>
<tr>
<td>Hob machine</td>
<td>160 Dia φ120</td>
</tr>
<tr>
<td>NC surface grinding machine</td>
<td>1095×440</td>
</tr>
<tr>
<td>Boring machine</td>
<td>1020×760×300</td>
</tr>
<tr>
<td>Sheet metal processing machine</td>
<td>2,650×1,290</td>
</tr>
<tr>
<td>3-D coordinate measuring machine</td>
<td>1200×2000×800</td>
</tr>
<tr>
<td>Applicable software</td>
<td>CATIA V5</td>
</tr>
</tbody>
</table>

Products

Parts processed by 5-axis control machining center (MC)

Airplane related processed article

Company Profile / Contact

Representative: NEXAS Co., Ltd. Koji Kaneda
Capital: US$16,667 ($1 = ¥120)
Major Customers: Tamagawa Seki Co., Ltd.
Address: 51-6, Shimotonoka, Iida, Nagano 395-0154, Japan
TEL: +81-90-5416-9629
E-mail: ne.k_mizutani@ne-co.jp
Outline of Business

Products
- Aero structure parts: Ribs, InSPA-ribs, Beams, Hinges, Trunnions, Fittings
- Aero Engine parts: Engine cases, Frames, Blisks, Diffusers
- Impellers: Compressor wheels for Gas turbines, Turbochargers

Our Strengths
- Founded in 1943
- Started AP Division in 1969
- We are the first company to introduce 5-axis machining center in 1975 in Japan.
- Our company is leading 5-axis technology, and have a wealth of experience in making complex aerospace, industrial and automotive parts. We have developed original cutting know-how utilizing a 3-D CAD/CAM system (CATIA), and aim to become the world’s leading 5-axis machining company.

Sales Amount

Facility & Equipment
- 5-axis machining centers: More than 110
  - MAKINO: T1, MAG1, a61-5x, D300
  - MITSUI: H86A-S, H683T, HU507T, HSSA-S, VERTEX550
  - MAZAK: VORTEX1400, e1080
  - OKUMA: VMP16, M1000VH, M900VH
  - DMG MORI: DMU200P

Organization

Specialties
- Aikoku Alpha AP Division is a leading 5-axis manufacturer offering advanced design skills, cutting technology, anti-vibration system by Fourier analysis, and advanced CAD/CAM tool-path program supported by the MS Division.
- Materials: Aluminum, Titanium, Nickel, Stainless steel
- Part sizes: Plate: up to 12,000mm x 4,000mm, Impeller: up to Ø1,800mm

Company Profile / Contact

Representative
Katsufumi Hida, President

Capital
US$10.0 million ($1 = ¥120)

Major Customers
Mitsubishi Heavy Industries, Ltd.
Fuji Heavy Industries, Ltd.
ShinMaywa Industries, Ltd.

Address
Morikami, Sobue-cho, Inazawa,
Aichi 495-8501, Japan
TEL
+81-587-97-1115
E-mail
a-kawaguchi@aikoku.com
Company Profile

AKEVONO INDUSTRY CO., LTD.
曙工業 株式会社

CERTIFICATION ISO 9001, ISO 14001, JIS Q 9100 (scheduled in 2016)
WEBSITE http://www.akevono.co.jp

Outline of Business

- Small & medium size aircraft parts
- Automobile trial products
- Precision machinery parts processing
- Equipment parts processing, robot parts, machine tool parts processing

Our Strengths

Delivering high-quality products through efficient equipment and state-of-the-art knowledge

- First we propose the production method, then fix the production process together with the customer.
- Superior processing technology
  1) JR Maglev superconducting magnet cooling equipment
  2) Humanoid robot exhibited at Aichi Expo 2005
  3) Special bolts
- Flexible customer service
  Meeting the needs of customers, such as lot production, rapid delivery, low price

Facility & Equipment

<table>
<thead>
<tr>
<th>Machine</th>
<th>Maker</th>
<th>Model name</th>
<th>X-axis Y-axis Z-axis</th>
<th>Type</th>
<th>Introduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal spindle machining centers</td>
<td>JTEKT Corporation</td>
<td>FH550SX</td>
<td>750x800x850mm</td>
<td>500x500 (pallet dimensions)</td>
<td>Jul. 2008</td>
</tr>
<tr>
<td>Vertical spindle machining centers</td>
<td>Matsuzawa Machinery Corporation</td>
<td>MX520</td>
<td>630x560x510mm</td>
<td>5-axis</td>
<td>Jan. 2014</td>
</tr>
<tr>
<td>Vertical spindle machining centers</td>
<td>BROTHER</td>
<td>M140x1</td>
<td>200x440x305mm</td>
<td>5-axis</td>
<td>Nov. 2014</td>
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<tr>
<td>Vertical spindle machining centers</td>
<td>DMG MORI Co., Ltd.</td>
<td>DMU100</td>
<td>1000x1250x1000mm</td>
<td>5-axis</td>
<td>Nov. 2015</td>
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<tr>
<td>NC lathes</td>
<td>Okuma Corporation</td>
<td>LB300</td>
<td>Drum type</td>
<td></td>
<td>Mar. 2007</td>
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<tr>
<td>CNC cylindrical grinders</td>
<td>JTEKT Corporation</td>
<td>GL4P-S50 II</td>
<td>Distance between centers 500mm</td>
<td></td>
<td>Aug. 2013</td>
</tr>
</tbody>
</table>

Sales Amount

US$12M ($1= ¥120)

Organization

Employees: 65

Company Profile / Contact

Representative
Akitaka Sugiyama

Capital
US$284,000

Major Customers
AISIN Group
JTEKT Corporation
Hoshizaki Electric Co., Ltd.

Address
55-1 Minamiutaguchi, Satomachi, Anjoh, Aichi 446-0001, Japan

TEL
+81-566-97-0677

E-mail
tetsuharu@akevono.co.jp

Important Information / Notices

Akevono Industry meets customers’ needs and solves problems.
We help to create “monozukuri” products and machine tools for the aircraft and automobile industries.
We offer outstanding products at reasonable prices.
APC AEROSPECIALTY INC.

CERTIFICATION
JIS Q 9100, JIS Q 14001, Nadcap (Nonconventional Machining)

WEBSITE
http://www.apc-aero.co.jp

Outline of Business

- Jet engine parts manufacturing using electrochemical machines (ECM)
- Precise machining using precision electrochemical machines (PECM) for high dimensional and repeat accuracy
- Burr-free surface
- No thermal damage
- No tool wear
- Capable of machining complex shapes in extremely hard materials
- Heavy-duty containerization systems for satellite and space development equipment
  - Full production of reusable shipping and storage containers
  - Design, integration, testing and analysis
  - Satellites, military and commercial engine modules, missiles, and precision electronic equipment
  - Helical cable isolator for shock and vibration attenuation
  - Container accessories such as breather valves, humidity indicators, desiccant baskets, and record holders
  - Jigs and fixtures
- Deburring and surface finish equipment for removing burrs, cleaning internal and external surfaces, and improving surface roughness for castings and machined parts
- Subassembly of civil and military aircraft panels
- Repair of aircraft panel components
- Large paint booth

Jet engine parts
Injection nozzle
Sample of aerodynamic surface

Spacecraft container
Carriage assembly
Helical isolators

Machining, electrochemical machining
Building deburring and surface finish equipment
Heavy-duty containers
Sophisticated painting
Aircraft panel subassembly
Asahi Kinzoku Kogyo Inc.
旭金属工業 株式会社

**CERTIFICATION**
Nadcap, JIS Q 9100, ISO 9001

**WEBSITE**
http://www.asakin.com/

### Outline of Business
- Manufacture of airplane parts for Boeing, Airbus, Bombardier, MRJ, etc.
- Aerospace-related products account for 96% of our total production.
- Machining, shot-peening, non-destructive testing, surface treatment (plating, anodizing), painting, sub-assembly

### Our Strengths
- We implement all special processes in vertically integrated production ("One-stop Shop").
- Special processes approved by individual customers
- The first company in Japan to receive Nadcap accreditation
- Nadcap accreditations for non-destructive testing, shot-peening, chemical processing and thermal spray coating
- Advanced technology for thermal spray coating (HVOF: High Velocity Oxygen Fuel)

### Facility & Equipment

#### Facilities
- Headquarter plant, Kyoto-South plant, Gifu-Anpachi plant, Gifu-300 year Plant, Gifu-East Plant

#### Equipment
- **Shot-peening**
  - Shot-peening equipment (impeller type and nozzle type)
- **Anodizing**
  - Chromic acid anodizing, sulfuric acid anodizing, boric-sulfuric anodizing, hard anodizing, hard anodizing with Teflon impregnated
- **Thermal spray coating**
  - HVOF equipment with spray guns DJ2700 and DJ2600
- **Inspection**
  - Penetrant inspection equipment, salt spray test cabinet, rupture (hydrogen embrittlement) evaluation, tensile strength (adhesion strength)

### Vertically Integrated Production
- Machine processing
- Non-destructive testing
- Shot-peening
- Shipment
- Sub-assembly
- Paint
- Surface treatment

### Sales Amount
- 6,405,542,000 yen
  - (Sept. 2013 – Aug. 2014)

### Social Contributions
- We built the Anpachi Sky Wall for free climbing at the Gifu-Anpachi Plant, which is enjoyed by both employees and locals.

### Company Profile / Contact

**Representative**
Yasuhiro Yamanaka

**Capital**
US$829,166

**Major Customers**
Mitsubishi Heavy Industries, Shimadzu Corporation, Kawasaki Heavy Industries

**Address**
Gifu-Anpachi Plant, 4851-4 Maki, Anpachi-cho, Anpachi-gun, Gifu 503-0125, Japan

**TEL**
+81-584-64-5061

**E-mail**
asakin@akg.co.jp
Outline of Business

Chubu Nihon Maruko (NCAGE: SKY48) is a Japan-based technology company specialized in engineering and manufacturing of interconnect products for aerospace, defense, and industrial markets.

Established in 1990, today Chubu Nihon Maruko is one of the most experienced domestic companies in the market, earning credentials by supplying highly reliable interconnect solutions.

CNM’s expertise broadens from MIL standard connectors, customized harness assemblies and connectors for defense and aerospace systems.

As an interconnection expert, CNM has been playing its role as solution provider for critical missions such as H-IIA, H-IIB launcher vehicles, HTV, and HAYABUSA.

Our Strengths

- Connectors
  - MIL standard connectors (MIL-DTL-83513 Micro Miniature Connectors & MIL-DTL-389999 Circular Connectors)

- Custom Harness Assemblies
  - Design and develop harness assemblies for harsh environmental applications

- Fiber Optic Interconnect Solutions for aerospace applications
  - Fiber optic connectors and E/O converters

- Rotary Link Connector® (Non-Contacting Opto-electronic Rotary Joint)
  - >3Gbps data transmission through rotational interface with continuous 360 rotation

Featured Product

- MIL-DTL-38999 – MIL Standard Circular Connector (Souriau) & Custom Harness Assemblies
  CNM is the local authorized VAD (Value Added Distributor) for MIL-DTL-38999 Circular Connectors by Souriau, which are world-wide well-known for exceptional performance and wide range of product lines such as hi-density signal layouts, fiber optics, quadrax, and hi-speed ethernet. CNM supply custom harness assemblies according to customer requirements.

- Rotary Link Connector® (RLC) – Non-Contacting Opto-Electronic Rotary Joint
  RLC is a non-contacting opto-electronic rotary joint for high-speed signal transmission and power supply through a rotational interface allowing 360 degree rotation between stator and rotor section.
  - Applications: Airborne Surveillance Camera, Radar, Robotics

Sales Amount

US$13 Million

Organization

- Employees: 132
- Komaki factory (headquarters)
  - Production
  - Production Control / Procurement
  - Engineering / R&D
  - Quality Control
  - Sales / International Sales
  - Administration
- Kobe sales office

Representative
Hiroki Kohtabashi; President

Address
23-3, Noguchi, Komaki, Aichi
485-0806, Japan

TEL
+81-568-79-6512

E-mail
m_kohtabashi@cnmaruko.co.jp

Capital
330K $1.00®¥120

Major Customers
Mitsubishi Heavy Industries, Ltd.
Kawasaki Heavy Industries, Ltd.
CHUO ENGINEERING CO., LTD.

CERTIFICATION  ISO 9001, JIS Q 9100
WEBSITE  http://www.chuo-eng.co.jp/

Outline of Business
- Design, analysis and testing in the development of aerospace products

Our Strengths
- We have worked to expand and enrich aerospace engineering for over 50 years.
- We currently employ over 300 engineers in many different projects related to the aerospace industry.
- We focus primarily on the design and analysis of aircraft, aerospace engines, and aerospace equipment, and offer specialized services to the development of various aircraft and space projects across Japan.

Analysis:
- Various type of analysis
- Fatigue and damage tolerance
- FEM modeling and analysis
- Fluid and thermal analysis

Design:
- Airframes, systems, interiors
- Layout and detail design
- Design for manufacturing
- Production and maintenance tools

Total Integrated Design

Analysis tools:
- MSC Nastran
- Patran / Femap
- Marc
- Adams
- NASGRO
- FLUENT
- HyperWorks

Design tools:
- 3D CAD
  - CATIA V4, V5
  - Creo
  - NX (UG)
  - SolidWorks
  - I-CAD/SX
- 2D CAD
  - Micro CAD
  - Auto CAD
  - CAD PAC
  - CCD

Facilities & Equipment

Testing equipment:
- Design & manufacturing
- Testing support

Analysis:
- Various type of analysis
- Fatigue and damage tolerance
- FEM modeling and analysis
- Fluid and thermal analysis

Design:
- Airframes, systems, interiors
- Layout and detail design
- Design for manufacturing
- Production and maintenance tools

Total Integrated Design

Analysis tools:
- MSC Nastran
- Patran / Femap
- Marc
- Adams
- NASGRO
- FLUENT
- HyperWorks

Design tools:
- 3D CAD
  - CATIA V4, V5
  - Creo
  - NX (UG)
  - SolidWorks
  - I-CAD/SX
- 2D CAD
  - Micro CAD
  - Auto CAD
  - CAD PAC
  - CCD

Organization

Facilities & Equipment

Testing equipment:
- Design & manufacturing
- Testing support

Analysis:
- Various type of analysis
- Fatigue and damage tolerance
- FEM modeling and analysis
- Fluid and thermal analysis

Design:
- Airframes, systems, interiors
- Layout and detail design
- Design for manufacturing
- Production and maintenance tools

Total Integrated Design

Analysis tools:
- MSC Nastran
- Patran / Femap
- Marc
- Adams
- NASGRO
- FLUENT
- HyperWorks

Design tools:
- 3D CAD
  - CATIA V4, V5
  - Creo
  - NX (UG)
  - SolidWorks
  - I-CAD/SX
- 2D CAD
  - Micro CAD
  - Auto CAD
  - CAD PAC
  - CCD

Company Profile / Contact

Representative  Yoshihiro Saita, President
Capital  US$0.97 million (including capital reserve)
Major Customers  Mitsubishi Heavy Industries, Ltd.
Mitsubishi Aircraft, Ltd.
Kawasaki Heavy Industries, Ltd.
Address  Nitta Bldg., 1-17-23 Meieki-minami, Nakamura-ku,
Nagoya, Aichi 450-0003, Japan
TEL  +81-52-589-2975
E-mail  aerospace@chuo-eng.co.jp
CHUOZUKEN. CO., LTD.

Outline of Business
- **Design**
  - Aircraft design
  - Automobile design

- **CAE**
  - Crash analysis
  - Vibration analysis
  - Noise analysis
  - Strength analysis
  - Fluid analysis

- **Technical Publication**
  - Aircraft manual development (ATA iSpec2200/S1000D)
  - Electronic manual development (DITA/XML/SGML)

- **System Development**
  - Web contents creation
  - DTP

Our Strengths
- **CAE**
  - 30 years of experience in automobile structural analysis and thermo-fluid analysis
  - 10 years of experience in aircraft structural analysis

- **Technical Publication**
  - Compliance with ATA iSpec2200 and S1000D (aviation standards)
  - English manuals, authored in full compliance with Simplified Technical English (ASD-STE100)
  - 15 years of experience in electronic documents in XML or SGML format
  - Data constructed using PTC products (We are a licensed PTC software reseller.)

Sales Amount
US$12,833,000
(fiscal year 2014)

Facilities & Equipment

<table>
<thead>
<tr>
<th>Design</th>
<th>CAE</th>
<th>Technical Publication</th>
<th>System Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATIA V5</td>
<td>HyperWorks, Nastran, Primer</td>
<td>PTC Arbortext</td>
<td>VB, .Net, C, C++, C#, Java</td>
</tr>
</tbody>
</table>

Organization
- General Affairs Department
- Engineering Department
- 1st Engineering Section
- 2nd Engineering Section
- Planning Department

Important Information / Notices
Are you planning to do business with a Japanese company?
Do you need to create aircraft manuals conforming to aviation standards?
We offer a total solution for coordinating with prime or tier vendors regarding technical publication and customer support.
We also provide structural design optimization supported by our design department.
Why not improve the quality and growth of your products with our service backed by solid performance and experience?

Company Profile / Contact
- **Representative**
  - Masashi Yanagida
- **Capital**
  - US$166,666 ($1 = ¥120)
- **Major Customers**
  - Mitsubishi Heavy Industries,
  - Mitsubishi Aircraft Corporation,
  - Mitsubishi Motors Corporation,
  - Nabtesco Corporation
- **Address**
  - 15-20 Furuwatari-cho, Naka-ku, Nagoya, Aichi 460-0025, Japan
- **TEL**
  - +81-52-323-2100
- **E-mail**
  - info@chuozuken.co.jp
CRE Co., Ltd.
株式会社 シーアールイー

CERTIFICATION
JISQ9001 : 2008 (ISO9001 : 2008), MSJ4000

WEBSITE

Outline of Business
Focused on gaining customer trust, CRE offers engineering support in the areas of aircraft structural design, structural analysis, electrical and electronic design, software development, device design, productivity-focused process design, and quality assurance.
CRE prepares and edits a variety of manuals. We also perform contracted projects associated with documentation, such as electronic conversions of documents and translations of technical documents and manuals.

Our Strengths
■ CRE has been involved in nearly all of the major development projects in the Japanese aerospace industry, while building upon the strong relationships with aircraft manufacturers.
■ CRE has experience in the design and development of almost all major components of aircraft.
■ Our skilled engineers, with 30 years of experience in aircraft design and development, are assigned to key roles in projects in order to manage the projects and provide training and guidance to younger engineers.

Facilities & Equipment
CATIA V4 ............................................. 11
CATIA V5 ............................................. 18
CADAM ............................................. 8
Solid Works ......................................... 1
MD NASTRAN DESKTOP ......................... 3
LS-DYNA ........................................... 1
HYPER WORKS ..................................... 1
FEMAP WITH NASTRAN .......................... 1
NX13300 MACH3 ................................. 1

Sales Amount

Organization
Employees: 640
Head Office
(Accounting Dept., General Affairs Dept., Personnel Dept., PR and Planning Dept.)
• Gifu Div.
• Nagoya Div.
• Aerospace Development Div.
• QA Div.
• Analysis Div.
• JIG Div.
• System Solution Div.
• Engineer Training Center
• Audit Office

Company Profile / Contact
Representative
Osamu Owaki

Capital
US$0.7375 million ($1 = ¥120)

Major Customers
MHI, KHI, FHI, IHI, SMIC, NIPPI, MITAC

Address
1-2-2 Kanayama, Naka-ku.
Nagoya, Aichi 460-0022, Japan

TEL
+81-52-323-7731 (main number)

E-mail
pr_info@cre-nagoya.com
Outline of Business

“Better support through superior technology”

We challenge the most advanced technologies with innovation and expertise to provide our customers with the most cutting-edge and on-time industrial solutions.

- R&D, Design, Product Engineering - analysis and optimization of aircraft parts and structures (shown right)
- Quality Assurance - supporting functional and flight testing, and posttest data analysis.
- Software Development - numerical control machining.

Our Strengths

- Our employees work harder and go further to satisfy and exceed the needs of our customers with a company-wide mission to always look from the customer’s viewpoint to provide the best possible service and make an indispensable contribution to our clients’ success. DSE knows that the partnerships we build with our customers are changing the world by building a better tomorrow with technology and innovation, and we are committed to this endeavor.

- We have the right people with the right flexibility to meet the specific technical demands of our customers. We have over 600 employees with a wide range of experience, backgrounds, and know-how in both business and technical fields such as: marketing, aerodynamic design/analysis, production engineering and quality assurance relating to development programs in aerospace, automobile, industrial machinery and software.
Company Profile

DAIKI SANGYO Co., Ltd.

Outline of Business
- Assembly of aircraft structures, as well as Helicopters in Commercial & Self Defense Force.
- Periodic inspection and maintenance of Self Defense Force fighter aircraft and Helicopter parts.
- Design and Manufacturing of Jigs & Tools.
- Assembly of Rocket launching system and maintenance and inspection of associated parts and equipment.
- Design and Manufacturing of High performance and large powered (Max 21Mpa, 1 unit: 500 liters per minute) hydraulic systems.

Our Strengths
Since in 1961, contributed to design, manufacture the custom-made machine/equipment including rocket launching structural assembly and maintenance, inspection of associated parts and equipment.
- Extensive experience in aircraft structure assembly.
- The Accumulated know-how to design and manufacture jigs that can lead to less man-hours in operations.
- Collaboration with Mitsubishi Aircraft Corporation for the development of many process of MRJ assembly. Design and manufacturing of Jigs & Tools, Major component assembly.

Products
- Jig for assembling framework of aircraft fuselage
- Jig for panel assembly of aircraft fuselage turning by hydraulic system
- Back up trolley for shield machine with hydraulic unit

Facility & Equipment
- CATIA V4 ...................... 1
- CATIA V5 ...................... 7
- MICRO CADAM ............... 3
- CADPAC CRIATOR .......... 3
- Solid Works ................... 2
- Laser Tracker (API) .......... 2

Organization
Employees 500
- President
- Senior Managing Director
- Management Section
- Parts Control Section
- Production Technology Section
- Quality Assurance Section
- Production Section
- Sales Section
- Engineering Section
- Materials Section
- Production Section
- Quality Assurance Section

Company Profile / Contact
Representative
Shigenori Naito, President

Capital
US$ 250,000

Major Customers
MHI, IHI

Address
3725-1 Yamada, Toin-cho, Inaba-gun, Mie 511-0251, Japan

TEL
+81-594-76-2201

E-mail
dsk-info@e-dsk.co.jp
Company Profile

Enomoto BeA Co.,Ltd.

CERTIFICATION JISQ9100, ISO9001
WEBSITE http://www.enomotoweb.com

Outline of Business
- Manufacture of aerospace-related components and design, produce, fixtures for machining.
- Develop, design, manufacturer and provide machine protection products.
- Research, develop, manufacture and provide environment-related projects and products.

Our Strengths
- We stand out amongst our competitors by specializing in many state of the art double column machining centers and large sized 3-axis and 5-axis machines.
- We currently have a sufficient number of skilled NC programmers and can react quickly to increase CAD/CAM systems when necessary.
- Due to our 60 years of accumulated experience in the aerospace industries, our excellent technology to perform highly difficult precision manufacturing and quality assurance systems are highly appreciated by leading heavy industries.
- We develop our own machine protection products including (chip conveyors and telescopic way covers) which lead the market with a share of over 30% in Japan.
- We locate in Kakamigahara, Gifu which is a major aerospace industry center in the Tokai district.

Facility & Equipment

<table>
<thead>
<tr>
<th>Type of Machining</th>
<th>Number of Machines</th>
<th>Manufacturer</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Axis Machining Center</td>
<td>1</td>
<td>MAKINO</td>
<td>X:8,200mm×Y:2,000mm×Z:650mm Spindle Motor 120kw Spindle speed 33,000rpm</td>
</tr>
<tr>
<td>5-Axis Machining Centers</td>
<td>9</td>
<td>OKUMA</td>
<td>X:3,050mm×Y:850mm×Z:700mm Spindle Motor 45/55kw Spindle speed 12,000rpm</td>
</tr>
<tr>
<td>5-Axis 2-Spindles Machining Centers</td>
<td>2</td>
<td>TOSHIBA</td>
<td>X:12,000mm×Y:4,000mm×Z:800mm Spindle Motor 45/55kw Spindle speed 12,000rpm</td>
</tr>
<tr>
<td>5-Axis Machining Center</td>
<td>1</td>
<td>OKUMA</td>
<td>X:11,500mm×Y:3,200mm×Z:800mm Spindle Motor 30/22kw Spindle speed 4,000rpm</td>
</tr>
<tr>
<td>5-Axis Machining Center</td>
<td>1</td>
<td>MATSUURA</td>
<td>X:760mm×Y:845mm×Z:660mm Spindle speed 20,000rpm</td>
</tr>
<tr>
<td>Other 3-Axis, 4-Axis, 5-Axis Machining Centers</td>
<td>37</td>
<td>OKUMA, DMG MORI SEIKI, SHIGA, MATSUURA, MITSUBISHI, etc.</td>
<td></td>
</tr>
<tr>
<td>3-Dimensional Coordinate Measuring Machine</td>
<td>1</td>
<td>Carl Zeiss</td>
<td>X:1,100mm×Y:3,000mm×Z:1,000mm</td>
</tr>
</tbody>
</table>

Sales Amount

US$ 44,166,666/2015fy (Expected Sales Amount)
US$ thousand ($1 = ¥120)

Organization

Employees: 341

Company Profile / Contact
Representative Naohiro Enomoto
Capital US$ 83,333 ($1 = ¥120)
Major Customers Kawasaki Heavy Industries, Ltd.
Mitsubishi Heavy Industries, Ltd.
Address 5-10, Soharakoamachi, Kakamigahara, Gifu 504-8551, Japan
TEL +81-58-389-7433
E-mail e.hr@enomotoweb.com
FUSO MACHINE WORKS, LTD.

Establishment: June 1, 1953

Lines of business:
Design and manufacture of various equipment for automation
(for automobile, autopart, and semiconductor industries)
Design and manufacture of precision molds and dies for press and injection molding
Processing of ultra-precision parts
Machining & inspection of aircraft parts

Our Strengths
Proof of Skills

- 5-axis machining center (MAKINO Ti) 1500×1300×2000mm
- High-speed multi center (SNK RB-4NM) 900×900×900mm
- 5-axis horizontal machining center (Mitsui Seiki HU63A-5X) 900×900×900mm
- 5-axis vertical machining center (SNK CMV-100) 1500×1330×1300mm
- CNC jig borer (Yasuda YBM 950V ver.III) 900×500×350mm
- CNC 3-dimensional coordinate measuring machine
  (Zeiss (Accretech) Prismo 7) 900×1180×650mm

Employees: 355
(Head Office and Factory: 225, Hokusei Factory: 75, Toin Factory: 55)

- Head Office and Head Office Factory
  500 Ooaza, Masuda, Kuwana, Mie 511-8558
  Tel: +81-594-24-5050 Fax: +81-594-21-9394

- Hokusei Factory
  237 Ookondo-shinden, Hokusei-cho, Inabe, Mie 511-0425
  Tel: +81-594-72-6111 Fax: +81-594-72-6115

- Toin Factory
  36 Aza Higashikawarahara Ooaza, Chikushi, Toin, Inabe, Mie 511-0253
  Tel: +81-594-76-0611 Fax: +81-594-76-0668

- 2nd Toin Factory
  1110 Ooaza, Roppano-shinden, Toin, Inabe, Mie 511-0242
  Tel: +81-594-86-0001 Fax: +81-594-86-0022

Overseas affiliated companies:
- Tianjin Fuso Machine Works, Ltd.
- Fuso U.S.A., Inc.
- Pt. Fuso Machine Works Indonesia

Company Profile / Contact

<table>
<thead>
<tr>
<th>Representative</th>
<th>Gaku Hattori</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>US$250,000</td>
</tr>
<tr>
<td>Major Customers</td>
<td></td>
</tr>
<tr>
<td>Denso Corp., Toyota Motor Corp.</td>
<td></td>
</tr>
<tr>
<td>Honda Motor Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>Nikon Corp., Tokyo Seimitsu Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>Kobe Steel, Ltd.</td>
<td></td>
</tr>
<tr>
<td>Covalent Materials Corp.</td>
<td></td>
</tr>
<tr>
<td>Mitsubishi Heavy Industries, Ltd.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>Fuso Machine Works, Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hokusei Factory</td>
<td>+81-594-21-9394</td>
</tr>
<tr>
<td>Toin Factory</td>
<td>+81-594-76-0668</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-mail</th>
<th><a href="mailto:kfujii@fusokoki.co.jp">kfujii@fusokoki.co.jp</a></th>
</tr>
</thead>
</table>
HIKARI MANUFACTURE CO., LTD.
株式会社 光製作所

CERTIFICATION  JIS Q 9100, Nadcap (CMSP), ISO 14001
WEBSITE  http://www.hikariss.co.jp/

Outline of Business
Machining processing of parts for aircraft and spacecraft frames and engines. Application of processing technologies to produce a variety of products to be supplied to the market.

- Main aerospace products:
  - Aircraft parts
  - Aircraft engine parts
  - Spacecraft parts and engine parts
  - Aircraft parts for composite materials
  - Jigs for composite laminated materials
  - Design and manufacture of special devices
- Other main products:
  - Functional automotive parts
  - Hydraulic parts for construction machines

Our Strengths
We carry out precision processing of complicated shapes of aircraft parts with many kinds of NC machines (including simultaneous 5-axis control).
We machine all types of materials from aluminum alloys to difficult-to-cut thick titanium, stainless steel, nickel alloy, and carbon fiber reinforced plastics (CFRP).
We use high-precision equipment and software for process setup, jig design, NC program creation, manufacture, and continuous operation to inspection.
We manufacture various jigs, test equipment, etc. by performing design, material supply, welding, machining, and assembly adjustment in our company. This strength enables us to propose various solutions.

Machining equipment
- Horizontal 5-axis machining center: 3 (Mitsui Seiki W1300mm × L1200mm × H1200mm)
- Bridge type 5-axis machining center: 5 (Shin Nippon Koki W4000mm × L11000mm × H1000mm)
- Vertical NC lathe: 5 (Toshiba Machine Φ1100mm × H800mm)
- Horizontal NC lathe: 4 (Okuma Φ1000mm × L4000mm)
- Other NC machines (About 100)

Measure equipment
- Coordinate measuring machine: 3 (Mitutoyo W1000mm × L2000mm × H800mm)

CAD/CAM system
- CATIA V5

Sales Amount
<table>
<thead>
<tr>
<th>Year</th>
<th>Aerospace</th>
<th>Others</th>
</tr>
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<tbody>
<tr>
<td>2011</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015 (Forecast)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Organization
- General Affairs Dept.
- Parts Production of Aerospace Division
- Equipment & Tool Fabrication Division
- Compressor & Hydraulic Parts Mass Production Division
- Production Engineering Dept.
- Quality Control Dept.

IMPORTANT INFORMATION / NOTICES
Fundamental Policy
To contribute to the development and welfare of society through eco-friendly manufacturing, providing quality assured products that satisfy our customers.

Company Profile / Contact
- Representative: Yoshihito Matsubara, President
- Capital: US$750,000 ($1 = ¥120)
- Major Customers: Mitsubishi Heavy Industries Co., Ltd., Fuji Heavy Industries Co., Ltd.
- Address: 248-3 Nakano, Kasamatsu-cho, Hasima-gun, Gifu 501-6034, Japan
- TEL: +81-58-387-4361
- E-mail: g.affairs@hikariss.co.jp
**Company Profile**

**HODEN SEIMITSU KAKO KENKYUSHO CO.,LTD.**

株式会社 放電精密加工研究所

**CERTIFICATION**
Nadcap(CP, CT, NM), JISQ9100(AS9100), ISO9001, ISO14001

**WEBSITE**
http://www.hsk.co.jp

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**Outline of Business**

- Machining of the low-pressure turbine blade for the aero gas turbine engine and various parts for rocket engine.
- Metal surface treatment of aero engine parts and automobile parts etc.
- Manufacturing of various molds for the ceramics honeycomb injection and Aluminum injection.
- Trust processing of industrial gas turbine parts, automobile parts and other metal product.
- Development and manufacturing of the mechatronics products.
- Manufacturing of the high precise and high efficient digital servo press.
- Trust processing of the press parts.
- Sales of the chrome free paint “ZECCOAT”.

**Our technology**

- Technology of metal machining with electric discharge machining (EDM) as main.

HSK covers the metal machining technologies of the EDM cultivated by experience more than 50 years, the manufacturing of precise mold by several machining methods and the surface treatment that first developed the chrome free paint in the world. Particularly, in the EDM, HSK is the Japan’s largest company and has been supporting the “manufacturing” as a pioneer of the EDM.

HSK held the Chubu establishment as an aircraft part manufacturing hub and acquired Nadcap (CP, CT and NM) based on the experiences that have proceeded the trust production of aircraft parts more than 35 years. HSK has an evaluation from customer in the management of various special processes.

In 2015, HSK launched a consecutive manufacturing line for low-pressure turbine blade used in low fuel consumption engine made in Rolls-Royce, in Komaki, Aichi prefecture as a new attempt and HSK started the blade productions.

In the future, HSK are going to acquire Nadcap of NDT and weld process in addition to Nadcap of above special process (CP, CT and NM) and will push the business enterprise which specializes in aero-part production/manufacturing.

---

**Facility & Equipment**

**EDM equipment**
- EDM 16
- WEDM 4
- Other machines 13

3-axis machining, EDM for small hole processing and various general-purpose machine

**Surface treatment equipment**
- Blasting Machine 10
- Various furnaces 14
- Fluorescent penetrant testing (FPT) equipment 1
- Plasma spraying machine 4

- **Machining of the low-pressure turbine blade for the aero gas turbine engine and various parts for rocket engine.**
- **Metal surface treatment of aero engine parts and automobile parts etc.**
- **Manufacturing of various molds for the ceramics honeycomb injection and Aluminum injection.**
- **Trust processing of industrial gas turbine parts, automobile parts and other metal product.**
- **Development and manufacturing of the mechatronics products.**
- **Manufacturing of the high precise and high efficient digital servo press.**
- **Trust processing of the press parts.**
- **Sales of the chrome free paint “ZECCOAT”**

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**Sales Amount**

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount of sales (JPY one million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>7500</td>
</tr>
<tr>
<td>2012</td>
<td>8000</td>
</tr>
<tr>
<td>2013</td>
<td>8500</td>
</tr>
<tr>
<td>2014</td>
<td>9000</td>
</tr>
<tr>
<td>2015</td>
<td>9500</td>
</tr>
</tbody>
</table>

※ The data for each year in February period

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**Organization**

Employees: 478 (as at February 2015)

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**Company Profile / Contact**

**Representative**
Katsuhiko Futamura, President

**Capital**
JPY 890 million (USD 7.4 million)

**Major Customers**
IHI, KHI, MHI, MHPS, Denso, LIX IL, NGK Insulators

**Address**
6-783 Sakashita-cho, Kasugai, Aichi 480-0305, Japan

**TEL**
+81-568-93-0666

**E-mail**
info@hsk.co.jp
Outline of Business

- Production of machining parts for aerospace and assembly for aircraft.
- Design and development and production of GSE for aircraft.

Our Strengths

- IAC has 31 CATIA units and our 5-axis machining machine holds 52 units. Thus, we can process all parts including those with complex shape, and can perform 5-axis processing of large parts of up to 18m. Our Malaysia factory undertakes surface treatment and paint work. Thus, we can handle the whole process of material purchasing, machining, surface treatment, painting and sub-assembly.

Company Profile / Contact

**Representative**  Tetsuo Imai  US$80,000
**Capital**  
**Major Customers**  KHI, MHI, FHI, NIPPI, SMIC, Ministry of Defense, SPIRIT, SAM, ALESTIS

**Address**  128 Kinzokudanchi, Kakamigahara, Gifu 504-0957, Japan
**TEL** +81-58-389-2011 Japan  +606-232-2062 / 2072 Malaysia
**E-mail**  iac@imaiaero.co.jp
Company Profile

Ishigane Seiki CO., LTD.
株式会社 石金精機

Certification: JIS Q 9100, ISO 9001, ISO 14001
Website: http://www.ishigane-fas.co.jp/

Outline of Business
- Design and manufacture of aircraft-related parts, medical-related
- Design and manufacture of precision machine parts such as fabrication machines, semiconductor devices, HDD assembly devices, and energy-saving devices, etc.
- Trial manufacture of automotive parts, etc.

Entered the aircraft industry in 2013, the aircraft business until last year was about 5 percent of our company. Recently, we received an order for all 18 different parts from MRJ (Mitsubishi Aircraft Co., Ltd.), about the wings mounted components "TRACK RAIL". In addition, we also received the order of all 800 items which consists of 20 models from Aircraft manufacturing companies. We expect from the production of aircraft-related parts started going into orbit, our company’s business aircraft components will grow rapidly. And from now on, we also make great effort to improve technical capability furthermore in order to satisfy customers and receive high quality evaluation from customers.

Our Strengths
- Processing of Blade shaped parts such as impeller, brisk.
- Manufacture all of aircraft parts such as casing, bracket, frame.
- Processing of High Tensile Strength Steel is also done with high technology, low cost and short lead time.
- We can deal with parts to mill difficult level include with multi-process from lathe turning, cutting, grinding to inspection in our company.
- We have built a factory only for manufacturing aircraft parts. And Facilities that can deal with any request from customers are prepared.

Facility & Equipment
With abundant facilities, we can manufacture in our company nearly all of processes from design, machining to assembly.

<table>
<thead>
<tr>
<th>Device</th>
<th>Processing capacity</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal milling machines for 5-sided / 5-axis machining</td>
<td>ø550x440x580</td>
<td>Matsuura Machinery Corporation</td>
<td>MAM72-35V(N)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ø980x560x560</td>
<td>DMG-Mori Co., Ltd.</td>
<td>UNI850 Mono BLOCK</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ø1600x1250x1100</td>
<td>DMG-Mori Co., Ltd.</td>
<td>UNI1600 Duo BLOCK</td>
<td>1</td>
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<tr>
<td>5-axis vertical machining center</td>
<td>ø1250x1250x1000</td>
<td>DMG-Mori Co., Ltd.</td>
<td>UNI1250 Duo BLOCK</td>
<td>1</td>
</tr>
<tr>
<td>Combined processing machine</td>
<td>ø250x1500</td>
<td>Yamazaki Mazak Corp</td>
<td>INTEGREX 300-IV</td>
<td>1</td>
</tr>
<tr>
<td>Coordinate measuring machine</td>
<td>1200x1800x1000</td>
<td>Tokyo Seimitsu Co., Ltd.</td>
<td>ACCURA2 12/18/10</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition, we have about 120 units of processing machines and inspection machines.

Sales Amount

<table>
<thead>
<tr>
<th>Year</th>
<th>US$10 million / 2015fy</th>
<th>($) = ¥120</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2014</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2016</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2017</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

Organization
Employees: 71 (Sep. 2015)

Company Profile / Contact

Representative
Katsuhiro Shimizu

Capital
US$250,000 *$1.00@ ¥120

Major Customers
Kawasaki Heavy Industries, Ltd.,
IHI Corporation,
Asahi Kiyotoku Kogyo Co.,
NACHI-FUJIKOSHI CORP.

Address
255 Nagaresugi, Toyama-shi,
Toyama 939-8032, Japan

TEL
+81-76-423-8317

E-mail
info@ishigane-fas.co.jp
Outline of Business

- Machining
- Designing/manufacturing of gauges and jigs
- Manufacturing of single and small unit of machining

Our Strengths

- We have high technology and great experience in designing and manufacturing inspection and measuring gauges and jigs.
- We offer excellent advice on improving quality based on many years of experience.
- We can accept orders for manufacturing a wide variety of products in small quantities.
- We have an outsourcing production network of about 40 companies in Japan, Thailand, South Korea, and China (Dalian).

Facility & Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Model/Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylindrical grinder</td>
<td>3</td>
<td>JTEKT φ300×500</td>
</tr>
<tr>
<td>Internal grinder</td>
<td>4</td>
<td>Toyo φ4×φ200</td>
</tr>
<tr>
<td>Surface grinder</td>
<td>5</td>
<td>Kuroda 600×500</td>
</tr>
<tr>
<td>Jig borer</td>
<td>1</td>
<td>Mitsui Seiki No4</td>
</tr>
<tr>
<td>Jig grinder</td>
<td>1</td>
<td>Mitsui Seiki 300G</td>
</tr>
<tr>
<td>Profile grinder</td>
<td>2</td>
<td>Waida 140×470</td>
</tr>
<tr>
<td>Electric spark machine</td>
<td>1</td>
<td>Sodick 300×200</td>
</tr>
<tr>
<td>Thread grinder</td>
<td>4</td>
<td>Matrix φ300×500</td>
</tr>
<tr>
<td>Universal measuring machine</td>
<td>2</td>
<td>Zeiss</td>
</tr>
<tr>
<td>Measurement of surface</td>
<td>1</td>
<td>Mitutoyo</td>
</tr>
<tr>
<td>Contour form measurement</td>
<td>1</td>
<td>Mitutoyo</td>
</tr>
<tr>
<td>CMM</td>
<td>1</td>
<td>Mitutoyo FALCIO710</td>
</tr>
</tbody>
</table>

Sales Amount

- 2011: $2000
- 2012: $3000
- 2013: $4000
- 2014: $5000

Organization

President

Factory Manager

Chairman

Administration (5 persons)

Design (3 persons)

Sales (3 persons)

Factory direct (15 persons)

Company Profile / Contact

**Representative:** Masanori Ito

**Capital:** US$167,000

**Major Customers:** Toyota, Honda, etc.

**Address:** 4-10 Yanagishima-cho, Nakagawara-ku, Nagoya, Aichi 454-0024, Japan

**TEL:** +81-52-361-7537

**E-mail:** info@ito-seimitsu.co.jp
Kakamigahara Aero Equipment Co., Ltd.

CERTIFICATION  JIS Q 9100 (AS 9100)
WEBSITE  http://www.kae-gifu.co.jp/

Outline of Business
- Manufacture of wiring harnesses for aircraft, helicopters and missiles
- Manufacture of extremely high-quality wiring harnesses
- Wiring harness build-up for quick installation on aircraft
- Design and manufacture of ground support equipment

Our Strengths
- Based on our technical skills outlined below, we strive to meet customers’ needs with excellent technologies and reliability.
  - Production of wiring harnesses with superior protection against the environment and electromagnetic interference
  - Production at low cost with short delivery time based on high reliability and technologies

Facility & Equipment
- Extra-long wire-harness manufacturing (up to 80m)
- Laser marking machine ................................3 sets
- Continuity and insulation test device ..............2 sets
- Thermostat tanks for environmental testing ....1 set

Organization
Employees: 150

Company Profile / Contact

Founded  April 18, 1968
Capital  US$84,000
Major Customers  Kawasaki Heavy Industries
                Mitsubishi Heavy Industries
                Fuji Heavy Industries
                Nippi Corporation
                Yamaha-Motor Company
                Tyco Electronics Japan G.K

Address  3-6 Sohara Koua-machi, Kakamigahara, Gifu 504-0814, Japan
E-mail  k.kiyama@kae-gifu.co.jp

Sales Amount

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$10,175 K</td>
<td>US$9,933 K</td>
<td>US$9,834 K</td>
</tr>
</tbody>
</table>
Outline of Business

We supply knives and circular saw blades for wood processing, cold saw blades for metal processing, diamond saw blades for the ceramic industry and other cutting tools for various materials that customers would like to cut.

Our Strengths

- We specialize in producing custom-made polycrystalline diamond (PCD) tools.
- We are able to provide solutions to your problems by optimizing the specifications of the tool.

**Countersink Cutter with PCD Insert**
(Material: CFRP, Application: Riveting countersink holes of the aircraft frame)
- High-precision cutter with one PCD tooth
- Tooling cost is reduced due to singular blade type.
- More cost-effective than other brand products.

**PCD Fine Pitch Teeth Face Mill**
(Material: Aluminum alloy, Application: Face milling)
- High-quality cutting surface with high-precision sharpened edge
- High-efficiency machining with super multi-cutting edges
- Resharpenable brazed edge without run-out adjustment
- The innovative clamping bolt structure for cutting-edge lubrication by a center hole coolant supply

Facility & Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Machine</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat-treatment furnace</td>
<td>Electric furnace</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>High-frequency heater</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Other heat-treatment facilities</td>
<td>8</td>
</tr>
<tr>
<td>Grinding machine</td>
<td>Several types of grinder</td>
<td>411</td>
</tr>
<tr>
<td>Machine tool</td>
<td>Several types of machine tool</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Several types of NC (numerical control) machine</td>
<td>134</td>
</tr>
<tr>
<td>Forming machinery</td>
<td>Several types of press &amp; roll machine</td>
<td>70</td>
</tr>
<tr>
<td>Special machinery</td>
<td>Several types of special machinery</td>
<td>239</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>386</td>
</tr>
</tbody>
</table>

Sales Amount

Worldwide

We have been developing many tools for processing CFRP. We are willing to work with customers to develop special cutting tools together. Please contact us.

Important Information / Notices

We supply knives and circular saw blades for wood processing, cold saw blades for metal processing, diamond saw blades for the ceramic industry and other cutting tools for various materials that customers would like to cut.

Company Profile / Contact

Representative: Masato Watanabe (President)
Capital: 2.14 billion yen (As of 2016/03/31)
Major Customers:
- Toyota Motor Corporation
- Nissan Motor Co., Ltd.
- Honda Motor Co., Ltd.
- Kawasaki Heavy Industries, Ltd.
- Fuji Heavy Industries, Ltd.

Address: 1-1 Nakaoguchi, Ohguchi-cho, Niwa-gun, Aichi 480-0192, Japan
TEL: +81-587-95-7221
E-mail: sales-ex@kanefusa.co.jp
KATO MANUFACTURING CO., LTD
株式会社 加藤製作所

WEBSITE       |  http://www.katoseisakusho.co.jp/

Company Profile

Outline of Business
We are exclusively an aerospace and defense focused enterprise and specialized in machining complex parts to customer specifications.

▶ Design and Production Engineering
▶ Programming
▶ Machining
▶ Surface Treatment and Painting (Out Sourcing)
▶ Inspection

Our Strengths
Our manufacturing and facilities cover 55,112 square feet, and contain 47 single-spindle 3, 4 and 5 axis machining centers. Machine parts are manufactured from titanium, nickel based alloys, heat treatable steels, and aluminum.

Quality Assurant
- 3D Measuring Instruments
  Size capacity: 47x118x40 (inch)

Facility & Equipment

<table>
<thead>
<tr>
<th>Model</th>
<th>No Of Axis</th>
<th>Maker</th>
<th>Table Size(Xmm.Ymm)</th>
<th>O/ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>VORTEX1400/160 MARK</td>
<td>5</td>
<td>Yamazaki</td>
<td>4000×1250 18,000rpm</td>
<td>2</td>
</tr>
<tr>
<td>VORTEX1400/160</td>
<td>5</td>
<td>Yamazaki</td>
<td>4000×1250</td>
<td>1</td>
</tr>
<tr>
<td>VORTEX1-630V(FMS44Pallets)</td>
<td>5</td>
<td>Yamazaki</td>
<td>630×630 10,000rpm</td>
<td>4</td>
</tr>
<tr>
<td>FH-6800(FMS 48Pallets)</td>
<td>4</td>
<td>Yamazaki</td>
<td>630×630 18,000rpm</td>
<td>3</td>
</tr>
<tr>
<td>FH-5800(FMS 68Pallets)</td>
<td>4</td>
<td>Yamazaki</td>
<td>500×500 25,000rpm</td>
<td>4</td>
</tr>
<tr>
<td>NEXUS5000- II</td>
<td>4</td>
<td>Yamazaki</td>
<td>500×500 25,000rpm</td>
<td>2</td>
</tr>
<tr>
<td>DH-60(FMS 69Pallets)</td>
<td>4</td>
<td>Mitsubishi</td>
<td>630×630</td>
<td>6</td>
</tr>
<tr>
<td>DH-60</td>
<td>4</td>
<td>Mitsubishi</td>
<td>630×630</td>
<td>2</td>
</tr>
<tr>
<td>MILLAC-630H</td>
<td>4</td>
<td>Okuma</td>
<td>630×603</td>
<td>4</td>
</tr>
<tr>
<td>MA-600H II (FMS 32Pallets)</td>
<td>4</td>
<td>Okuma</td>
<td>630×631</td>
<td>4</td>
</tr>
<tr>
<td>VM-7</td>
<td>3</td>
<td>Okk</td>
<td>1550×740 13,000rpm</td>
<td>3</td>
</tr>
<tr>
<td>MVR-25</td>
<td>3</td>
<td>Mitsubishi</td>
<td>3000×1500 12,000rpm</td>
<td>1</td>
</tr>
<tr>
<td>MCV-A II</td>
<td>3</td>
<td>Okuma</td>
<td>4100×1500</td>
<td>2</td>
</tr>
<tr>
<td>Any Other 3-Axis Vertical M/C</td>
<td>3</td>
<td>-</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Nc Lathe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>BHN710 CMM/C-3S</td>
<td>-</td>
<td>Mitutoyo</td>
<td>1000×700×600</td>
<td>1</td>
</tr>
<tr>
<td>Crysta-Apex123010</td>
<td>-</td>
<td>Mitutoyo</td>
<td>1200×3005×1005</td>
<td>1</td>
</tr>
</tbody>
</table>

Sales Amount

Important Information / Notices
In October 2016, No 3 plant is going to start operating in Matsusaka, that is a cooperative society organization. Machining, Sheet metal, Heat treatment, Surface treatment and paint, Shot peening include in this house.

Company Profile / Contact

Representative  |  Takashi Kato
Capital          |  US$ 83.3(Thousand)
Major Customers  |  Mitsubishi Heavy Industries Ltd
                          |  Kawasaki Heavy Industries Ltd
Address           |  82-20-3-Chome
                          |  Kakanmi/Higashimachi
                          |  Kakanmiharara, Gifu 509-0103, Japan
TEL               |  +81-58-379-0111
E-mail            |  takashima@katoseisakusho.co.jp
Company Profile

Kondo Machine Corporation

Certification: JIS Q 9100, Rolls-Royce SABRe Certificate
Website: http://www.kondo-kikai.co.jp
http://www.gokiso.jp

Outline of Business

- Machine design and manufacturing
- Machine processing for aviation engine parts
- Ultra-precision parts manufacturing
- Mold design and manufacturing

Market Product (Exclusive Bicycle Wheel)
“GOKISO”, the ultimate bicycle wheel system: development, design, manufacturing and international distribution

Our Strengths

- Kondo Machine Corporation has a history of over 60 years and is a manufacturer of ultra-precision machines specializing in ultra-precision metal cutting. The company is also highly reputed as a parts manufacturer for jet engines.
- Our absolute and accurate quality control is applied to every single product. Every product lives up to uncompromising standards in design, production and quality control. Our products showcase the true value of craftsmanship. This is our philosophy.
- The company launched the brand GOKISO in 2010 to convey our philosophy to the worldwide market.

Facility & Equipment

- Turning lathes
- NC lathes
- Cylindrical grinding
- Machining center
- Surface grinding
- EDM
- EDW
- CMM and inspection facilities

Organization

Kondo Machine Corporation has skilled people in the following areas:

Development
Design
Manufacturing
Q.A.
Sales
After-market

Important Information / Notices

“Kondo Machine Corporation is a small company – around 30 employees – that makes high precision metal parts that spin around” (David L. 2014, http://positivo-espresso.blogspot.jp/2015/01/the-gokiso-story-gokiso-monogatari.html)

Company Profile / Contact

Representative: Yutaka Kondo
Capital: US$330,000 ($1 = ¥120)
Major Customers: NTN Corp., Aerospace Bearing Dev.
Address: 1-130 Funairi Kanie-cho, Amagun, Aichi 497-0048, Japan
TEL: +81-567-95-1343
E-mail: kondo@kondo-kikai.co.jp
Company Profile

KOSAKA IRON WORKS CO., LTD.
株式会社 小坂鉄工所

CERTIFICATION  JIS Q 9100, MSJ 4000
WEBSITE  http://www.kosakaiw.com/

Outline of Business

- Manufacture of precision parts for aircraft
- Mass-production of turbine blades grinding mounted on the aircraft engine
- Machining of rocket engine parts
- Manufacture of prototype products for rockets

(Aircraft products account for about 80%.)

Our Strengths

- We specialize in machining small precision parts, ranging in size from fingernail to hand size, and offer a wide variety of cutting.
- We can deal with urgent orders.
- We will challenge any project using technologies accumulated since 1958.

Facility & Equipment

Complex lathe ......................... 2
Multi-purpose lathe .................... 12
NC multi-purpose lathe ............... 2
NC lathe ................................. 9
Multi-purpose vertical milling machine 2
Multi-purpose horizontal milling machine 1
NC milling machine ..................... 3
Vertical machining center ............ 4
Grinding machine for external diameter 4
Grinding machine for internal diameter 1
Flat grinding machine .................. 7
Honing machine ........................ 1
Radial drilling machine ............... 1
Electrical discharge wire cut machine 2
Electrical discharge machine ........ 1
Electrical discharge boring machine 1
Profile projector ..................... 1
Shape measuring machine ............ 2
Surface roughness measuring machine 1
3D measuring machine ............... 2
Laser marker ......................... 1

Sales Amount

Gross sales: ¥1 billion (2014)

Organization

Employees: 85  (Oct. 2015)

Important Information / Notices

Certified according to JIS Q 9100 (Aug. 2007)

Company Profile / Contact

Representative  Hirotaka Kosaka, President
Capital  ¥20 million
Major Customers  Mitsubishi Heavy Industry Ltd.,
Eagle Industry Co., Ltd.,
Kanto Aircraft Instruments Co., Ltd.,
NOK Corporation,
Tayto Nippon Sanso Corporation
NSD Corporation, Teraschi Manufacturing Co., Ltd., etc.

Address  Main factory:
4-36 Kaname-cho, Minami-ku, Nagoya,
Aichi 457-0802, Japan
Mitake factory:
2188-62 Minamiyama, Mitake, Mitake-cho,
Kani-gun, Gifu 505-0116, Japan

TEL  +81-52-611-5456 (Main factory)
E-mail  kosakaco@poplar.ocn.ne.jp
Koyama Chemical Co., Ltd.
株式会社 コヤマケミカル

CERTIFICATION
ISO 9001, JIS Q 9100, AMS 2412, AMS 2410, QQS 365

WEBSITE
http://www.info-surface.jp

Outline of Business
- Processing of function-added plating mainly for aero-aviation components, electronic parts, and automobile parts

Our Strengths
- Copper, nickel, and tin plating for mass-produced products
- Excellent high-mix, small-lot production
- High technologies and know-how for surface treatment of various materials to meet customers’ needs
- Network of partner factories, enabling us to reduce lead time of all types of surface treatment

Facility & Equipment
- Copper plating facilities
- Nickel plating facilities
- Tin plating facilities
- Silver plating facilities
- Gold alloy plating facilities
- Various electroless plating facilities

Company Profile / Contact

Address
120-1 Aza-Kakitsubata Narumi-cho
Midori-ku, Nagoya, Aichi 458-0801, Japan

TEL
+81-52-891-1881

E-mail
info@surface.co.jp

Major Customers
- NTN Corporation
- Owari Precise Products Co., Ltd.
- Asahi-Seiki Manufacturing Co., Ltd.
- Panasonic Corporation

Products and Services
Our plate processing provides additional functions to aircraft engines and assembly parts such as seizure prevention.
MATSUURA CO., LTD.
株式会社 松浦

Certification
JIS Q 9100, Nadcap (Welding), ISO 9001, ISO 14001

Website
http://www.kk-matsuura.co.jp

Overview of Business
- Aerospace parts
- Manufacturer of transportation equipment
- Other products (parts for automobiles, parking support equipment, electrical distribution, etc.)

Our Strengths
- Major customers highly evaluate the following aspects of our products:
  1) On-time delivery
  2) High quality
  3) Reasonable prices

We do our best to meet customers' requests and gain their trust.

Facility & Equipment
- 1000-ton hydraulic double-action type press (introduced in Feb. 2016)
- 500-ton hydraulic single-motion type press
- Clamp press (250 ton, 200 ton, 140 ton and 100 ton)
- 2D laser beam machine
- NC turret punching machine (2 sets)
- Shearing machine (3 sets)
- Bending machine (125 ton, 100 ton and 60 ton)
- TIG automatic welding machine (introduced in Feb. 2016)
- TIG welding machine (for aircraft, 3 sets)
- Conical roll molding machine (introduced in Jan. 2016)

Sales Amount

Organization
- Employees: 55

Important Information / Notices
- Selling points
  We mainly produce parts in small volumes in efficient combination with mass-produced parts. We strive to create a good, comfortable workplace and work hard to provide customers with products which benefit society and are eco-friendly.

Company Profile / Contact

Representative
Takahiro Matsuura

Capital
US$100,000, ($1 = ¥100)

Major Customers
Mitsubishi Heavy Industries Ltd.

Address
1296 Honjo, Komaki, Aichi
485-0821, Japan

TEL
+81-568-78-3111

E-mail
office1@kk-matsuura.co.jp
Company Profile

Meinan Machinery Works Co., Ltd.
有限会社 名南機械製作所

CERTIFICATION JIS Q 9100 (scheduled in 2016), MSJ 4000
WEBSITE http://meinan-kikai.co.jp

Outline of Business

- Manufacture of machined parts for aerospace industry
- Design and manufacture of jigs & tools and parts for aircraft assembly
- Manufacture of prototype parts for automobiles
- Manufacture of parts for special machines

Our Strengths

- Machining of aluminum, titanium, and other hard-to-cut materials as well as 3D profiling
- Manufacture of serrated parts
- Rotary grinding
- We are able to respond to urgent orders for materials, quenching, surface treatment, and other special processes because our office and factory are conveniently located both for our workers and sub-contractors.
- We have received an excellent company award from JAXA and Mitsubishi Heavy Industries several times.

Facility & Equipment

<table>
<thead>
<tr>
<th>Device</th>
<th>Processing Capacity</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Q'ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-axis machining center</td>
<td>630×560×510, 60×560×610</td>
<td>Matsuura, Mazak</td>
<td>MX-520, VARIAXIS 1-500</td>
<td>2</td>
</tr>
<tr>
<td>Turn mill center</td>
<td>450×550×200×1225</td>
<td>Mazak</td>
<td>INTEGRIT 200-4ST, other</td>
<td>3</td>
</tr>
<tr>
<td>4-axis machining center</td>
<td>630×630</td>
<td>Okuma</td>
<td>MULTUS B200 II, LB3000EX</td>
<td>2</td>
</tr>
<tr>
<td>NC machine</td>
<td></td>
<td>Mitsubishi</td>
<td>DH60, MH-60E</td>
<td>2</td>
</tr>
<tr>
<td>Surface grinding machine</td>
<td>1250×600×595</td>
<td>Okamoto</td>
<td>PSG126DX</td>
<td>5</td>
</tr>
<tr>
<td>Rotary grinding machine</td>
<td>g1500</td>
<td>Ichikawa</td>
<td>ICB-1500</td>
<td>4</td>
</tr>
<tr>
<td>NC bandsaw</td>
<td>30×430×430</td>
<td>Amada</td>
<td>PCSAW430</td>
<td>1</td>
</tr>
<tr>
<td>WEDM</td>
<td>1050×820×305</td>
<td>Mitsubishi</td>
<td>MV2400S</td>
<td>1</td>
</tr>
<tr>
<td>Measuring machine</td>
<td>900×1600×600</td>
<td>Mitsutoyo, Faro</td>
<td>Crysta Apex SR166</td>
<td>2</td>
</tr>
<tr>
<td>CATIA V5</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>CAD CAM</td>
<td></td>
<td></td>
<td>CATIA V5, Auto CAD, Surfcam, other</td>
<td>19</td>
</tr>
</tbody>
</table>

Sales Amount

<table>
<thead>
<tr>
<th>Year</th>
<th>Aerospace</th>
<th>Others</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>4000</td>
<td>10000</td>
<td>5000</td>
</tr>
<tr>
<td>2012</td>
<td>6000</td>
<td>9000</td>
<td>7000</td>
</tr>
<tr>
<td>2013</td>
<td>8000</td>
<td>11000</td>
<td>9500</td>
</tr>
<tr>
<td>2014</td>
<td>10000</td>
<td>13000</td>
<td>11000</td>
</tr>
<tr>
<td>2015</td>
<td>12000</td>
<td>15000</td>
<td>13000</td>
</tr>
<tr>
<td>2016</td>
<td>14000</td>
<td>18000</td>
<td>15000</td>
</tr>
</tbody>
</table>

Organization

Employees: 71
R & D (3)
Next-generation industry
Aerospace (35)
General parts (25)
Quality assurance (8)

Important Information / Notices

The R&D Division for next-generation industry reports directly to the president.
We have been collaborating with Nagoya Institute of Technology on the development of a training robot for rehabilitation for five years.
In addition, we are developing in-house an industrial robot for aircraft assembly.

Representative
Yukio Kobayashi
Capital
US$100,000 ($1.0=¥100)
Major Customers
Mitsubishi Heavy Industries, Ltd.
JFE Steel Corporation
Address
39 Akahana-cho, Minami-ku, Nagoya, Aichi 457-0063, Japan
TEL
+81-52-823-2810
E-mail
y.kobayashi@meinan-kikai.co.jp
MEIRA Corporation

Outline of Business
Fasteners, machining parts and rod assemblies for aerospace, precision threaded parts and cold forging parts for automobiles, orthopedic implants and instruments.

Our Strengths
- **Products and Services**
  Meira supplies materials, and offers one-stop manufacturing and quality assurance covering machining, heat treatment, non-destructive inspection, surface treatment, coating/painting, and assembly.

- **Special Processes**
  Meira is NADCAP-certified in heat treatment, surface treatment, non-destructive inspections, and shot peening.

Facility & Equipment

<table>
<thead>
<tr>
<th>Chemical Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium plating</td>
</tr>
<tr>
<td>Cadmium plating - low hydrogen embrittlement</td>
</tr>
<tr>
<td>Cadmium plating - fluoroborate</td>
</tr>
<tr>
<td>Cadmium-titanium alloy plating</td>
</tr>
<tr>
<td>Zn-Ni plating</td>
</tr>
<tr>
<td>Hard chromium plating</td>
</tr>
<tr>
<td>Chemical conversion coating</td>
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<tr>
<td>Anodizing-chronic acid</td>
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<td>Anodizing-sulfuric acid</td>
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<td>Anodizing-boric acid-sulfuric acid</td>
</tr>
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<td>Passivation</td>
</tr>
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<td>Cleaning-descaling of titanium</td>
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<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-axis machining center (Table 630x630mm)</td>
</tr>
<tr>
<td>4-axis machining center</td>
</tr>
<tr>
<td>Multi-axis turning center</td>
</tr>
<tr>
<td>CMM</td>
</tr>
<tr>
<td>Vacuum furnace</td>
</tr>
<tr>
<td>Aluminum furnace</td>
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<tr>
<td>Paint line</td>
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<tr>
<td>Swage machine</td>
</tr>
<tr>
<td>CNC thread rolling machine</td>
</tr>
<tr>
<td>Gun drill machine</td>
</tr>
<tr>
<td>External cylindrical grinding machine</td>
</tr>
<tr>
<td>Press (300 ton)</td>
</tr>
<tr>
<td>SEM</td>
</tr>
</tbody>
</table>

Sales Amount

<table>
<thead>
<tr>
<th>Employees: 680</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Organization

Company Profile / Contact

Representative: Makoto Ohashi, Representative Director
Capital: US$27,500,000 ($1 = ¥120)
Major Customers: MHI, KHI, FHI, IHI, Shin-Maywa, JAMCO, Nippl, Mitsubishi Electric, NEC

Address: 17-15 Tsubaki-cho, Nakamura-ku, Nagoya, Aichi 453-0015, Japan
TEL: +81-52-459-1276
E-mail: miyashita@meira.co.jp

MEIRA Corporation
メイラ 株式会社

CERTIFICATION | JIS Q 9100, NADCAP (HT, CP, NDI, SE), ISO 14001
WEBSITE | http://www.meira.co.jp

Outlook of Business

<table>
<thead>
<tr>
<th>Spline bolt</th>
<th>S/L nut</th>
<th>Chemical processing line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machined product</td>
<td>Rod assemblies</td>
<td>Penetrant inspection</td>
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</tbody>
</table>

| Machined product | Machined product | Magnetic particle inspection |

Facility & Equipment

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Address: 17-15 Tsubaki-cho, Nakamura-ku, Nagoya, Aichi 453-0015, Japan
TEL: +81-52-459-1276
E-mail: miyashita@meira.co.jp

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Major Customers: MHI, KHI, FHI, IHI, Shin-Maywa, JAMCO, Nippl, Mitsubishi Electric, NEC

Address: 17-15 Tsubaki-cho, Nakamura-ku, Nagoya, Aichi 453-0015, Japan
TEL: +81-52-459-1276
E-mail: miyashita@meira.co.jp
Mizuhocraft Co., Ltd.
ミズホクラフト 株式会社

Outline of Business

- For the aerospace industry: manufacture and delivery of various types of heaters such as polyimide heaters, and Hot Bonders (Heater Controllers) as CFRP and GFRP part repair kits
- For general industries: silicone rubber heaters, drum heaters and temperature controllers

Our Strengths

- We are manufacturing products under the Boeing’s specific requirements and approved process.
- High performance based on strict quality assurance
  - Flexibility —— can manufacture heaters to match your needs and applications
  - Free design —— can design for any electric power level, for any size
  - Orders for a single unit —— can handle any requests
- To satisfy all clients’ needs without being bound to existing technology, we undertake the following:
  - material development
  - design development
  - manufacturing technology development
  - manufacturing facility development

Usage Performance

BOEING 737  Japan Air Self-Defense Force KC-767
BOEING 747  Japan Air Self-Defense Force C-130H
BOEING 767  Japan Air Self-Defense Force UH-60J
BOEING 777
BOEING 787

Example

1. High-Flexibility Heat Blanket (Stretchable Blanket)
   We decided to use materials with no glass fiber cloth, to make our heater more elastic than conventional products. We also made the heater as thin as possible, reducing its thickness to just 1.9mm (0.074”).
   With the new approach to the material itself and its thinness, we were able to create a more flexible heater.

2. Bladder Bag
   1. Heat resistant to 200℃ (392°F)
   2. Will not break at pressures up to 6 atm
   3. Should be as thin as possible (hopefully less than 0.5mm (0.019”))

3. Vacuum Heat Blanket
   We put all these parts together in one device:
   1. Manufactured a new heater with integrated thermocouple
   2. Manufactured a new insulated silicone bag with sealant function
   3. Combined the heater and bag (#1 & #2)
   4. Added an insulated vacuum port to the combined heater and bag (#3)

Company Profile / Contact

<table>
<thead>
<tr>
<th>Representative</th>
<th>Soichiro Ito</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>¥10 million (US$100,000)</td>
</tr>
<tr>
<td>Founded</td>
<td>April 2009</td>
</tr>
<tr>
<td>Major Customers</td>
<td>Boeing, Mitsubishi Aircraft, ANA Aero Supply Systems, ANA, JAL Engineering, JAXA, Sojitz Aerospace Corporation Singapore Airline Engineering</td>
</tr>
</tbody>
</table>

Address  109 Creation-Core, 2206-22, Anajahora, Shimoshidami, Moriyama-ku, Nagoya, Aichi 463-0003, Japan
TEL  +81-52-737-0190
E-mail  s.itou@mizuhocraft.co.jp
Let Us Be Different!

We strive to be a one-of-a-kind group of engineers who goes beyond customers’ expectations. With over 50 years of experience, we will continue to master our craft to achieve competitive edge and never-ending growth.

Overview:
- JISQ9100 certified company specializing in 3 & 5-axis machining of aluminum components with high complexity, precision, and speed
- Serving customers in various industries including aerospace, semiconductors, and industrial machinery
- Located in Toyama, three hours from the major concentration of aerospace OEMs and suppliers in central Japan

Awards:
Awarded the Jury’s Encouragement Prize for IT Management of Small and Medium Enterprises by the Japanese Ministry of Economy, Trade and Industry

Our Strengths
- 5-axis machining for various aluminum components (maximum table size of 2100mm x 5000mm)
- Highly flexible production environment enabling short lead times and high-mix low-volume production
- Strong emphasis on quality assurance by utilizing coordinate measuring machines (CMM) resulting in high precision
MIZUNO METAL WORKS CO., LTD.

Outline of Business

- **Aircraft Division**: The major division of our company, fabricating aircraft/spacecraft parts with state-of-the-art facilities and specialized machining technology such as long-size precision cutting, 5-axis cutting, and titanium cutting.

- **Vehicle and Aircraft Device Division**: Mainly designs and fabricates tools & jigs for aircraft assembly, and aircraft components for overhauls (repairs) of aircraft.

- **Hydraulic Device Division**: Mainly fabricates hydraulic device components for industrial vehicles and construction machines. Performs machining, welding and assembly, and also fabricates machined parts of aircraft.

Our Strengths

- Technique to process lamina long lengths of aluminum material by exclusive 10m processing machine.
- Technique to process titanium alloy products by self-developed high-efficiency tool.
- We specialize in the design and production of tool & jigs and mechanical processing.
- We have a one-stop manufacturing system for assembly and overhaul of components.

Facility & Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>Width</th>
<th>Height</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spar Miller</td>
<td>10,500</td>
<td>700</td>
<td>250</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Five-axis machining center</td>
<td>4,480</td>
<td>1,320</td>
<td>712</td>
<td>A45</td>
<td>C270</td>
<td>16</td>
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<tr>
<td>Four-axis machining center</td>
<td>1,050</td>
<td>900</td>
<td>980</td>
<td>21</td>
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<tr>
<td>Three-axis machining center</td>
<td>6,000</td>
<td>2,400</td>
<td>600</td>
<td>23</td>
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</tr>
<tr>
<td>Auto milling machine</td>
<td>9</td>
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<tr>
<td>CNC turning center</td>
<td>1,080</td>
<td>850</td>
<td>W1,200</td>
<td>6</td>
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<tr>
<td>CNC lathe</td>
<td>675</td>
<td>2,520</td>
<td>12</td>
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<tr>
<td>Jig boring machine</td>
<td>1,500</td>
<td>660</td>
<td>800</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Coordinate measuring machine</td>
<td>1,600</td>
<td>6,000</td>
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<tr>
<td>Cati V4, V5</td>
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</tr>
</tbody>
</table>

Organization

Employees: 212

Sales Amount

US$23.5 million (2014)

Important Information / Notices

Management Policy:

By focusing on “first-class craftsmanship” to gain customers’ trust, we seek to develop the company and employees’ happiness, and thus widely contribute to society.
Company Profile

NABELL CORPORATION
株式会社 ナベル

Outline of Business

- MRO covers for aerospace such as:
  Tire covers, engine covers, intake covers, helicopter blade covers, etc.

- Robot covers (Robot-Flex®)
  Welding, painting, surface treatment, foundry, clean room (Scara Robot), EMC, robot boots

- Way covers for machining center
  Cross rail bellows of a large, horizontal-type machining center for an airplane wing
  (16.4ft cross rail testing machine at Nabell)

Our Strengths

- Innovation:
  We see our products from the customers’ viewpoint and turn customers’ needs into our innovations.

- Worldwide Network
  Manufacturing: Japan, USA, China, Korea, Sourcing: Japan, USA, Germany, France, Taiwan

- Materials x Manufacturing Methods
  With well-selected materials from the global market and sophisticated manufacturing methods, we consistently manufacture products for end users.

Facility & Equipment

Nabell Global Network

Sales: US$ 30 Million
Employees: 280

Nabell Group
- Nabell Japan – Mie, Yamaguchi
- Nabell USA
- Nabell Taiwan
- Seyeong Nabell
- Nabell China

Important Information / Notices

Dr. Bellows – Focused on the MRO market for the next 30 years
Our new brand, Dr. Bellows, looks ahead to the next 30 years. We focus on R&D for the future possibilities and potential of Bellows (such as our new portable and foldable solar panels). We also study end users’ viewpoint and needs to identify their difficulties, and create new needs which no one has realized yet.

Equipment:
Water jet machines, bellows pleating machines, ultrasound welding machines, high-frequency welders, sewing machines, 3D scanners, 3D printers, laser machines (CO2, fiber with punching)

Company Profile / Contact

<table>
<thead>
<tr>
<th>Representative: Norio Nagai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital: US$416,666.66 *$1 = 120 yen</td>
</tr>
<tr>
<td>Major Customers: Mitsubishi Heavy Industries, Ltd. Mitsubishi Electric Corporation AMADA Makino Milling Machine Co., Ltd. Yamazaki Mazak Corporation DMG Mori Seiki Co., Ltd. SNK</td>
</tr>
</tbody>
</table>

Address: 7-2-3 Yumegaoka, Iga City, Mie Pref.
TEL: +81-595-21-5060
E-mail: nabell@bellows.co.jp
Nabtesco Corporation

Outline of Business

- Nabtesco Aerospace Company is a key business among six business units.
- It has over 60 years of experience in the design, development and manufacture of hydraulic components, engine-related components, and flight control actuation systems.
- One of The World’s Top Suppliers for Flight Control Actuation:
  - Domestic Programs: Almost 100% Share
  - Boeing Commercial Program:
    - Top Supplier of "Fly-By-Wire" Flight Control Actuation Systems
    - Recent New Programs:
      - 737MAX FBW Spoiler Actuator
      - 777X Flight Control Actuation Systems
    - Awarded "2013 Supplier of The Year"
  - Mitsubishi Regional Jet: Supplier of Flight Control Actuation Systems

Our Strengths

- Flight Control Actuation Systems:
  - Expertise and Know-How accumulated over the years through various programs
  - Highly Qualified Engineering Team based on CAD/CAE/CAT
  - Own EHSV: Key Component of Fly-By-Wire Flight Control Actuator
  - High Quality and Prompt Delivery for Customer Satisfaction
- Worldwide Customer Support:
  - Repair Shops Authorized by Various Countries’ Civil Aviation Authority
    - JCAB, FAA, EASA, CAAC, CAAS, DCA
  - Support Sites:
    - Customer Support Offices: Gifu (Japan), Kirkland (WA, USA), Dusseldorf (Germany), & Singapore (Singapore)
    - Repair Shop: Gifu (Japan), & Kirkland (WA, USA)
Outline of Business

- Precision products manufactured with advanced technology on state-of-the-art equipment
  The tools and fixtures that Nishimura Works manufactures for the aerospace industry are highly-specialized products used in the production of the Mitsubishi Regional Jet, the Boeing 787, and the H-IIA/H-IIB launch systems, as well as helicopters and other aircraft. Nishimura is committed to meeting the challenges of the ever-advancing aerospace industry.

- Tools and fixtures for the aerospace industry
  Nishimura accepts orders from aerospace and defense contractors for the manufacture of tools and fixtures used in the production of passenger planes, fighter planes, helicopters, rockets, and other aircraft. Production standards for the aerospace industry call for extreme precision, and those tools and fixtures are exceptionally difficult to manufacture.

- Manufacture of component parts for aircraft
  All aircraft must be capable of transporting passengers in safety. Nishimura Works manufactures structural elements of passenger aircraft. These parts form the airframe itself and there is absolutely no room for error in their manufacture.

- Dispatch of technical staff
  We can provide support as necessary for the production of the latest aircraft by dispatching our technical staff to work directly at the customer’s production or management facility.

Our Strengths

- An integrated process of design, manufacture, and quality control
  We have developed our own integrated process for product design, manufacture, and quality control based on the use of 3D CAD systems, five-axis machining, and inspection techniques such as 3D measurement. This system is the cornerstone of our ability to produce highly-specialized products while offering reduced costs, high quality, and short delivery times.

- In addition to jigs/tools for the aerospace industry, we also manufacture aircraft parts. Expertise in these two segments creates a synergistic effect in our creative manufacturing capabilities.

- We provide products of superior quality backed by recognized certifications such as JIS Q 9001 and JIS Q 9100.

Facility & Equipment

- Machining
  - 6 Five-axis machines (8250×4320×1700mm)
  - 8 Three-axis machines (5250×2400×1700mm)
  - 2 Three-axis wire-cut machines (700×500×300mm)
  - 1 General-purpose lathe (9600×850mm)
  - 2 Surface grinding machines (600×400×200mm)
  - 1 CNC vertical lathe (Φ2400×1550mm)

- Bending/pressing
  - 2 Hydraulic presses (600t)

- Measuring instruments
  - 3 3D-coordinate measuring machines (1200×2000×1000mm)

Sales Amount

Organization

Employees: 124

- President
- Managing Director
- Directors
- General Manager
- Planning
- Human Resources
- Sales
- M/C
- Overseas

Important Information / Notices

Nishimura Works has 50 years of experience as a jig/tool manufacturer for the aerospace industry.

Company Profile / Contact

Representative
Koji Nishimura

Capital
US$83,334 ($1 = ¥120)

Major Customers
Mitsubishi Heavy Industries, Ltd. Nagoya Aerospace Systems Works
Mitsubishi Heavy Industries, Ltd. Nagoya Guidance & Propulsion Systems Works
Kawasaki Heavy Industries, Ltd. Aerospace Company

Address
3-36 Kansei-cho, Minato-ku, Nagoya, Aichi 455-0066, Japan

TEL
+81-52-651-2135

E-mail
nss@nishimuraworks.co.jp
**Outline of Business**

- Design and manufacture of silicone rubber heaters (heater mat) for industrial use, for repair composite materials for aviation (stretch type, standard type, magnetic type)
- P&F heaters (polyimide flexible heater)
- Temperature controllers

**Our Strengths**

- Provision of customized heaters, even single units, using our patented process (shape, voltage, power, etc.)
  
  We have even manufactured a 1x2m size heater.

- Quick response to requests, short lead time
  
  Please contact us if a short lead time is required.

- Many applications
  
  Aviation (for repair of aircraft), general industry, construction, medical care, automobiles, etc.

- Idea creation
  
  Flexible ideas create a better future.

---

**Facility & Equipment**

- 100-ton hydraulic thermal press …… 8
- Electric testing system ………….. 1
- Thermo viewer ……………………1
- Plasma cleaner …………………1
- 3D CAD ……………………...1

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**Sales Amount**

- 430 million yen (year to Sept. 2014) (US$3.58 million)
- 460 million yen (year to Sept. 2015) (US$3.83 million)

($1 = ¥120)

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**Organization**

Employees: 30

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**Company Profile / Contact**

<table>
<thead>
<tr>
<th>Representative</th>
<th>Yasuhiro Maruyama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>20 million yen</td>
</tr>
<tr>
<td></td>
<td>US$0.17 million ($1 = ¥120)</td>
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<tr>
<td>Address</td>
<td>1-601 Hara, Tenpaku-ku, Nagoya, Aichi 468-0015, Japan</td>
</tr>
<tr>
<td>TEL</td>
<td>+81-52-804-3140</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:info@om-heater.jp">info@om-heater.jp</a></td>
</tr>
</tbody>
</table>
Outline of Business

We serve as your partner for grinding in production development, and offer ideal processing and grinding solutions.

(1) Grinding processing by expert craftsmen
During the 47 years since our establishment, we have specialized in ‘grinding the impossible’ in a 1-μm process by N/C machines, leveraging the intuition and experience of our craftsmen.

- Cylindrical grinding: outside φ570mm, inside φ600mm
- Surface grinding: 600mm x 2000mm
- Profile grinding: 200mm x 200mm x 200mm

(2) Measurement of product dimensions with multiple inspection facilities
Constant-temperature chamber inspections, three-dimensional measuring machines, roundness measuring instruments, highly-trained measurement experts

Our Strengths

(1) Various products
Air-plane actuators, bearings, measurement devices, gauges, main spindles of industrial machines

(2) Materials and manufacturing
- Fe, SUS, Al, FC, CFRP, Cu, Inconel, etc.
- From 1 to 100 pieces

Facility & Equipment

- External grinding: 20
  Okuma, JTECT - φ570mm x 2500mm
- Internal grinding: 15
  TOYO - φ1mm ~ φ600mm
- Surface grinding: 10
  Hitachi - 600mm x 2000mm
- Profile grinding: 4
  WAIDA - φ200mm x 200mm
- Jig grinding: 3
  WAIDA - 400mm x 500mm
- Center hole grinding: 2
  JTECT - φ125mm x 1250mm
- Surface roughness measurement: 2
  Kosaka Lab.
- Roundness measurement: 2
  Tokyo Seimitsu - φ600mm x 900mm
- 3D coordinate measuring machine: 1
  Tokyo Seimitsu - 600mm x 600mm x 900mm

Organization

Employees: 49

Company Profile / Contact

Representative: Ken Ohori
Capital: US$66000 ($1 = ¥120)
Major Customers: KHI, IAC, MERA
Address: 1-9 Sohara, Terajima-cho, Kakamigahara, Gifu 504-0842, Japan
TEL: +81-58-389-1811
E-mail: ohorikenma@sky.plala.or.jp
Okaya Special Steel Center Co., Ltd.
株式会社 岡谷特殊鋼センター

CERTIFICATION

WEBSITE
http://www.kotc.co.jp

Outline of Business
- Our main business fields are the industrial machinery and construction machinery markets. We provide a variety of services including material stocks, cutting, and machining.
- We aim to undertake highly complex machining processes.
- We acquired JIS-Q-9100 in January 2015, and are entering the aerospace field.

Our Strengths
- Machining capability: We can manufacture highly complex materials by using NC turning machines, combined machines, machining centers, abrasive machines, etc.
- Just-in-time delivery: We offer just-in-time delivery utilizing our material stock capabilities.
- Procurement: By using the Okaya Group network, we can handle aerospace materials with more advantageous conditions.
- Inspection capabilities: We conduct product inspections both on internal products and outsourced products, with a 3D measuring machine and various measuring instruments under controlled temperature.
- We invested in two combined machines in 2016, and are upgrading our machining technologies.

Facility & Equipment
- Cutting Machine HFA 530φ etc .............................. 15
- Combined machine INTEGREX 300 250φ x 1500mm .................. 1
- Combined machine INTEGREX 200ST 200φ x 1500mm .................. 1
- Combined lathe NEXUS 350-III 220φ x 1500mm ...................... 1
- NC lathe M 4 200φ x 1000mm ........................................... 2
- NC lathe MS 350φ x 1500mm .............................................. 1
- NC lathe power master 400φ x 2800mm ................................. 1
- General-purpose lathe 400φ x 1200mm .................................... 1
- Machining center SV-25 1500x800x650mm ............................. 1
- Machining center MCV650 1050x560x550mm ......................... 1
- Polishing machine GEP1100-CNC 250φ x 1000mm ................. 1
- Three-dimensional measuring machine CONTURA 1000x1200x600mm ... 1

Organization
Employees: 48

Important Information/Notices
Customer service will be done by Okaya & Co., Ltd., which is the parent company of Okaya Special Steel Center.
Okaya was founded in 1669 as a hardware store in Nagoya and has a history of over 340 years.
As shown in the company name with the Chinese character for “iron”, we have expanded in Japan and overseas markets as a trading company based on the key business of “iron”.

Company Profile / Contact
Representative
Hideto Konishi

Capital
US$500,000 ($1 = ¥100)

Major Customers
Yamazaki Mazak, KYB

Address
111-1 Hagishima 1-chome
Oguchi-cho, Aichi 480-0124, Japan

Address
Okaya & Co., Ltd. (Parent Company)
4-18, Sakae 3-chome, Naka-ku, Nagoya,
Aichi 460-8668, Japan
Department: Specialty Steel Department

TEL
+81-52-204-8193

E-mail
takanom@okaya.co.jp
**Ryoki Tool Company, Ltd.**

**Outline of Business**

- Invar tooling for composites
- Tooling for aircraft and aerospace
- Aircraft parts fabrication
- Measurement services under contract
- Stamping dies for automobiles

**Our Strengths**

- Advanced Invar tooling supplier
  - Ryoki, through its superior technologies and capabilities, designs, bends, welds, and machines Invar tools of unsurpassed quality. This is evidenced through its role in supplying fuselage, skin, center wing box, stabilizer, fairing, spar, and stringer tools for major Japanese and international Tier 1 companies.
- 5-axis CNC capabilities
  - As of July 2014, Ryoki's large-sized tooling fabrication capability has increased significantly, thanks to a new, 1,470 m² (15,800 ft²) facility that houses two state-of-the-art 5-axis bed mills. Each of these machines has a 3.5x14 m (11.5x46 ft) bed, and a travel envelope of 3.5x15.5 m (11.5x51 ft), which brings the company's inventory of 5-axis mills to seven.
- Engineering and quality assurance
  - The Engineering Group at Ryoki is comprised of 24 engineers who are experienced and knowledgeable in tool design and fabrication. These engineers provide the foundation for the quality tools that Ryoki proudly delivers. Among the tools at their command are eight seats of the latest version of CATIA V5.

**Facility & Equipment**

(Only the primary equipment is listed.)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Machine table size</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-axis bridge mill</td>
<td>14,000 x 3,500 mm (45.9 x 11.5 ft)</td>
<td>2</td>
</tr>
<tr>
<td>5-axis bridge mill</td>
<td>11,100 x 3,500 mm (36.4 x 11.5 ft)</td>
<td>1</td>
</tr>
<tr>
<td>5-axis bridge mill</td>
<td>5,000 x 2,500 mm (16.4 x 8.2 ft)</td>
<td>2</td>
</tr>
<tr>
<td>Bridge mill</td>
<td>6,000 x 2,500 mm (19.7 x 8.2 ft)</td>
<td>2</td>
</tr>
<tr>
<td>Bridge mill</td>
<td>5,000 x 2,000 mm (16.4 x 6.6 ft)</td>
<td>2</td>
</tr>
<tr>
<td>Bridge mill</td>
<td>4,000 x 2,500 mm (13.1 x 8.2 ft)</td>
<td>7</td>
</tr>
<tr>
<td>CAD/CAM</td>
<td>1 CATIA V4, 8 CATIA V5, 2 Unigraphics</td>
<td></td>
</tr>
<tr>
<td>Measurement equipment</td>
<td>4 laser trackers, 1 portable CMM, 1 fixed CMM</td>
<td></td>
</tr>
</tbody>
</table>

**Sales Amount**

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20,000,000</td>
</tr>
<tr>
<td>2014</td>
<td>25,000,000</td>
</tr>
<tr>
<td>2015</td>
<td>30,000,000</td>
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<tr>
<td>2016</td>
<td>35,000,000</td>
</tr>
<tr>
<td>2017</td>
<td>40,000,000</td>
</tr>
</tbody>
</table>

($1 = ¥120)

**Important Information / Notices**

Ryoki has a satellite sales office in Washington, US.
Contact: Chris.Klapheke@ryoki.co.jp / m-hattori@ryoki.co.jp

**Company Profile / Contact**

- **Representative**: Yasuhiro Hara, President & CEO
- **Capital**: US$150,000
- **Major Customers**: MHI, KHI, FH, Shin-Maywa, Nippi, IHI, Mitsubishi Electric, Toyota Industries

**Address**: 2-8-21 Takaki, Ichinomiya, Aichi
**TEL**: +81-586-71-6792
**E-mail**: m-hattori@ryoki.co.jp

**Organization**
**Company Profile**

**Sanko Hamono Co., Ltd.**

**WEBSITE** [http://www.sanko-cutler.co.jp](http://www.sanko-cutler.co.jp)

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**Outline of Business**

- Manufacturing, customization, R&D and sales of cutting tools
- Product line-up includes drills, end mill routers, and cutters for CFRP, GFRP composites, metals, and wood materials
- Trial and customization of cutting tools to suit each customer’s machine conditions
  Sanko Hamono is a maker of industrial cutting tools and grinding tools, specializing in tool design, manufacture, repair, regrinding, and restoration. We provide tool manufacturing and repair services employing a comprehensive range of equipment including NC machining centers, wire cutting and brazing equipment, high-precision polishers, tool grinders, profiling machines, and inspection machines.

**Our Strengths**

- Our latest products include drilling and milling tools for carbon (CFRP) / glass (GFRP) composite materials, which are superior in preventing burr edges and delamination of composite layers and in extending tool life with special coatings

**Burr-free and Delamination-free Drill and End Mill Router for Composites**

- General problems in composite machining include poor cutting of carbon and glass fibers:
  - Burr edges occur and deburring is needed
  - Delamination reduces production yield
  - Decline in machining speed
- Special bit geometry for composites cleanly cuts the fibers:
  - No need for deburring process
  - Improved machining process yield
  - Reduced tool exchange
  - Faster processing using suitable cutting tools

**Trial Service of Special Drill & End Mill Router**

Our technical strengths include the customization and development of a cutting tool profile to suit each material and the customer’s machining conditions. We offer a trial service based on analysis of the machining situation, and then design the tool specifications for on-site trial in the customer’s process.

---

**Facility & Equipment**

- Flexible tool grinder (ANCA)
- Lathe (Mazak)
- Machining center
- Profiling NC milling machine
- NC lathe
- Wire cut machine
- Inspection machine (Zoller)
- CAD 2D, 3D etc.

**Sales Amount**

US$1.7 million (2014)  ($1 = ¥120)

---

**Important Information / Notices**

**Product Line-up for Composite Machining**

[Burr-free and delamination-free]

- Fiber drills
- Boring bits
- Fiber routers
- Compression routers
- Hole cutters
- Honeycomb cutters, etc.

For more information, visit our website at [www.sanko-cutler.co.jp](http://www.sanko-cutler.co.jp), where videos show the technical advantages of our tools and prototype development.

---

**Company Profile / Contact**

**Representative**

Hirotaka Morishima, President

**Capital**

US$83,000 ($1 = ¥120)

**Major Customers**

Kanefusa Corporation
Nagoya Diamond Industrial Co., Ltd.

**Address**

3-1-25 Fukufune-cho, Nakagawaku, Nagoya, Aichi 454-0836, Japan

**TEL**

+81-52-363-2828

**E-mail**

h-morishima@sanko-cutler.co.jp
Company Profile

SANKO MFG CO., LTD.
株式会社 三光製作所

CERTIFICATION
ISO 9001, JIS Q 9100

WEBSITE
http://www.sankomfg.co.jp

Outline of Business

- Machining of ultra-precision parts, from aerospace engine parts to civilian-use water valves
- Machining of steel, aluminum, stainless steel, titanium alloy, nickel-based superalloy

The length of the bottom section of the solar panel is 57 m, the exact length of the H-2B rocket developed in Japan.

Our Strengths

- We have more than 40 years’ experience in manufacturing aerospace parts such as rocket engines and hydraulic equipment.
- We have much experience and skills in machining difficult-to-cut materials such as Inconel, Haynes and Waspaloy with lathes, 5-axis machining centers and electrical discharge machining.
- We machine ultra-precision parts such as main engine parts for the H-2A/B rocket, second-stage motor parts, fuel control valves, and parts for civil aircraft engines.
- Our company policy is to “Keep challenging what others hesitate to try”.

Facility & Equipment

- Large 5-axis machining center ... 3 units
- Machining center ................. 12 units
- NC jig borer .................. 3 units
- Universal jig borer ............. 1 unit
- Large NC lathe ................. 5 units
- NC lathe .......................... 8 units
- NC vertical lathe ............ 3 units
- NC wire-cut EDM ........... 5 units
- NC wire-cut machine .... 4 units
- Gun drill ..................... 2 units

Sales Amount

US$5.8 million (2014) ($1 = ¥120)

Organization

Employees: 60

Important Information / Notices

- We are a member of MASTT (Meiyu* Aerospace Support Technology Team), which consists of 24 regional engine parts manufacturers and can undertake integrated manufacturing of engine parts. We plan to expand not only domestically but also internationally as a member of MASTT.

(* Meiyu: Mitsubishi Heavy Industries, Ltd. Nagoya Guidance & Propulsion Systems Works)

Company Profile / Contact

Representative
Kiyoshi Okumura

Capital
US$0.25 million ($1 = ¥120)

Major Customers
Mitsubishi Heavy Industries, Ltd.
Aichi Tokei Denki Co., Ltd.
Daicel Corporation

Address
3-9, Yasumatsu, Shippo-cho, Ama, Aichi 497-0011, Japan

TEL
+81-52-442-0569

E-mail
info@sankomfg.co.jp
Company Profile

Sinfonia Technology Co., Ltd.
シンフォニアテクノロジー 株式会社

CERTIFICATION
JIS Q 9100 (Aerospace), ISO27001, ISO14001, ISO9001

WEBSITE
http://www.sinfo-t.jp/eng/

Outline of Business

- Design, Develop, and Manufacture Aerospace Electrical Equipment
  - Electrical power systems
  - Electro-mechanical actuation systems
  - Stores management systems
  - Hoists & Winches
  - Aircraft/Airport ground support equipment

- Customer service
  - Repair & Overhaul
  - Periodic inspection and maintenance
  - Engineering support

- Research and Development
  - Various Critical Elements for MEA
    (More Electric Aircraft)

Our Strengths

- Total solution
  Based on knowledge and technology we have accumulated through long experience with electrical power generator development, we have become only one total solution provider of airborne electrical power system in Japan.

- In-House Design
  We have solid capabilities of design and engineering. We are reputed to be capable for the best result tailored to customers’ requirements.

Facility & Equipment

Ise plant is fully equipped with manufacturing tools and machines for the Aerospace key components.

- Aerospace Production Exclusive Building in Ise plant
  Ground Floor: Machining, Testing, Shipping
  2nd Floor: Manufacturing, Assembling, Special Processing (Clean Rooms)
  3rd Floor: Engineering, Administration, Experimenting, Repairing

- Main Features
  - Fully Air-Conditioned Environment
  - Anti-Dust Environment
  - Isolated High-Accuracy Machining Room
  - Clean Room Facilities
  - Complete Facility for Development Test

Sales Amount

JPY 82.0 billion / Outlook in 2015fy
(USD 683 million)

($1 = ¥120)

Organization

Our Strengths

- Total solution
  Based on knowledge and technology we have accumulated through long experience with electrical power generator development, we have become only one total solution provider of airborne electrical power system in Japan.

- In-House Design
  We have solid capabilities of design and engineering. We are reputed to be capable for the best result tailored to customers’ requirements.

Company Profile / Contact

Representative
Kozo Furutani, President

Capital
JPY 10.1 billion
(USD 84 million) ($1 = ¥120)

Major Customers
JSDF, MHI, IHI, KHI, FHI, JSW, JAMCO, HI, etc.

Address
100 Takegahana-cho, Ise,
Mie 516-8550, Japan

TEL
+81-596-36-3335

E-mail
sinfonia-aerospace@sinfo-t.jp

Sales Amount Organization

![Graph showing sales amount and organization structure](image-url)
Outline of Business

- Aerospace equipment and parts manufacturing
- Design and manufacturing of swivel joints for aircraft
- Design and manufacturing of swivel joints and rotary joints for industrial machinery
- Medical device parts manufacturing

Our Strengths

- Based on our 30+ years of experience, we specialize in manufacturing difficult-to-cut materials, as well as complex shaped metal finishes. We have joined programs of V-2500 turbofan engine, HTV (H-II Transfer Vehicle), ISS (International Space Station), H2 rocket, MRJ (Mitsubishi Regional Jet) and many parts for aerospace-related products.
- We design and develop swivel joints and rotary joints. Our new swivel joints, which we esigned and manufactured under the MIL standard, are used for the defense program.

Vision: From Manufacturing to Special Processes

Currently, we are trying to provide a Non-Destructive Testing service in-house including Penetrant Inspection and Magnetic Particle Testing. We acquired Nadcap certification at the end of 2017 and our employee is the Responsible Level III. We will be able to operate in-house integrated process.

Facility & Equipment

<table>
<thead>
<tr>
<th>Device</th>
<th>Processing Capacity (mm)</th>
<th>Manufacturer</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNC lathes</td>
<td>φ370×L600</td>
<td>Okuma, DMG MORI, etc.</td>
<td>15</td>
</tr>
<tr>
<td>Combined lathes</td>
<td>φ450×L900</td>
<td>Okuma, DMG MORI</td>
<td>3</td>
</tr>
<tr>
<td>Horizontal machining centers</td>
<td>φ850×X900×Y800× Z1020</td>
<td>Makino Milling Machine</td>
<td>2</td>
</tr>
<tr>
<td>Vertical machining centers</td>
<td>X1300×Y562×Z562</td>
<td>Okuma</td>
<td>4</td>
</tr>
<tr>
<td>Wire-cut electrical discharge machines</td>
<td>X1060×Y660×Z220</td>
<td>Okuma, Mitsubishi Electric</td>
<td>2</td>
</tr>
<tr>
<td>NC cylindrical grinder</td>
<td>φ200</td>
<td>Okuma</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition, we have inspection facilities that include 3D-coordinate measuring machines, image dimension measurement systems and surface texture and contour integrated measuring instruments. We also use design tools that include CATIA V5, Solid Works, TOP-Solid and Auto CAD LT2016, etc. We will install robots and automation system for attaching/detaching and deburring, disposing chips and transportation for pre-processing materials in our factory. Furthermore, we’re discussing MORE automated factory.

Machining Materials

- Stainless steel: AMS 5639 (SUS304), AMS 5647 (SUS304L), AMS 5653 (SUS316L), AMS 5646 (SUS321), AMS 5646 (SUS347), etc.
- Precipitation hardening type stainless steel: AMS 5659 (15-5PH), AMS5654 (17-4PH), etc.
- Nickel alloy: AMS 5666 (Inconel 625), AMS 5663 (Inconel 718), etc.
- Titanium alloy: AMS 4928 (Ti-6Al-4V), etc.
- Cobalt alloy: AMS 5759 (L605), etc.
- CFRP, and others

Important Information/Notices

- To meet expanding market demands, S-TEC will be relocated to our brand-new factory which has 4,000 square meters, approximately. Construction will start in January 2018 and end in July 2018. Productions are expected to start in September 2018.
- We are now conducting research & development of swivel joints for aircraft with lower cost and higher performance, and hope to work with partners on joint product development.
TAKAGI CHEMICALS, INC.
株式会社 髙木化学研究所

CERTIFICATION

WEBSITE
http://takagi-kagaku.co.jp/english/

Outline of Business

Takagi Chemicals, Inc. was the first company in Japan to work on recycling of plastics. With many patents and deep expertise, we conduct R&D in line with customer needs. We have set technology standards in various fields, such as recycling of PET bottles and resin coating for clips and clamps, etc.

Main Products
- Automobile parts, forklift parts/automatic warehouse parts, and motorcycle parts
- Plastic injection molding products for automobile interior parts and outboard engine parts
- Polyester short fiber, cotton and sound-absorbing materials

Our Strengths
- R&D to meet customer requirements
- Development and manufacture of three types of products (metal, resin, and fiber products)
  1. Metal: Small-lot production of many products, production without dies, and short-term delivery in Japan by laser machining (handling 4000 items), surface treatment (coating and plating) and welding
  - Supply of parts for prototypes and mass production
  - Fabrication of dies for mass production
  - Development of specific types of aircraft clamps
  2. Resin: Commodity and engineering plastic products, two-color molding products, assembly
  3. Fiber: Any color, light- and flame-resistance without halogenated flame retardants
- Technology for recycling PVC, nylon, and polyester since the company’s foundation
- Track record of supplying aeroparts (metal parts)

Facility & Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC milling machine</td>
<td>1</td>
<td>Makino milling machine 550×320×300</td>
</tr>
<tr>
<td>NC lathe</td>
<td>1</td>
<td>Okuma Corporation</td>
</tr>
<tr>
<td>Tapping center</td>
<td>1</td>
<td>Brother Industries</td>
</tr>
<tr>
<td>5-axis machining center</td>
<td>1</td>
<td>DMG 735×680×650 (to be installed in December 2015)</td>
</tr>
<tr>
<td>CAD software</td>
<td>4</td>
<td>Dassault CATIA V5 R22</td>
</tr>
<tr>
<td>CAM software</td>
<td>1</td>
<td>Mitsubishi Electric CAM Magic</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Hyper Mill Open Mind</td>
</tr>
</tbody>
</table>

Company Profile / Contact

Representative
Hiroyuki Takagi

Capital
US$250,000 ($1 = ¥120)

Major Customers
Toyota Industries Corporation
Honda Motor Co., Ltd.
Suzuki Motor Corporation

Address
21-1 Horita, Ohbata, Okazaki, Aichi 444-3502, Japan

TEL
+81-564-48-3016

E-mail
info@takagi-kagaku.co.jp
Outline of Business

- Production of metal plate parts for aircraft
- Production of small-size sheet metal parts for B777, B787, B767, GX, MRJ, F-15, etc.
- Production of metal plate parts for entrance doors, etc. for buses
- Production of large refrigerators for professional use

Our Strengths

- Production of parts for aircraft
  Provision of metal plate parts for civilian aircraft, combat aircraft and rockets
  Contribution to flight safety by meeting all requests concerning quality control and manufacturing processes

- Production of parts for buses
  Provision of parts for entrance doors, emergency doors, side doors to roof bows and other parts
  Integrated manufacturing process from blanking process, sheet metal stamping to sub-assembling such as welding, adhesion, etc.

- Production of large refrigerators, etc.
  Ice stockers and ice crushers: Production and assembly of stainless steel outer plates and other metal plate parts. Safe packing and shipping of completed products: food machinery designed for hygiene and the environment

Facility & Equipment

For aircraft:
- NC router processing machine … 1220×2440×t8 (mm)
- NC turret punching press ……… 1270×1270×t2 (mm)
- NC milling machine … stroke X=820, Y=520, Z=410
- 80t press machine, etc.
- Deburring machine
- 36t bending machine
- Shearing machine

Others:
- 3D laser processing systems
- NC turret punching press
- 500t double-crank press
- 80t bending machine
- Shearing press
- Welding robot

Company Profile / Contact

Representative: Yasuyuki Takagi
Capital: US$166,667 ($1 = ¥120)
Major Customers: MH, MFBM, Hoshizaki
Address: 2-17 Yajie-cho, Minami-ku, Nagoya, Aichi 457-0821, Japan
TEL: +81-52-611-3239
E-mail: aerospace@takagikk.co.jp

Address
2-17 Yajie-cho, Minami-ku,
Nagoya, Aichi 457-0821, Japan
TEL +81-52-611-3239
E-mail aerospace@takagikk.co.jp
Company Profile

Takasago Electric, Inc.
高砂電気工業 株式会社

CERTIFICATION
AS9100/JISQ9100/EN9100, ISO9001

WEBSITE
http://www.takasago-elec.co.jp/
http://www.takasago-fluidics.com/

Outline of Business
- Solenoid valves, check valves and pilot valves for hydraulic or pneumatic systems
- Air/gas valves for ventilation and oxygen supply systems
- Pinch valves and liquid control devices for beverage service, galley and lavatory equipment
- Proportional valves for fuel control
- Electrical actuators (solenoids)
- Precisely machined metallic and plastic parts
- Various fluid control devices for space experiments

Our Strengths
- High-level of quality control with 50-year experience in the medical industry
- Custom design solution and high-mix low-volume production to meet various customer needs
- Customization and miniaturization to make your system light-weight
- Manufacturing facilities in Japan and China, and sales offices in Japan, U.S. and China
- In-house manufacturing; precision machining, assembling in a cleanroom, function testing, etc.

Facility & Equipment

<table>
<thead>
<tr>
<th>Process</th>
<th>Category</th>
<th>Manufacturer</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic Processing</td>
<td>CNC Lathe</td>
<td>EGURO LTD.</td>
<td>10EX</td>
</tr>
<tr>
<td></td>
<td>MC</td>
<td>FANUC Robodrill</td>
<td>A-T21Fa</td>
</tr>
<tr>
<td></td>
<td>5-axis Grinding Machine</td>
<td>ROKU-ROKU Co., Ltd.</td>
<td>CEGA-SS400</td>
</tr>
<tr>
<td>Metal Processing</td>
<td>CNC Lathe</td>
<td>Mazak Corporation</td>
<td>QUICK TURN SMART 200L</td>
</tr>
<tr>
<td></td>
<td>Combined Lathe</td>
<td>Nakamura-Tome Precision Industry Co., Ltd.</td>
<td>Super NTMX</td>
</tr>
<tr>
<td></td>
<td>MC</td>
<td>Makino Milling Machine Co., Ltd.</td>
<td>a-51</td>
</tr>
<tr>
<td>Molding</td>
<td>Injection Molding Machine</td>
<td>TOSHIBA MACHINE CO., LTD.</td>
<td>EC50SX</td>
</tr>
<tr>
<td>Measuring</td>
<td>Coordinate Measuring Machine</td>
<td>Carl Zeiss</td>
<td>DURAMAX5/5/5/CNC</td>
</tr>
</tbody>
</table>

Sales Amount

Important Information / Notices
- Selected by the Ministry of Economy, Trade and Industry as one of "300 of Japan's Vibrant Monozukuri (Manufacturing) SMEs"
- Certified by SONY Corporation as a Green Partner

Company Profile / Contact

Representative: Managing Director; Naoya Asai
Capital: US$ 750,000 ($1 = ¥120)
Major Customers: Shimadzu Corporation, GE Healthcare Bio-Science AB, Hitachi High-Technologies Corporation, etc.

Address: 66 Kakitusubata, Narumi-cho, Midori-ku, Nagoya, Aichi 459-8520, Japan
TEL: +81-52-891-2301
E-mail: info@takasago-elec.co.jp
TAMADIC Co., Ltd.
株式会社 タマディック

Outlook of Business

- TAMADIC engineers are assigned various duties in the design phase, such as design and analysis of aircraft and support for rocket launchings etc.
- TAMADIC manufacturing engineers support leading-edge manufacturing technologies as production planners and tool engineers etc.
- TAMADIC designs and manufactures jigs, tools, and equipment.

Our Strengths

Overall know-how, experience, and high engineering capabilities based on over 50 years history in the aerospace industry.

Facility & Equipment

- CAD License : Total 319
  - CATIA V4/V5 .........................45
  - Pro/E ................................10
  - Autodesk Product Design Suite ......76
  - SolidWorks ..........................14
  - MSC NASTRAN/PATRAN ..........4
  - UniDraf ................................17
  - MicroCaelom III .....................24
  - CADRA ................................38
  - AutoCAD LT ..........................37
  - MATLAB ...............................1
  - UniDraf ................................17
  - MicroCaelom III .....................24
  - CATIA V4/V5 .........................45
  - CAEDRA ...............................38
  - UniDraf ................................17
  - MATLAB ...............................1
  - etc.

Sales Amount

Annual sales : 11,710 million yen
(March 31, 2015)

Organization

Employees : 938
(as of April 2015)

Company Profile / Contact

Representative
Toshihiko Morizane

Capital
US$ 825,000  ($1 = ¥120)

Major Customers
MH, KHI, TOYOTA, NISSAN, MELCO

Address
Nagoya Itcho Building 3F, I-5-11
Nishiki, Naka-ku, Nagoya, Aichi
460-0003, Japan

TEL
+81-52-209-6711

E-mail
prir@tamadic.co.jp
Company Profile

TAMAGAWA INDUSTRIES, LTD.

**Outline of Business**

- Manufacture of parts for aircraft, space equipment, and nuclear power equipment
- Design and manufacture of hydraulic equipment, various testing equipment, and jigs & dies
- Structural sub-assembly and parts repair of aircraft

**Our Strengths**

- We have more than 40 years of experience of manufacturing aerospace parts, where high quality and reliability are essential. We actively accept difficult jobs, with our keen curiosity and ambitious engineering spirit.
- We have technologies such as machining difficult-to-process materials (nickel based alloys), machining composite materials (CFRP, etc.), and manufacturing functional parts of missiles.

**Facility & Equipment**

| 5Axis Machining Center | 1 | MAZAK | VARIAXIS 730-5X || 730×850×560 |
| Gantry-Type Machining Center | 1 | MITSUBISHI | MVR30 | 4,200×3,000×700 |
| Horizontal Machining Center | 2 | NIIGATA | ULTY501 | 800×850×750 |
| NC Vertical Lath | 1 | OM | VTlex1250 | ø1,200×1,160×2Axes |
| NC EDM | 1 | SODICK | AQ75L | 700×500×350 |
| NC Small Hole Drill EDM | 1 | ELENIX | CT500FX | 550×380×450 |
| Wirecut EDM | 1 | CHARMILLES | ROBOFIL510 | 700×400×400 |
| CMM | 1 | MITSUTOYO | C9106 | 850×1,000×600 |

**Sales Amount**

US$8,433,000 / 2015fy
US $(Thousand) / ($1.00=¥120)

**Organization**

President/CEO: Total Employees: 100
- Manufacturing
- Production Control
- Sales
- General Affairs

- Production Engineering
- Machinery
- Finishing & Assembly
- Aerospace Structure Assembly

**Company Profile / Contact**

- **Representative:** Takahiko Yoshida
- **Capital:** US$100,000
- **Major Customers:** Mitsubishi Heavy Industries Ltd., Daicel Corporation, Toray Industries, Inc.

- **Address:** 1218-18, Jifuku, Kagiyacho, Kasugai, Aichi, 480-0304, Japan
- **TEL:** +81-568-88-6551
- **E-mail:** tamagawa@md.ccnw.ne.jp
Company Profile

TAMAGAWA SEIKI CO., LTD.

Company Profile

Outline of Business

Tamagawa Seiki has long specialized in the development and manufacture of aerospace instruments, gyroscopes and defense-related equipment, ever since the company was founded in Kamata, Tokyo in 1938. Based on a long history of production and installation in aircraft with the Japan Defense Agency, the company’s aviation business has been expanding for commercial aircraft with Tier 1 or Tier 2 integrators in recent years.

Business Contents

- Angular sensors and motors for pilot control system, flight control system, etc. for commercial aircraft
- Resolver, LVDT (linear variable differential transformer), RVDT (rotary variable differential transformer), and DC brushless motors
- Aircraft electrical equipment, gyros, inertial measurement instruments
- Electro-mechanical actuators such as throttle quadrant assy, landing gear actuators, etc.
- Motion control systems for factory automation
- Angular sensors for drive motors of hybrid electric vehicles and electric vehicles

Our Strengths

- Tamagawa has detailed know-how of the production equipment used to produce such components. Most of the equipment can be built in-house, which is our major advantage.
- Not only for factories but also vehicles, Tamagawa has succeeded in the market. The company supplies various resolver products for eco-friendly cars, proof of our high quality with very low failure rate.
- A unique plant that integrates technologies for three key transportation means, producing products for automobiles, aircraft, and trains on the same floor.

Sales Amount

- US$382 million (2014) (Non consolidated)
- US$467 million (2014) (Consolidated for Tamagawa Group)

Organization

TAMAGAWA Group (15 subsidiaries)

- TEC (Tamagawa Techno Creation)
  - Engineering
- TPM (Tamagawa Parts Manufacturing)
  - Special processes, Machining
- TLC (Tamagawa Logistic)
  - Logistics
- TAMAGAWA Seiki
  - Design & Development
  - Production control
  - Quality assurance
  - Production engineering
  - Prototype production
  - TAMAGAWA Trading
  - Sales & Marketing
- TAE (Tamagawa Aero Equipment)
  - Series Production
- TSP (Tamagawa Sky Precision)
  - MRO
- TMC (Tamagawa Microtep)
  - Series Production
- TMD (Tamagawa Manufacturing)
  - Special processes, Machining
- TAS (Tamagawa Aero Systems)

Important Information / Notices

Tamagawa has full confidence in its ability to develop excellent products by:

- Providing a stable supply of high-reliability products by manufacturing in Japan
- Continuously reducing costs, from development to series production
- Reflecting knowledge and reliable techniques obtained through previous developments in new programs
- Immediate resolution of quality problems

Company Profile / Contact

Representative
Shigeo Seki, President & COO

Capital
¥100,000,000

Major Customers
Toyota, Mitsubishi Heavy Industries, Ltd., Mitsubishi Electric Corporation, ABB

Address
1020 Kega Iida, Nagano 395-8520, Japan

TEL
+81-265-21-1814

E-mail
tadasu-takigawa@tamagawa-seiki.co.jp

Website
http://www.tamagawa-seiki.co.jp
Company Profile

TANIDA LTD.
谷田合金 株式会社

CERTIFICATION | Nadcap, JIS Q 9100
WEBSITE | http://www.tanida.co.jp

Outline of Business

- **Aerospace Parts:**
  - Accessory gear box, manifold, housing, cylinder head, crankcase, …
- **Manufacturing Processes:**
  - Sand casting and 5-axis machining with 3D printing
- **Special Processes:**
  - Welding, heat treating, material testing laboratories, chemical processing, non-destructive testing

Our Strengths

*We make aircraft lighter than ever*

- **Innovative 3D-Print Manufacturing**
  - Super-flexible sand pattern casting for unrestricted designing
- **Magnesium Casting and Machining**
  - Extremely light metal for engine components

Facility & Equipment

| Sand Casting | Al and Mg for aerospace, low-pressure and differential-pressure casting, 3D-printing sand core |
| Machining | MAKINO T1 XYZ (1500 x 1300 x 2000mm) |
|           | MAKINO a81nx XYZ (900 x 900 x 1020mm) |
|           | MAKINO a82 XYZ (1100 x 850 x 1020mm) |
|           | DMG MORI NVL XYZ (φ1600 x 1350mm) |

20 machines in total for aerospace

Sales Amount

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD (Thousand)</td>
<td>5,000</td>
<td>10,000</td>
<td>15,000</td>
<td>20,000</td>
<td></td>
</tr>
</tbody>
</table>

Investment for Aerospace

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD (Thousand)</td>
<td>4,000</td>
<td>3,000</td>
<td>2,000</td>
<td>1,000</td>
<td>0</td>
</tr>
</tbody>
</table>

Important Information / Notices

A Taiwan branch was established in Taichung in 2014, as a joint venture with AvioCast Inc.

Company Profile / Contact

<table>
<thead>
<tr>
<th>Representative</th>
<th>Koichi Komai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>US $830,000</td>
</tr>
<tr>
<td>Major Customers</td>
<td>KHI, IH, SPI; Toyota, Yamaha, Nismo, Nabetco, Aisin-AW</td>
</tr>
<tr>
<td>Address</td>
<td>28-2, Higashikagatsume-machi, Kanazawa, Ishikawa 920-0209, Japan</td>
</tr>
<tr>
<td>TEL</td>
<td>+81-76-237-9400</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:kohel@tanida.co.jp">kohel@tanida.co.jp</a></td>
</tr>
</tbody>
</table>
Outline of Business

- 1. Aircraft: Aircraft structural assembly, design and fabrication of tools and jigs
- 2. Conveyance equipment: Design and manufacture of conveying apparatus such as ceiling cranes
- 3. Industrial facilities: Design and manufacture of air-conditioners and sanitary plumbing systems
- 4. General-purpose compressors: Sales and maintenance

Our Strengths 1/2

- 1. Integrated Manufacturing System from Planning to Assembly
  Tech Sasaki offers integrated manufacturing from production planning to designing and fabricating jigs to completion of assembly, by mobilizing the managerial resources of the Aerospace Division and internal group companies.

- 2. Newest Technologies for Handling Composite Materials
  We have been accumulating technologies for processing composite materials for various aircraft, the use of which is expected to increase, and have reinforced our technological capabilities to meet modern needs.

- 3. Quality Assurance System
  Tech Sasaki is JIS Q 9100: 2009 certified, has a division which maintains the quality management system, and has established a solid control system for supplying high-quality products.

Our Strengths 2/2

- 4. Engineer and Assembly Worker Dispatch
  It has been 20 years since we launched the aircraft project, under which we provide staff with both excellent assembly skills and expert knowledge of the aerospace industry.

- 5. Various Technologies
  We have applied various technologies of other divisions to aerospace manufacturing sites.
  - Conveyance Equipment Division (design, construction, and sales of ceiling cranes, etc.)
  - Industrial Facility Division (design and construction of dust-free chambers, paint shops, etc.)
  - General-Purpose Compressor Division (pneumatic power sources and maintenance)

Company Profile / Contact

- Representative: Hirokazu Sasaki
- Capital: US$833,000
- Major Customers: Mitsubishi Heavy Industries, Ltd.
- Address: 4-9-21, Jinguu, Atuta-ku, Nagoya, Aichi 456-0031, Japan
- TEL: +81-52-678-7811
- E-mail: tech@ssk-gp.co.jp
TEKNIA Co., Ltd.
株式会社 TEKNIA

CERTIFICATION

WEBSITE
http://www.teknia.co.jp

Outline of Business
- Parts for machine tools, industrial machines, and aerospace

TEKNIA has highly sophisticated machining technologies backed by the company’s 100-year history. Recently we have focused on reducing costs by effectively using our plant in Thailand.

Our Strengths
1. High-level machining technology
   A variety of machining tools and skilled craftsmen with sophisticated technologies (lathes, NC lathes, multi-lathes, milling, drilling, and grinding in the machining center)

2. Materials and sizes handled
   Difficult-to-cut materials such as high hardness steel (4340), stainless steel (15-5ph), titanium (6Al4V)
   Sizes: φ50-800 mm, φ50-600 mm (material sizes)

3. Own processes, tools, and equipment planning
   Our policy is to build our own tools and equipment, and thus plan and develop the fastest, most efficient ways of manufacturing.

Facility & Equipment
- NC lathe ………………… 46
- Mill turn center ……… 6
- Machining center …… 35
- 5-axis …………………… 3
- MCM …………………… 1

Sales Amount
¥ 1,000 million/2015

Organization
- QA …………………… 5
- Sales ………………… 2
- Administration …….. 4
- Engineering ………… 4
- Manufacturing …… 120
- 4 factories:
  - Nagoya Factory
  - Aisai Factory
  - Gujo Factory
  - Thai Factory
- US Head office ……. 1

Important Information / Notices
As a third-tier supplier, we supply machined parts for aircraft equipment, especially motors, generators, gear boxes, hydraulic units, etc.

Company Profile / Contact
- Representative: Hiroshige Takahashi
- Capital: US$540,000
- Major Customers: DMG, IAC, Sinfonia Technology
- Address: 3-459 Ematsu, Nakagawa-ku, Nagoya, Aichi 454-0954, Japan
- TEL: +81-52-303-3347
- E-mail: ishida@teknia.co.jp
TENRYU AERO COMPONENT CO., LTD.

Outline of Business

- Fabrication of aircraft parts (sheet metal parts and composite parts)
- Sub-assembly of aircraft airframe
- Design, development and manufacture of aircraft equipment (various seats, containers and racks)

Our Strengths

- Aerospace industry
  We plan jig fabrications by receiving drawings and specifications from our customers, and manage all processes from parts fabrication (molding and special processes) to assembly.
- Update of special processes
  We improve facilities in special processes (surface treatment, heat treatment, painting, etc.). We are able to introduce an integrated production system in cooperation with heavy industries and partner suppliers in the region and aim to expand overseas.
- Certifications of strict quality control
  We have obtained JIS Q 9100 and Nadcap special process certifications for non-destructive testing and composite materials. Various tests are conducted under these global standards to ensure the quality of products and services in the aerospace business.
- Safety of seats
  Aircraft seats are required to have ultimate safety. Our actual loading tests and state-of-the-art computer analysis enable us to confirm world-class safety.

Facility & Equipment

<table>
<thead>
<tr>
<th>NO.</th>
<th>Name</th>
<th>QTY</th>
<th>Model</th>
<th>Manufacturer</th>
<th>Specifications &amp; Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydraulic rudder press (1000t)</td>
<td>1</td>
<td>DPC-1000</td>
<td>Kawasaki Hydromechanics Corp.</td>
<td>1800W × 2500L (mm)</td>
</tr>
<tr>
<td>2</td>
<td>Heat treatment furnace</td>
<td>1</td>
<td>FU-340/340</td>
<td>Trinity Industrial Co., Ltd.</td>
<td>1300W × 3100L × 2200H (mm)</td>
</tr>
<tr>
<td>3</td>
<td>Heat treatment furnace</td>
<td>1</td>
<td>FU-1200/120</td>
<td>Trinity Industrial Co., Ltd.</td>
<td>1000W × 2000L × 800H (mm)</td>
</tr>
<tr>
<td>4</td>
<td>Chemical coating treatment line</td>
<td>1</td>
<td>—</td>
<td>Tsunura Chemical Industry Co., Ltd.</td>
<td>1000W × 2500L × 1500H (mm)</td>
</tr>
<tr>
<td>5</td>
<td>Arcodic coating treatment line</td>
<td>1</td>
<td>—</td>
<td>Tsunura Chemical Industry Co., Ltd.</td>
<td>1000W × 2500L × 1500H (mm)</td>
</tr>
<tr>
<td>6</td>
<td>Automatic riveting machine</td>
<td>1</td>
<td>D906-3</td>
<td>BROTJE</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Automatic riveting machine</td>
<td>1</td>
<td>D906-2</td>
<td>BROTJE</td>
<td>90°, 90°</td>
</tr>
<tr>
<td>8</td>
<td>Autoclave furnace</td>
<td>1</td>
<td>—</td>
<td>Ashida Mfg. Co., Ltd.</td>
<td>2.0m(6.6ft) Humidity: 250°C, max.</td>
</tr>
<tr>
<td>9</td>
<td>Autoclave furnace</td>
<td>1</td>
<td>—</td>
<td>Ashida Mfg. Co., Ltd.</td>
<td>3.0m(9.8ft) Humidity: 250°C, max.</td>
</tr>
<tr>
<td>10</td>
<td>Dynamic testing apparatus</td>
<td>1</td>
<td>—</td>
<td>Seattle Safety LLC</td>
<td>50G</td>
</tr>
<tr>
<td>11</td>
<td>Static load testing apparatus</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>12</td>
<td>Fire-resistance testing apparatus</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>13</td>
<td>Oil burner apparatus</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>14</td>
<td>Endurance testing machine</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>15</td>
<td>Custom hardness measurement apparatus</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>16</td>
<td>Coordinate measuring machine</td>
<td>1</td>
<td>CRT-A123020</td>
<td>Mitutoyo Corporation</td>
<td>120SW × 300SL × 100SH (mm)</td>
</tr>
</tbody>
</table>

Sales Amount

Annual Sales:
- US$42.7 million (fiscal 2014)
- US$40.5 million (fiscal 2013)
- US$37.1 million (fiscal 2012)
- US$34.5 million (fiscal 2011)
- US$30.2 million (fiscal 2010)

Organization

Employees: 511
Board of Directors:
- Makoto Fukunishi - President
- Kazuhiro Shiga - Director
- Ryuzo Hira - Director
- Isamu Nakamura - Director
- Yoko Ichihara - Corporate Auditor

Company Profile / Contact

Representative
Makoto Fukunishi, President

Capital
US$0.95 million ($1 = ¥100)

Major Customers
Kawasaki Heavy Industries, Ltd.
Mitsubishi Heavy Industries, Ltd.

Address
1-1 Sohara Koa-cho, Kakamigahara, Gifu 504-0814, Japan

TEL
+81-58-382-6431

E-mail
aireigyou@tenryu-aero.co.jp

Website
http://www.tenryu-aero.co.jp/
TOBA KOKEN CO., LTD.

Outline of Business

1. Design, development and manufacturing of sheet-metal forming dies and jigs
2. Fabrication of sheet-metal parts of airframes and engines (aluminum and titanium)
3. Design, development and manufacturing of dies, and manufacturing of parts, sub-assemblies and BIWs for prototype automobiles

Our Strengths

- Manufacturing of various sheet-metal parts using our own designed tools
  We have extensive experience of sheet-metal part manufacturing, including hydroforming, brake forming, punch press machining, etc.
- Certification for special processes (heat treatment)
  We have obtained Nadcap certification for heat treating aluminum and are able to process 2024-T42, -T62, 6061-T42, -T62, 6013-T6, and 7075-T42, -T62, -T73.
  Our furnaces can be calibrated by our own laboratory. Metallographic testing, hardness testing, tensile strength testing, etc. can be done in-house.
- Laser beam machining certified by P&W and Nadcap (nonconventional machining)
  PW4000 engine parts made of Hastelloy material are machined using certified machines.
- Machining sheet-metal of titanium
  Titanium sheet-metal can be machined by laser beam machining and abrasive water jet cutter.

Facility & Equipment

- **Machining**
  - NC router, NC machining center, abrasive water jet cutter, 5-axis laser processing machine
- **Forming**
  - Bending roller (L2,600mm, t=6.0), brake press, mechanical press, hydraulic press (max. 2,000t), fluid cell press (L1,600xW600xH800mm, Quintus), one more press (L2,000xW1000xH120mm, Quintus) to be added in Feb. 2018
- **Heat treatment**
  - 2 solution furnaces* (max. 1,800x800)
  - 2 aging furnaces* (max. 2,000x1,000)
- **Inspection**
  - CMM & digitizer (FARO)
  - Tensile testing machine*
  - Hardness tester*
- **Programming system**
  - CATIA-V4, CATIA-V5

Important Information / Notices

TOBA KOKEN is one of the leading suppliers of the sheet-metal parts manufacturing industry in Japan. We are currently developing a more comprehensive system to handle everything from purchasing materials to surface-treatment painting. In the near future, we will also focus on assembly manufacturers overseas to expand our business worldwide.

Company Profile / Contact

**Representative**
Shigeo Sobajima, President
**Capital**
US$3.3 million ($1 = 120 yen)
**Major Customers**
Mitsubishi Heavy Industries, Ltd.
Kawasaki Heavy Industries, Ltd.
Subaru Ltd. / Shinmaywa Industries, Ltd.
**Address**
2-11 Himegaoka, Kani, Gifu
509-0249, Japan
**TEL**
+81-574-62-3220
**E-mail**
m-sobajima@tobakosan.co.jp
**TOHMEI GROUP (TOHMEI Ind.)**

東明グループ（東明工業 株式会社）

**CERTIFICATION**
- JIS Q 14001: 2004

**WEBSITE**
http://www.tohmei.com

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**Outline of Business**

- Assembly of aerospace structure
- Periodic inspection and maintenance of aircraft
- Design and manufacture of fixtures, assembly tools and mechanical devices (electrical, hydraulic, pneumatic servo-control technology)
- Manufacture of advanced composite products
- Manufacture of special containers for aircraft and space equipment

**Our Strengths**

- **Aerospace industry**
  - Assembly, painting and installation of aerospace structures
  - Design and manufacturing of assembly tools
  - Transportation of aerospace products with special packing services
- **Inspection and test equipment**
  - We propose and fabricate a wide range of devices fully utilizing our electrical, hydraulic, and pneumatic servo-control technology.
- **Advanced composites including design**
  - The Tohmei Group produces advanced composite products through our integrated production system. Design and stress analysis including tooling, fabrication, assembly, and painting.
  - Design ................... Tohmei Engineering Co.
  - Fabrication ................... PNC Co., Ibaraki Ind.
  - Assembly & painting ........... Tohmei Ind.

---

**Facility & Equipment**

- **HTV structure**
- **Collision test drive**
- **Autoclave** (D: 2m, L: 5m, max 200°C)
- **Thermoplastic 80t press** (600 × 600 mm, Max: 450°C)
- **NDI, CMM**
- **CATIA V5, NASTRAN**

**Sales Amount**

US$100 million (2014)

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**Company Profile / Contact**

**Representative**
Akira Ninomiya

**Capital**
US$830,000

**Major Customers**
MHI, KHI, FHI

**Address**
2-11 Shinkatanaike, Chita, Aichi
478-0069, Japan

**TEL**
+81-562-54-1881

**E-mail**
info@tohmei.com

---

Our Strengths

- **Aerospace industry**
  - Assembly, painting and installation of aerospace structures
  - Design and manufacturing of assembly tools
  - Transportation of aerospace products with special packing services
- **Inspection and test equipment**
  - We propose and fabricate a wide range of devices fully utilizing our electrical, hydraulic, and pneumatic servo-control technology.
- **Advanced composites including design**
  - The Tohmei Group produces advanced composite products through our integrated production system. Design and stress analysis including tooling, fabrication, assembly, and painting.
  - Design ................... Tohmei Engineering Co.
  - Fabrication ................... PNC Co., Ibaraki Ind.
  - Assembly & painting ........... Tohmei Ind.
Company Profile

TOKUDA INDUSTRIES CO., LTD.
徳田工業 株式会社

CERTIFICATION
JIS Q 9100, JIS Q 9001 (ISO 9001), MSJ4000

WEBSITE
http://www.tokuda.co.jp/

Outline of Business

- Aerospace
  Our company specializes in machined parts of aircraft, design fabrication of jigs and tools for aircraft, and the production of various types of models for technical verification (wind-tunnel experiment models or mock-ups). We also assemble easy parts of aircraft.

- Others
  We design and manufacture jigs for automobiles (forming dies, check jigs, etc.) and produce medical equipment (laryngoscopes). We manufacture solid terrain models from digital data.

Our Strengths

- We manufacture aircraft parts from various materials (e.g. aluminum, titanium, stainless steel, and CFRP). We possess 33 spindles, and can manufacture materials up to 17 m in length. We perform unattended continuous machining and possess process machines with the following features:
  1. An automatic line that produces small parts continuously by one chuck
  2. A mechanism that continuously produces a single material
  3. A system that can stock up to 6 pallets (2000×6000) and carry them automatically

Facility & Equipment

<table>
<thead>
<tr>
<th>Model</th>
<th>Maker</th>
<th>Axis</th>
<th>Stroke</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tricept T905</td>
<td>PKM</td>
<td>5</td>
<td>200×500</td>
<td>30000rpm (Patent acquired)</td>
</tr>
<tr>
<td>Vertex 550-5X</td>
<td>MITUI</td>
<td>5</td>
<td>550×600</td>
<td>20 pallet changer</td>
</tr>
<tr>
<td>C30U</td>
<td>HERMLE</td>
<td>5</td>
<td>650×800</td>
<td>20 pallet changer</td>
</tr>
<tr>
<td>e-1060V8</td>
<td>Mazak</td>
<td>5</td>
<td>1875×1000</td>
<td>6 pallet changer</td>
</tr>
<tr>
<td>HPS-150B</td>
<td>SNK</td>
<td>5</td>
<td>6150×1800</td>
<td>2 pallet changer + 6 pallet stocker</td>
</tr>
<tr>
<td>Mycenter-H300SC</td>
<td>Mazak</td>
<td>5</td>
<td>400×425</td>
<td>Continuous machining line</td>
</tr>
<tr>
<td>INTEGREX 300-III</td>
<td>Mazak</td>
<td>5</td>
<td>630×230</td>
<td>Continuous machining line</td>
</tr>
<tr>
<td>RB-200F</td>
<td>SNK</td>
<td>5</td>
<td>10250×2900</td>
<td>2 pallet changer</td>
</tr>
<tr>
<td>HPS-120B</td>
<td>SNK</td>
<td>5</td>
<td>4460×1400</td>
<td>2 pallet changer</td>
</tr>
<tr>
<td>HX-150B</td>
<td>SNK</td>
<td>5</td>
<td>1500×4000</td>
<td>30000rpm</td>
</tr>
<tr>
<td>HSM-Modal</td>
<td>EEW</td>
<td>5</td>
<td>17000×5000</td>
<td>Extremely large process machine</td>
</tr>
<tr>
<td>A55</td>
<td>MAKINO</td>
<td>4</td>
<td>560×560</td>
<td>21 pallet changer</td>
</tr>
<tr>
<td>a81M</td>
<td>MAKINO</td>
<td>4</td>
<td>900×800</td>
<td>8 pallet changer</td>
</tr>
<tr>
<td>YBM8000N</td>
<td>YASUDA</td>
<td>4</td>
<td>1100×800</td>
<td>6 pallet changer</td>
</tr>
</tbody>
</table>

Sales Amount

We have a patent for a continuous processing system. We have been granted permission to manufacture medical equipment.

Important Information/Notices

Company Profile / Contact

Representative
Yasuaki Tokuda

Capital
US$250,000

Major Customers
KHI, NIPPI, MHI, FHI, TOYOTA, FUTABA

Address
209 Kinzokudanchi, Kakamigahara, Gifu 504-0957, Japan

TEL
+81-58-380-0003

E-mail
sawai@tokuda.co.jp
TOYO KOKU DENSHI Co., Ltd. (TKD)
東洋航空電子 株式会社

Website: http://www.tokoden.co.jp

Outline of Business
- Manufacture of electrical wiring harnesses
- Installation of wiring harnesses
- Design and manufacture of automatic circuit testing equipment
- Design and manufacture of ground support equipment

Our Strengths
- We have 48 years of experience in the manufacture & installation of wiring harnesses.
  - Products: B787, DASH-8-400, MU-2, MU-300 (BEACHJET 300)
  - Installation: MRJ, B787, DASH-8-400, GX, MU-2, MU-300
- Best quality, cost and delivery
  - We can mass-produce while maintaining the best QCD because we have facilities for manufacturing exclusive harness boards and automatic circuit testing equipment.

Facility & Equipment
- Laser marking machine: CAPRIS50-300 (Spectrum Tech.) …… 2
- Automatic circuit testing equipment (our product) ……………………… 2 (5,400 points, 1,150 points)
- Braiding machine: custom-made (Kokubun Ltd.) ……………… 3

Sales Amount

Organization
- Employees: 245

Company Profile / Contact
- Representative: Katsuaki Niwa
- Capital: US$800,000 ($1 = ¥120)
- Major Customers:
  - MHI, Ltd., FHI, Ltd., KHI, Ltd., IHI Aerospace Co., Ltd.,
    Nakazato Corporation, NEC Corporation, Toshiba Social Infrastructure Systems Company
- Address: 63-1 Kakihata, Inuyama, Aichi 484-0901, Japan
- TEL: +81-568-67-2160
- E-mail: info@tokoden.co.jp
TOYO SEIKO Co., Ltd.
東洋精鋼 株式会社

CERTIFICATION
AS 9100, Nadcap (Surface Enhancement), MSJ 4000, ISO 9001, ISO 14001

WEBSITE
http://www.toyoseiko.co.jp/

Outline of Business

- Shot-peening processing of aerospace parts under contract
  - Nadcap (surface enhancement)
- Sales of Almen strip, Almen gage and Magna valves for the aerospace industry
  - TOYO SEIKO is a distributor of Electronics Inc. (US shot-peening products) in Japan.
- Sales of Conditioned Cut Wire (aerospace approved)
- Sales of Coverage Checker
- Residual Stress Measurement

Our Strengths

- For more than 40 years, TOYO SEIKO has been manufacturing and selling Conditioned Cut Wire, which is used in the aerospace and automotive industries. We specialize in shot-peening, and have expanded to conduct, under contract, shot-peening processing of aerospace parts since 2006. TOYO SEIKO is Nadcap-certified for surface enhancement.
  - We perform shot-peening for suppliers to The Boeing Company.
  - We can help your business from test production to mass production.
  - We develop and sell Coverage Checkers.
  - We can measure residual stress for verifying peening quality.

Facility & Equipment

Aerospace Division

- Shot-peening processing equipment
  - Large wheel type (Parts size: 900×1100mm)
  - Large air type (Robot) (Parts size: 1000×1500mm)
  - Small wheel type (Parts size: 200×500mm)
  - Small manual air type (2 machines)
- Inspection devices
  - Two X-ray diffractometers for residual stress measurement
  - Almen gage, Ro-Tap sieve shaker

Sales Amount

<table>
<thead>
<tr>
<th>Year</th>
<th>TOYO SEIKO</th>
<th>TOYO SEIKO THAILAND</th>
<th>TOYO SEIKO NORTH AMERICA</th>
</tr>
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<tbody>
<tr>
<td>2012</td>
<td>32.1</td>
<td>33.6</td>
<td>32.9</td>
</tr>
<tr>
<td>2013</td>
<td>31.8</td>
<td>31.9</td>
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<td>2014</td>
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</tr>
<tr>
<td>2015</td>
<td>31.8</td>
<td>32.6</td>
<td>31.6</td>
</tr>
</tbody>
</table>

Important Information / Notices

Subsidiaries

- TOYO SEIKO (THAILAND) CO., LTD.
  Mfg. & sales of Conditioned Cut Wire
  Bangpoo Industrial Estate, Samutprakarn, Thailand
  Tel +66-2-324-0046
  Email: info@toyoseiko.co.th

- TOYO SEIKO NORTH AMERICA, INC.
  Sales of Conditioned Cut Wire
  South Bend, IN, USA
  Tel +1-574-288-2000
  Email: sales@toyoseiko-na.com

Company Profile / Contact

Representative
Yoshihiro Watanabe (President)

Capital
US$208,333 ($1 = ¥120)

Major Customers
MHI, NHI, IHI, Toyota, Nissan, Honda, Subaru, NHK Spring, Chubuha

Address
3-195-1 Umaganji, Yatomi, Aichi 490-1412, Japan

TEL
+81-567-52-3451

E-mail
toyoseiko@toyoseiko.co.jp

Company Profile

Facility & Equipment

Aerospace Division

- Shot-peening processing equipment
  - Large wheel type (Parts size: 900×1100mm)
  - Large air type (Robot) (Parts size: 1000×1500mm)
  - Small wheel type (Parts size: 200×500mm)
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  Mfg. & sales of Conditioned Cut Wire
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  Tel +66-2-324-0046
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- TOYO SEIKO NORTH AMERICA, INC.
  Sales of Conditioned Cut Wire
  South Bend, IN, USA
  Tel +1-574-288-2000
  Email: sales@toyoseiko-na.com

Company Profile / Contact

Representative
Yoshihiro Watanabe (President)

Capital
US$208,333 ($1 = ¥120)

Major Customers
MHI, NHI, IHI, Toyota, Nissan, Honda, Subaru, NHK Spring, Chubuha

Address
3-195-1 Umaganji, Yatomi, Aichi 490-1412, Japan

TEL
+81-567-52-3451

E-mail
toyoseiko@toyoseiko.co.jp
Company Profile

TOYOTA BOSHOKU CORPORATION

CERTIFICATION | Production and Inspection Approval by JCAB
WEBSITE | http://www.toyota-boshoku.com

Outline of Business

- 1) Design, development and manufacturing of aircraft passenger seats
- 2) Development of automotive interior systems and manufacturing and sales of automotive interior products
- 3) Manufacturing and sales of automotive filters and powertrain components
- 4) Manufacturing and sales of other automotive components
- 5) Manufacturing and sales of fabric goods

Product Information

As a supplier of interior systems for automobile manufacturers, Toyota Boshoku provides integrated and effectively coordinated interior components such as seats, door trims, headliners, floor carpets and others.

In April 2015, Toyota Boshoku delivered its very first aircraft passenger seats to All Nippon Airways Co., Ltd. (ANA), Japan’s leading and only 5-star airline. The seats are installed on ANA B767-300 aircraft for domestic service.

The project brought together ANA’s experience and expertise in the aviation sector, with Toyota Boshoku’s high-quality craftsmanship and manufacturing capabilities, which have been refined over decades of experience providing seats for a variety of automobile lines.

Our Strengths

Our new aircraft passenger seat is ergonomically developed for comfort across a wide range of body sizes and types, based on Toyota Boshoku’s experience designing seats for customers around the world, which have included compact, luxury and racing cars.

Facility & Equipment

- Flammability test equipment (for Bunsen burner)
- Static test equipment

Sales Amount

Total consolidated fiscal year sales in US million dollars ($1 = ¥120)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>8,996</td>
</tr>
<tr>
<td>2013</td>
<td>10,153</td>
</tr>
<tr>
<td>2014</td>
<td>10,679</td>
</tr>
</tbody>
</table>

Organization

- Aviation Business Promotion
- Cost Planning and Evaluation
- Quality Assurance
- Production and Production Engineering
- Research & Development Design, Certification
- Marketing and Sales Purchasing

Company Profile / Contact

Representative | Shuhei Toyoda, Chairman
Capital | US$70 million ($1 = ¥120)
Major Customers | All Nippon Airways (ANA), Toyota Motor Corporation
Address | 88, Kanayama, Kamekubi-cho, Toyota, Aichi 470-0395, Japan
TEL | +81-565-43-2335 (Makishima, Sales)
E-mail | yasuhiro.makishima@toyota-boshoku.com
Company Profile

Tsuchiya Group
株式会社 槌屋（グループ概要）

CERTIFICATION
ISO 14001, ISO 9001, MSJ 4000

WEBSITE
http://www.tsuchiya-group.co.jp

Outline of Business

- Manufacturing and distribution of printings (striped tapes, caution labels), paints, resins, ceramics, adhesives, tapes, textiles, magnets and many other kinds of chemical products for the automotive, aerospace, business machine and housing industries.

Our Strengths

- Embracing the company motto "Creativity and Challenges", the Tsuchiya Group has been expanding since its establishment in 1950, with sales offices, R&D centers and factories around the world.

  ● Distribution
  - Our major products are paints, resins, tapes, adhesives and textiles guided by various property information from more than 500 suppliers.

  ● Development
  - Development of new products through the combination of R&D, sales and suppliers, based on the latest material technologies

  ● Printing
  - Rapid provision of high-quality products to market through our own development process from designing to finalizing product specifications

  ● Textiles
  - Provision of textile brushes, sealing materials developed for cushioning, noise-prevention and air sealing

Sales Amount
US$1.2 billion ($95,400 million) (fiscal year 2014, domestic)

Organization
Employees: 1,500 (Domestic)

Company Profile / Contact

Representative
Koichi Ohara, President & CEO

Capital
US$8.08 million (Domestic only)

Major Customers
Toyota Motor Corporation, / Mitsubishi Heavy Industries, Ltd., Kawasaki Heavy Industries, Ltd., / Fuji Heavy Industries, Ltd., Denso Corporation, Asahi Seki Co., Ltd., Mitsubishi Motors Corporation

Address
2-9-29, Kamimaezu, Naka-ku, Nagoya, Aichi 460-8330, Japan
TEL
+81-52-747-3204
E-mail
tsanami@tsuchiya-group.co.jp
Usetech Co., Ltd.
有限会社 ユーズテック

CERTIFICATION | EN 9100:2009
WEB SITE | http://www.usetec.co.jp

Outline of Business

“Our advanced equipment, technologies and skilled operators provide reliable products for customers.”
- Manufacturing of intricate aerospace parts by precision machining and cutting
- Manufacturing of high volumes of automotive parts (up to 5-digit parts production per day)
- Manufacturing of low-volume aerospace and rail vehicle parts
- Inspection for all parts with designated and calibrated measuring devices and tools

Our Strengths

- Can supply a wide range from simple parts to intricate parts to meet customers’ requests.
- Can manufacture and procure difficult-to-cut-materials such as Invar, titanium, Kovar, as well as aluminum alloys.
- Utilizing our 3D coordinate measuring machine, we can ensure accurate measurements and production to meet customers’ requirements at affordable prices.

facility & equipment

Machining Centers:
- FANUC .................. Robodrill X4
- Matsuura ............ FX-5 (20,000 S/S) X3
- Matsuura .......... FX-5 (5-Axis, 30,000 s/s)
- Matsuura ........... AM72-63V (5-axis)
- Matsuura .............. MC500V
- Toyotaaki .................. FH50

Presses:
- Aida............................ 80tf
- Washino........................ 45tf

Measuring Instruments:
- Accretec 3D coordinate machine
- High-precision cutting machine
- Drilling machine/Tapping machine

NC Lathes:
- Moriseiki..................... NL 2500
- Eguro ........................ NUCLET

Organization

Employees: 50

Company Profile / Contact

Representative  Norio Ueyanagi, President
Capital  ¥5 million
Major Customers  Yata Sancho Co., Ltd.
                Mino Industry Co., Ltd.
Address  5005-18 Kanae Kirishi, Iida,
          Nagano 395-0807, Japan
TEL  +81-265-56-1210
E-mail  usetec@usetec.co.jp
WADA Aircraft Technology Co., Ltd.
株式会社 和田製作所

CERTIFICATION
JIS Q 9100, ISO 9001, JIS Q 9001, MSJ 4000

WEBSITE
http://www.wadass.com

Outline of Business
- Design and manufacturing of jigs and tools for the aircraft and space industry
- Manufacturing of parts for the aircraft and space industry

Our Strengths
- Processing systems
  - We perform design, manufacturing, assembly and quality assurance as well as maintenance and reworking of molding jigs for composites and sheet metal, positioning jigs, inspection jigs and assembly jigs. We have state-of-the-art facilities and systems to satisfy various customers’ requirements.
- Rubber forming dies
  - We have been manufacturing rubber forming dies for sheet metal since our establishment 50 years ago. We continue to develop original systems to ensure stable quality and low cost.

Company Profile / Contact
Representative
Noriyuki Wada, President

Capital
US$80,000

Major Customers
MH

Address
72-1 Gogashima, Haruhi, Kiyosu, Aichi 452-0962, Japan

TEL
+81-52-401-4711

E-mail
info@wadass.com
Outline of Business

Waka Manufacturing is a Japan-based technology company specialized in the engineering and manufacture of interconnection/coaxial cable products for the aerospace, defense, telecommunication and industrial markets.

Established in 1958, Waka Manufacturing is one of the most experienced domestic companies in the coaxial market, especially in millimeter wave frequencies up to 110 GHz.

Waka Manufacturing’s expertise includes MIL standard connectors, customized cable assemblies and connectors for the defense and also aerospace industries. Our microwave coaxial connectors and technology have been accredited by JAXA for aerospace use as the first connector maker in the microwave category in Japan.

Our Strengths

- Microwave Coaxial Business
  Waka develops and produces coaxial connectors and cables that carry microwaves up to 110 GHz as well as microwave components such as phase shifters and filters. Our proprietary designs are based on our experience and know-how and analyses of electromagnetic fields, in particular our expertise in the millimeter wave band, as well as precision and quality production at the Omi Factory in Nagano.

- Connectors/Cable assemblies
  Standard SMA to 1.00mm W connectors (MIL-STD/IEEE-287)
  Our cable assembly is used in passenger aircraft for in-flight internet communication.

- Millimeter wave product
  Adapters, cables and components up to 110 GHz are available.
  E band falling object radar is in the R&D phase for ground support equipment of airport runways.

Facilities

- Head Office
  Nishi-Shinjuku 1-20-3, Takagi Building 6F
  Shinjuku-ku, 160-0023 Tokyo JAPAN

Sales Amount and Target

- Year 2015 Sales
- Year 2016 Sales
- Year 2017 Sales

Our Segment

- Microwave coaxial connectors & technology have been accredited for aero space use as the first connector maker of micro wave category in Japan.

Important Information/Notices

- JAXA accredited Waka!! (2013.03)
  Our Micro wave coaxial connectors & technology have been accredited for aero space use as the first connector maker of micro wave category in Japan.

- Waka is an engineering company; 10% of our employees are technical engineers.

Organization

Representative: Yoshinosuke Wakabayashi, President
Capital: US$22.8M ($1 = ¥101)
Major Customers: Panasonic Corporation, Mitsubishi Electric Corporation

Company Profile / Contact

Address: Takagi Building 6F, Nishi-Shinjuku 1-20-3, Shinjuku-ku, 160-0023 Tokyo, Japan
TEL: +81-3-6635-5410
E-mail: International Sales
suzuki_d@waka.co.jp

Representative
Wakabayashi
President

Chairman
President

Quality Assurance

International Sales
suzuki_d@waka.co.jp

Matsumoto Plant
6043-17 Nanaki, Azumino-shi, Nagano 399-7104 Japan
Tel:81-263-62-2643
Fax:81-263-62-4964
URL:http://www.waka-matsumoto.jp/

Omi Plant
4590-1 O.Omi-mura, Higashichikuma-gun, Nagano 399-7701 Japan
Tel:81-263-67-2174
Fax:81-263-67-2157

Head Office
Nishi-Shinjuku 1-20-3, Takagi Building 6F
Shinjuku-ku, 160-0023 Tokyo JAPAN
Company Profile / Contact

Representative: Motoharu Teranishi
Capital: US$667,000 ($1 = ¥120)
Major Customers: MHI, Toyota, Aisin
Address: 2-146 Oneyama, Midori-ku, Nagoya, Aichi 459-8007, Japan
TEL: +81-52-621-8969
Fax: +81-52-624-4711
E-mail: y.oguri@prismadd.jp

Outline of Business

- Additive manufacturing solutions:
  3DMaterials: Powder manufacturing/supply
  3DXpertise: Design/redesign (Simulation and topological optimization)
  PRISMADD: 3D printing manufacturing (Parameter optimization)

- Manufacturing services:
  Yamaichi Special Steel: Special steel supply
  - Ultra-precision machining
  - Heat treatment
  - Measurement (ISO 17025)

Our Strengths

We offer world-leading additive solutions for the aerospace industry.

- AM Solutions: Topological optimization for designs enables the reduction of material and volume, excellent surface condition, and best performance.
- Parameter optimization achieves the full potential of 3D printing systems.

- Metal Powder: We supply the best metal powder for AM, including titanium, Inconel, and stainless steel.

- Precision Machining: Our thermostatic controlled factory and YASDA machines ensure ultra-precision.


- Measurement: We guarantee ultra-precision machining by an ISO 17025 certified measurement system.

Facility & Equipment

3D printer: 3D Systems
Heat treatment: Chugairo, IHI
CMM: Hexagon Metrology
5-axis machining center: HERMLE, YASDA
Jig borer: YASDA

Sales Amount

15 billion yen

Organization

Employees: 200
Locations: Japan, Thailand, Vietnam
Partnerships: PRISMADD (http://prismadd.com/), 3D Xpertise (http://www.3dxpertise.fr/)

Important Information / Notices

PRISMADD JAPAN is a joint venture established by Yamaichi Special Steel and PRISMADD, the pioneer of the AM industry in France. We provide support ranging from selecting the powder material (3D Materials) to manufacturing (PRISMADD) with designs and redesigns made by topology optimization and realistic simulation (3DXpertise), as well as post-processes such as heat treatment, precision machining and accuracy assurance (YSS). We have added the new capability of AM to our specialties of heat treatment and precision machining to take advantage of the characteristics of special steels. We offer one-stop solutions for sophisticated development of aerospace and aeronautic parts.
Greater Nagoya Initiative Center (GNIC)

Greater Nagoya Initiative Center is to promote foreign direct investment and business alliance between overseas and Japanese companies.

About Greater Nagoya

One of Japan’s notable powerhouses of productivity is in central Japan, often referred to as the Greater Nagoya (GN). Greater Nagoya is defined as the area within a 100km radius of the Nagoya central business district covering Aichi, Gifu, Mie prefectures, the city of Nagoya at the heart of Japan. A center of manufacturing prowess for well over a century, the region today boasts a total annual GDP of over $577 billion, large enough to place it among the top 20 world economies.

Greater Nagoya Initiative Center (GNIC), a joint organization of national and local governments, industries and academia, is to promote foreign direct investment into Greater Nagoya region and business alliance between overseas and Japanese local companies in the region.

The One-stop Solution

In cooperation with affiliated organizations, GNIC provides “one-stop” services to overseas corporations interested in starting or expanding business into Greater Nagoya region. The below complimentary supporting services are provided free of charge.

1) Comprehensive information / consultation services
2) Delegation / Invitation Program
3) Business matchings / meetings arrangement
4) Business startup support
5) Continuous follow-up

Contact Information | Greater Nagoya Initiative Center (GNIC)
Address | C/O Public Foundation of Chubu Science and Technology Center
Ikko Osu Building 7F, Osu 1-35-18, Naka-ku, Nagoya, Aichi 460-0011, Japan
TEL | +81-52-218-4020
FAX | +81-52-204-1469
URL | www.greaternagoya.org

C-ASTEC

Chubu Aerospace Industrial Technology Center

Outline of Business

C-ASTEC is committed to comprehensively promoting projects related to the advancement of the aerospace industry and technology, and to creating a global aerospace industry cluster in the Chubu region.

1) Research and studies
2) Collecting and providing information and raising awareness
3) Technological assistance
4) Human resource development
5) Cooperation and exchange with related organization
6) Forming clusters and providing assistance in coordinating aerospace suppliers

Contact Information | C-ASTEC (Chubu Aerospace Industrial Technology Center)
Address | Pola Nagoya Bldg. 10F 2-9-26 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan
TEL | +81-52-221-6681
URL | http://www.c-astec.jp/