

# THE HEART OF JAPANESE AEROSPACE



AICHI-NAGOYA AEROSPACE CONSORTIUM

ENGLISH



**AICHI-NAGOYA AEROSPACE CONSORTIUM**



## THE HEART OF JAPANESE AEROSPACE

Aichi Prefecture is located in the central part of Japan, with a population of 7.5M centered around Nagoya City. The area boasts a GDP of 290B \$, which is an economic scale equivalent to several countries in the world. Aichi Prefecture is the No.1 aerospace industrial region in Japan where the development and production of fuselage and wings of Boeing passenger jets, aircraft engines and Japanese flagship rockets, etc. are actively carried out. In addition, some companies including startups are working on the development of next-generation air mobility technologies such as eVTOL and suborbital spaceplane.

Furthermore, Aichi Prefecture is one of the world's leading industrial manufacturing regions where various industries thrive. Many global manufacturers in automotive and machine tooling such as Toyota Motor Corporation, DENSO, AISIN, OKUMA, DMG MORI and Mazak are headquartered in Aichi Prefecture.

## AICHI-NAGOYA AEROSPACE CONSORTIUM

ANAC strives for comprehensive development of the aerospace industry in Aichi Prefecture via collaboration by all sectors of the aerospace industry, such as The Aichi Prefectural Government, The City of Nagoya, local government organizations, support organizations, industry organizations and universities. Our consortium promotes the aerospace industry through various activities, such as forums, networking events, exhibiting, matchmaking, human resource development, consulting programs by various experts and support for R&D. We serve as a bridge to facilitate international business relations by collaborating with foreign government organizations and aerospace specific clusters.

ANAC strives to bring together the capabilities of Aichi with the global community to create a brighter future for Aerospace.



AICHI PREFECTURAL GOVERNMENT



CITY OF NAGOYA



Central Japan Aerospace  
Total Encouragement Center



AICHI INDUSTRY PROMOTION ORGANIZATION



Nagoya Industries Promotion Corporation



Komaki City



Nagoya Chamber of Commerce & Industry



Japan External Trade Organization(JETRO)  
JETRO NAGOYA



Greater Nagoya Initiative Center



NAGOYA UNIVERSITY



CHUBU UNIVERSITY



愛知県立大学  
Aichi Prefectural University

# OVERVIEW

**GDP**  Comparable to several countries in the world  
**\$290 billion**

**Turnover**  **\$374 billion**  
 No.1 for 46 consecutive years

**Universities**   
**52**

**Population**   
 Estimate **7.5 million**

**Companies**   
**209,483**

**AICHI**  
**NAGOYA CITY**

**Export**   
**\$171 billion**  
 in Nagoya Customs

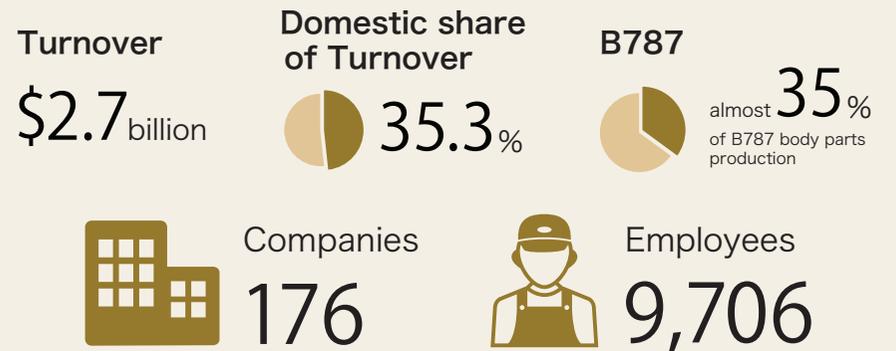
**Employees**   
**4.2 million**

## Turnover of main industries

<b>Automotive</b> 	TOYOTA DENSO AISIN MITSUBISHI MOTORS	 No.1	<b>\$193 billion</b>
<b>Material</b> 	Metal Rubber Plastic	 No.1	<b>\$38.2 billion</b>
<b>Production machinery/Robotics</b> 	Yamazaki Mazak OKUMA DMG MORI JTEKT	 No.1	<b>\$17.3 billion</b>

## AEROSPACE

Aerospace Industry in the Chubu Area centered on Aichi Prefecture





# 01 COMPANY PROFILE



Address	Nitta Building, 1-17-23 Meieki-minami, Nakamura-ku, Nagoya, Aichi, 450-0003, Japan
Tel	+81-52-611-2919
Email	contact@chuo-eng.co.jp
Website	<a href="https://www.chuo-eng.co.jp/english/">https://www.chuo-eng.co.jp/english/</a>
Contact Person	Toru Shitani Operating Officer, General Manager of Aerospace Division
Capability Category	· Aircraft Design Engineering Services (Structural Design & Analysis, Testing) · Manufacturing Testing Equipment
Representative	Yutaka Ishida, CEO & President
Sales Amount	5.7 billion yen (as of the end of March, 2024)
Capital	116 million yen (Capital reserve is included)
Employees	551
Established	September 1955
Certification	JIS Q9100, ISO9001
Major Customers	MHI group, KHI group, IHI group, JAXA, SUBARU, HONDA group, Airbus Helicopters Japan

## Business Overview

Our business is focused primarily on the design and analysis of Aircraft, Rocket and Aerospace Equipment. Especially Analysis and Additive Manufacturing Solution field, our technicians meet your demand with rich experience and skills. We also provide the design and manufacture of Test Equipment.

## Products • Materials • Part Sizes • Facilities & Equipment

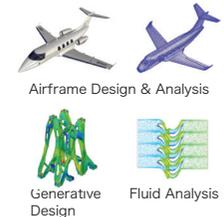
### Product & Services

Design Engineering : Structure, Equipment and Jigs  
 Analysis Engineering : Strength Analysis, Vibration Analysis, Motion Analysis, Thermal Analysis, Fluid Analysis and Optimization  
 Software Sales : HyperX  
 R&D : Test Equipment

Additive Manufacturing : Design for Additive Manufacturing, Manufacturing Prototype, Machining, and Evaluation

### Design Tools

CAD : CATIA V4 V5, CREO, Unigraphics NX-2, Solid Works, AUTO CAD, MICRO CAD  
 Analysis : HyperX, Abaqus, Nastran, HyperWorks, Apex, Patran, Femap, ADAMS, Marc, Fluent, NASGRO  
**·Additive Manufacturing Facilities (Partner Company)**  
 3D Printer : EOS M290, M400-4 (250mmx250mmx325mm, 400mmx400mmx400mm)



## Our Strength

- We are the only design company in Japan that is strong in the field of aircraft structural design analysis and is capable of high-speed structural sizing using HyperX. Sizing more than 10 times faster than conventional methods can significantly reduce costs and schedules.
- We are strong in Additive Manufacturing Engineering. We can support the whole process from selection of parts suitable for Additive Manufacturing to design proposal of new shape using topology optimization, and prototype manufacturing and evaluation.



## Needs we can correspond / Business partners we want

- Customers who want Design and Analysis for Aerospace Vehicle.
- Customers who want Aerostructure Stress Sizing.
- Customers who want Additive Manufacturing Engineering Solutions.
- Customers who want Design and Manufacture prototype by Additive Manufacturing.

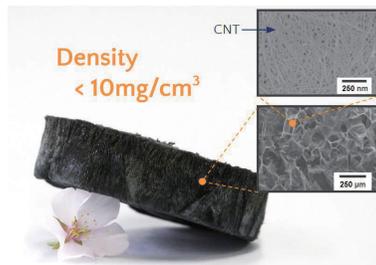
## Office & Plants

- Head Office (Tokyo)
- Office (Yokohama, Nagoya, Komaki, Fukuoka, U.S.A.)
- R&D Center (Komaki)

## 02 COMPANY PROFILE

# SoraMaterials inc.

Address	1-2-32 Tsurumai, Showa-ku, Nagoya, Aichi 466-0064, Japan
Tel	090-6931-0128
Email	info@sora-materials.com
Website	<a href="https://sora-materials.com/">https://sora-materials.com/</a>
Contact Person	CEO Tomoki Osato
Capability Category	Precision machining
Representative	Tomoki Osato
Capital	3,500,000 yen
Employees	2
Established	April 30, 2024



### ■ Business Overview

SoraMaterials inc. is a deep-tech startup originating from Nagoya University, focused on the research and development of "ultra-lightweight materials" that are so light they can float in the air. Despite their remarkable lightness, these materials possess functional properties such as thermal insulation, sound absorption, and electromagnetic shielding. This unique combination of "ultra-lightweight" and "functionality" sets our materials apart.

The primary application areas we envision are industries where weight reduction is crucial, such as aerospace and air mobility, contributing to further lightweighting of vehicles. Additionally, we are exploring applications in various other fields, including the automotive industry and building materials, leveraging the versatile characteristics of our materials to drive product development across a broad range of sectors.

### ■ Products • Materials • Part Sizes • Facilities & Equipment

#### "Ultra-Lightweight Materials"

- Composite materials made of carbon-based and polymer-based materials
- Capable of adjusting density within a range of 0.5 to 10 times that of air density
- Possesses thermal insulation, sound absorption, and electromagnetic shielding properties
- Can produce panels approximately 30cm x 30cm x 10cm in size (custom sizes available upon request)
- If in panel form, can be shaped into virtually any design (e.g., trapezoid, circular, star-shaped, etc.)

### ■ Our Strength

Based on research conducted at Nagoya University, SoraMaterials Inc. specializes in the development of carbon and polymer materials. We have independently developed a unique manufacturing process for "ultra-lightweight materials" and are capable of supporting clients' needs through joint product development or even at the foundational research level.

### ■ Needs we can correspond / Business partners we want

SoraMaterials Inc. is capable of supporting material and product development using ultra-lightweight materials for manufacturers that require lightweight functional materials with properties such as thermal insulation, sound absorption, and electromagnetic shielding.

### ■ Office & Plants

1-2-32 Tsurumai, Showa-ku, Nagoya, Aichi 466-0064, Japan

## 03 COMPANY PROFILE

# Sumitomo Electric Industries, Ltd.



Address	Nagoya Lucent Tower 36F 6-1 Ushijimacho, Nishi-ku, Nagoya, Aichi, 451-6036, Japan
Tel	+81-52-589-3873
Email	nsakata@sei.co.jp sawai-naoki@gr.sei.co.jp
Website	<a href="https://www.sumitomotool.com/en/">https://www.sumitomotool.com/en/</a>
Contact Person	Naoki Sakata / Naoki Sawai Hardmetal Division
Capability Category	Cutting tool manufacturer
Representative	Osamu Inoue
Sales Amount	Consolidated: 4,402,814 million yen
Capital	99,737 million yen
Employees	Consolidated: 293,266
Established	April 1897
Certification	ISO9000 ISO14001
Major Customers	Aerospace engine, fuselage, landing gear, bearing, fastener, actuator manufacturers. Automotive manufacturers.



### ■ Business Overview

R&D, production, providing technical service of cutting tools (Carbide, CBN, Diamond).

Developing of precious and high efficiency machining.

### ■ Products • Materials • Part Sizes • Facilities & Equipment

Turning, Milling, Drilling tools for Aerospace engine, fuselage, landing gear, bearing, fastener, actuator component made of Titanium, Ni-Alloy, Al, CFRP etc.

### ■ Our Strength

#### Innovative Technology Development

Sumitomo is at the forefront of technology, offering high-performance cemented carbide and unique super hard materials. In Europe, our European Design and Engineering Center specializes in developing best solutions and tools, custom-made in Germany to meet your specific needs.

#### Tailored Manufacturing Excellence

Sumitomo Electric Hardmetalfabrik GmbH as well as other plants in US, Japan and Asia excels in producing special tools with unmatched flexibility, speed, and precision. Our commitment to quality ensures that every tool meets the highest standards of accuracy.

#### Sustainable Regrinding Services

To promote environmental sustainability, we offer comprehensive regrinding services through our plants, extending the life and performance of your tools.

#### Tungsten Recycling Expertise

Sumitomo Electric Industries, Ltd. utilizes two advanced methods for tungsten recycling, selecting the optimal process to maximize efficiency and effectiveness for each production scenario.

### ■ Needs we can correspond / Business partners we want

Machining company for Jet engine, fuselage, landing gear, bearing, fastener, actuator, other Aerospace parts.

### ■ Office & Plants

#### Sales Network

Japan (16 locations)

Germany, France, Italy, Poland, UK, Turkey, US, Canada, Mexico, Brazil, Thailand, Singapore, India, Indonesia, Philippines, Malaysia, Australia, Taiwan, China,

#### Production Network

Japan(5 locations), Germany, Czech Republic, US, Thailand, Indonesia, China

#### Tool Engineering Center / Design and Engineering Center

Japan (6 locations), US, Germany, Thailand, Indonesia, India, China

## 04 COMPANY PROFILE

# TAKAGI STEEL Co., Ltd.



Address	3-308 Fujimae Minato-ku Nagoya Aichi 455-0855, Japan
Tel	+81-52-301-1801
Email	t-takagi@takagi-steel.co.jp
Website	www.takagi-steel.co.jp
Contact Person	President and CEO Tomohide Takagi Nagoya Sales Manager Kazutaka Yamashita
Capability Category	Sales and distribution of materials for aircraft.
Representative	President and CEO Tomohide Takagi
Sales Amount	1,200 million yen
Capital	50 million yen
Employees	33 people
Established	1955/4/8
Certification	JIS Q9100 (obtained in February 2022) ISO9001/14001 (obtained in January 2021)
Major Customers	AISIN SIN'EI Co., Ltd. DENSO Co., Ltd. AMANO Corporation ALPHA Corporation FDK Corporation Konica Minolta, Inc. JTEKT Corporation THK Co., Ltd. Tsukiboshi Manufacturing Co., Ltd. FUKUI BYORA Co., Ltd. NITTO KOGYO Corporation Nitta Corporation HAMANAKODENSO Co., Ltd. HAMANA PARTS INDUSTRY Co., Ltd. Hirose seikou Co.,Ltd. NIPPON POP RIVETS AND FASTENERS Ltd. MIWA LOCK Co., Ltd. Musashi Seimitsu Industry Co., Ltd. MEIRA Corporation UNICRAFT NAGURA Corporation YKK Corporation

### ■ Business Overview

In the business area, we have partnership with over 200 companies in over 60 years for sales of materials mainly for special steels and tool steels. We have advantage that be able to do parts completion to one-stop by collaboration with partners and utilizing our own factory. In line with the acquisition of JIS Q9100 certification, we have established a specialized department "Aviation Group" across sales, management and warehouse. As a result, the quality inspection and control system for handling aircraft materials has been strengthened.

### ■ Products • Materials • Part Sizes • Facilities & Equipment

#### 【Handling material】

Aircraft Materials: A286, 17-4PH, 17-7PH, 15-5PH, PH13-8Mo, Nimonic80A, Inconel 718, Waspaloy, PWA 92, Hastelloy, Ti6Al4V, 17-22A, H-11, Greek-Ascoloy, 4130, 4140, 4330, 8740, A2017, A2024, A6061, A7075

Special steel materials: SKH51, SKH55, SKH57, HAP, YXR, DURO, SLD-i, SLD-MAGIC, SKD11, SKS, SK, DAC-MAGIC, SKD61, HPM, NAK, SUS, SC, SCM, SNCM

#### 【Major equipment】

Cutting machine, Machining center, NC grinding machine, three-dimensional measuring machine, three-dimensional CAD / CAM.

### ■ Our Strength

We can sales the only drawbench materials (about aeronautical field) produced by Japan domestic. We provide production scheme with "Hitachi Metals, Ltd." a major manufacturer of aviation materials in Japan and a drawbench processing. This method is in demand for heat resistant steels such as A286 and Inconel 718.

### ■ Needs we can correspond / Business partners we want

- We offer various service such as arranging purchase parts, designing, manufacturing and inspection, which can save your labour. (We have achieved 40% cost reduction from target price.)
- We offer service with low-cost, high quality and short delivery time. (3days is the fastest delivery after your order)
- We offer KAIZEN (e.g. cost reduction by design changes)

### ■ Office & Plants

Headquarters : 3-7-19 Nishiki, Naka-ku, Nagoya, Aichi 460-0003, Japan

Nagoya Office : 3-308 Fujimae, Minato-ku, Nagoya, Aichi 455-0855, Japan

Toyohashi Office : 51-1 Motoyashiki, Mitsuya-cho, Toyohashi, Aichi 441-3114, Japan

Seto Factory : 16 Higashiyasudo-cho, Seto, Aichi 489-0053, Japan





MEMO



MEMO



MEMO



AICHI PREFECTURAL GOVERNMENT



CITY OF NAGOYA

**C-ASTEC**

Central Japan Aerospace Total Encouragement Center



AICHI INDUSTRY PROMOTION ORGANIZATION



Nagoya Industries Promotion Corporation



**METI**  
Chubu Bureau of Economy, Trade and Industry



Komaki City



Nagoya Chamber of Commerce & Industry

**JETRO**

Japan External Trade Organization(JETRO)  
JETRO NAGOYA



GREATER NAGOYA  
INITIATIVE  
Greater Nagoya Initiative Center



**NAGOYA UNIVERSITY**



**CHUBU UNIVERSITY**



**愛知県立大学**  
Aichi Prefectural University

# AICHI-NAGOYA AEROSPACE CONSORTIUM

## CONTACT

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AICHI PREFECTURAL GOVERNMENT / CITY OF NAGOYA / Central Japan Aerospace Total Encouragement Center / AICHI INDUSTRY PROMOTION ORGANIZATION / Nagoya Industries Promotion Corporation / Chubu Bureau of Economy, Trade and Industry  
Komaki City / Nagoya Chamber of Commerce & Industry / Japan External Trade Organization(JETRO) JETRO NAGOYA / Greater Nagoya Initiative Center / NAGOYA UNIVERSITY / CHUBU UNIVERSITY / Aichi Prefectural University



**Website**



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Issued in Oct, 2024