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Here you will find
more information



<http://eng.tman.tokyo.jp>

Tokyo Tokyo Old meets New

TOKYO



Metropolitan

Aviation
Network





To all visiting guests

First of all, I would like to thank all the people related to this event as well as the organizers for our participating in the aerospace industry exhibitions.

In the Tokyo metropolitan area, we have many excellent world-class manufacturing industries that are active by making full use of state-of-the-art technology and craftsmanship, and they are the source of industrial power for our country.

In Tokyo, in order to meet a wide range of requirements from home and abroad, including aircraft parts manufacturing, we launched the Tokyo Metropolitan Aviation Network (TMAN) in the fall of 2015.

TMAN is a completely new consortium that has originated from Tokyo, aiming at integrated production services to build a trusting relationship between “creators” and “users” . It is composed of the Tokyo Metropolitan Industrial Technology Research Institute, small and medium-sized enterprises in the Tokyo metropolitan area that boast the world’ s highest technology and performance.

These companies are active in fields such as metallic materials, machining, additive manufacturing & MRO, etc., and I hope they will become your good partners.

Last but not least, “Tokyo 2020 Olympic and Paralympic Games” will be held in Tokyo. It will also be a big chance for various industrial fields to showcase Tokyo’ s possibilities to the world. The Tokyo Metropolitan Government will proceed with preparations intensively for less than two years. And continuous support from all of you is indispensable.

Thank you.

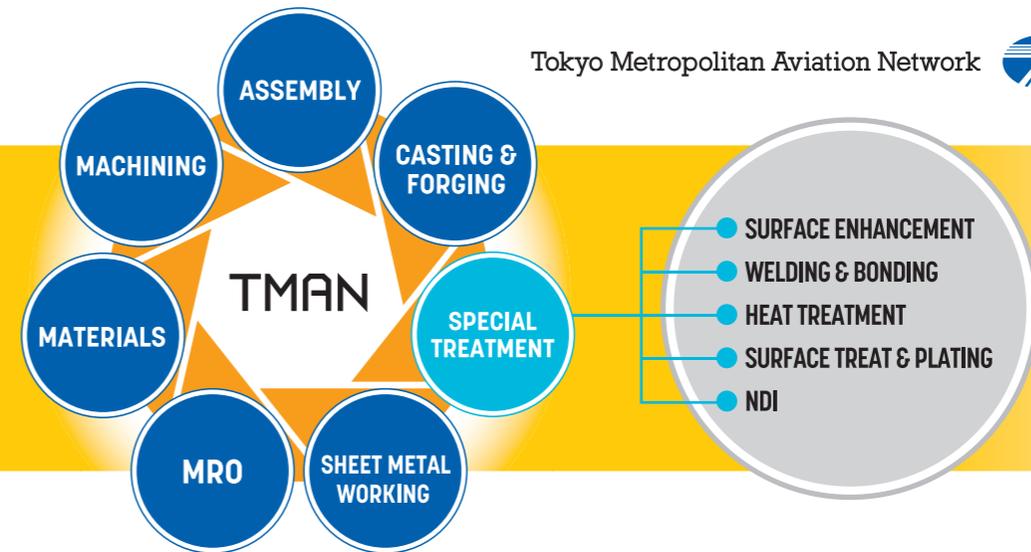
April 2018
Yuriko Koike, Governor of Tokyo

A handwritten signature in black ink, which appears to be the signature of Yuriko Koike.

TOKYO Metropolitan Aviation Network

*Stronger together,
joining through diversity*

Welcome to an introduction of the TMAN (Tokyo Metropolitan Aviation Network).
The TMAN provides a platform for mutual exchange, learning, and development as a high-level
performance manufacturer towards the global aviation industry.
Please refer to the contents of this booklet for details.



Cluster Description

Facts and Figures

Number of members: 57, Mostly SMEs (small and medium sized enterprises)
Number of employees: 5,400 (as of November, 2017)
Number of research institutes: 1
Number of airports: Two (2) Metropolitan International Airports (Haneda and Narita)

Cluster Management

Organizational form: Associated network operated by TMG (Tokyo Metropolitan Government) and its secretariat
Financing: TMG's annual budget

Main Actors (Core Members)

Main industry actors: Member companies, located in Tokyo and its vicinity, are working in different fields of aviation industry including civil and defense aircraft/engine parts manufacturing and MROs. They have been working with major Heavy Industries in Japan which are Tier-1 and Tier-2 manufacturers to aircraft and engine OEMs.

Main research institutes: TIRI (Tokyo Metropolitan Industrial Technology Research Institute)

The mission of TIRI is to promote the development of small and medium-sized enterprises through industrial technology by research, consulting and testing, and thus to contribute the quality of life for the citizens in Tokyo. TIRI has been enhancing its support in aviation industry support laboratory for testing, R & D, and supporting for technical verification on preproduction parts for aviation industry cluster TMAN.

Our Vision (Ambitions)

To contribute to the TMAN member companies for more business opportunities in the industry.
To contribute to the Japanese aviation industry for more competitiveness in the global market.

Cluster Competences and Strategy

Strength and Competencies

Tokyo is the capital city of Japan, and a center of Japanese culture and industry. In this advantageous location, the TMAN can provide a large variety of processes, and this diversity enhances a competitiveness of member companies in the industry. The TMAN members are well provided with Quality certifications including JIS Q 9100, equivalent to AS/EN, and a Nadcap for special processes using TMG's intensive supports over the years. As the result, the network provides an opportunity for integrated production with mutual engagement.

Our support

- **For core members:** Strategic support in obtaining business opportunities
- **For developing members:** Organization of seminars, networking events, Nadcap and QMS accreditation subsidization. Business matching coordination by experienced advisors.

International Aerospace Exhibition

The TMAN members have been accumulating their experiences of global aviation business through participation and networking in major Aerospace exhibitions, such as ILA Berlin, Singapore Air Show, Paris Air Show, Aviation Forum Hamburg, Japan International Aerospace Exhibition, and Aeromart Nagoya.

Main Challenges

Competition: The TMAN has been providing intensive strategic supports to the members towards global competitiveness and business expansion. We expect that those competencies can lead member companies to become competitive players in the industry.

Regional Strategy: Tokyo has a fluency to whole domestic industry and a potential to lead the Japanese aviation industry. We expect that the TMAN can propel the industry development by cooperating with colleagues and related authorities.

Contact: info@tman.tokyo.jp

Member Companies

As of March 2018

No.	Firms	Industry ENTERED	SEGMENT					CERTIFICATE					PROCESS													WEB Site URL										
			AIRFRAME	ENGINE	COMPONENT, APPLIANCE	CABIN INTERIOR, SYSTEMS	DEFENSE	SPACE	ISO 9001	ISO 14001 or Equiv.	ISO 17025	ISO 27001	JIS Q 9100 or AS/EN9100	Nadcap	UL Standards	Customer's Certificate	MOLD	CAD/CAM	INSPECTION, MEASUREMENT	TOOL, FIXTURE	Electrics & Electronics	PAINTING	ASSEMBLY	Misc. SPECIAL PROCESSES	SURFACE ENHANCEMENT		WELDING & BONDING	HEAT TREATMENT	SURFACE TREAT & PLATING	NDI	CASTING, DIE-CAST	FORGING	SHEET METAL, PRESS	NON-METALLIC or COMPOSITE	MACHINING	
20	Maeda Corporation	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																								www.maedash.co.jp/en
21	MARKTEC Corporation	→	✓	✓	✓	✓	✓	✓	✓	✓	✓																									www.marktec.co.jp/en/tabid/272/Default.aspx
22	Mega Works Corporation																																		www.megaworks.co.jp	
23	Metal Technology Co. Ltd.	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																						www.kinzoku.co.jp/english/index.html?lid=1	
24	Mimasu Industries Co., Ltd. [AMATERAS]	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																						mmsk.co.jp/english/index.html	
25	Misashi Co., Ltd.	→		✓			✓	✓	✓	✓	✓																								misashi.co.jp/eng	
26	Mitsuya Co., Ltd.	→		✓	✓			✓	✓	✓	✓																								www.mitsuya-plating.com	
27	Nagao Industry Co., Ltd.							✓	✓																										www.nagao-inck.co.jp	
28	Nagase Co., Ltd. [AMATERAS]	→		✓	✓		✓	✓																											www.japan-company.jp/nagase-shibori	
29	Natori Seisakusho Co., Ltd.							✓	✓																										www.natori-mnf.co.jp	
30	Nicchu Co., Ltd.	→	✓	✓	✓	✓	✓	✓	✓	✓	✓																								www.blast.co.jp/english/index.php/top	
31	Nippon Precision Casting Corporation	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																							www.npc-c.co.jp/about/index.html	
32	Nishihara Rikoh Corporation							✓	✓																										www.nishihararikoh.co.jp/en.html	
33	Ogino Industrial Co., Ltd.	→			✓			✓	✓																										www.ogino-net.co.jp/en/index.html	
34	OK Print Corporation	→			✓		✓	✓	✓																										www.okp.jp/english/index.html	
35	O-KEI Resin Co., Ltd.	→	✓																																www.ok-jyushi.co.jp	
36	Sanno Techno-Arts Co., Ltd.	→	✓			✓	✓	✓		✓	✓																								www.sanno-ta.jp	
37	Shiono Precision Co., Ltd. [AMATERAS]	→	✓	✓	✓	✓	✓	✓			✓																								www.shiono-precision.com/english	
38	Shoji Works Co., Ltd.																																		www.shoji-ss.jp/pc	

☑ : Under Accreditation



MTC Metal Technology Co. Ltd.

Core Competencies

Metal Technology Co. Ltd. (MTC) has proceeded to grow and develop into a global expert in providing metal solutions to its customers. We provide integrated manufacturing solutions and services of metal parts through HIP, Vacuum Heat treatment, Diffusion Bonding, Machining, Brazing, Welding and Additive Manufacturing to meet the rapidly changing needs of various industries.

Our aerospace business consists of two major processes, manufacturing and repairing of aero-engine parts. For manufacturing, we are involved in manufacturing parts for the aerospace, aircraft, and defense industries. For repair, in 2011, our Chiba plant commenced parts repair primarily for the heat treatment of aircraft engine cases and other special processes. Our Narita plant is certified as an FAA repair station, an EASA Maintenance Organisation. Our main repairs are for blades and vanes.

Currently we operate three AM units. An AM280 DMLS, an A2X EBM, and a Q20 EBM are all fully operational. MTC can provide a high quality product to meet customer's request as we are involved in covering the whole process; pre-verification, build, heat treatment after build, post-inspection, finishing process and post-inspection quality assurance.

MTC's near-net-shape capability in powder metallurgy, or PM, manufacturing has been developed over years of experience in the field. Being able to form near-net-shapes with dimensional control contributes to sustainability, making PM a recognized green technology, and making it a preferred metal forming solution. It reduces waste and allows the design of complex shapes and geometries not practical or impossible with other metal forming processes. MTC has the second largest HIP capability in the world with 18 HIP units in operation including the world's largest HIP unit, Giga-HIP. Our processing size ranges from Dia.200mm x H300 right up our Giga-HIP at Dia.2050 x H4200. This enables us to be able to match customer needs and desires for any type of project.

Certs

- ISO 9100
- JIS Q 9100
- Nadcap (Heat Treating)
- FAA / EASA/ JCAB certified repair station
- Rolls-Royce

Contact

sales@kinzoku.co.jp
Iain Dandy, +81-(0)3-5365-3035

Website

<https://www.kinzoku.co.jp/en.html>





Machining



Sugasawa Seiki Co., Ltd.

Core Competencies

Sugasawa Seiki is a manufacturing company specializing in precision machining and assembly of machined parts. They are used for fuel injection system and hydraulic control valves of diesel engines. We also provide parts for various hydraulic control valves of aircraft flight control systems as well as jet engine and rocket engine components. We have capability to produce parts with integrated process within our company including NDT, mating-pair parts matching, and performance test (e.g. Hydraulic Pressure Test and Flow Rate Test). In addition, with our reliable special process partners for heat treatment and/or surface treatment, Sugasawa offers valuable integrated supply chain services to our customers.

Certs

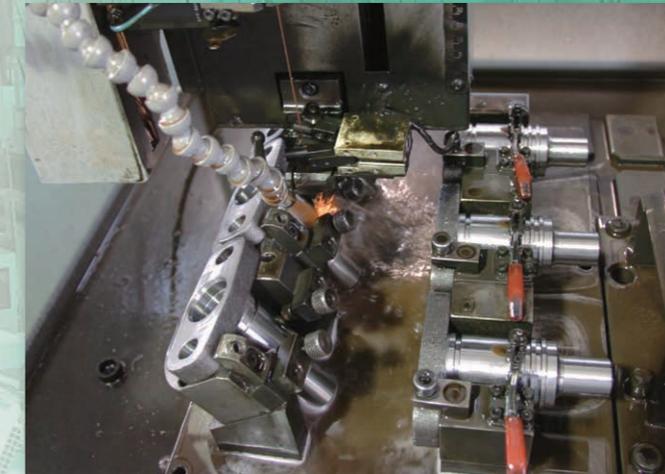
EN9100
Nadcap (Non Destructive Testing: Magnetic Particle Inspection)
ISO22301 (Business Continuity Plan & Management System)

Contact

hasegawa_nobu@sugasawa.com

Website

<http://www.sugasawa.com/>





Urano Co., Ltd.

Core Competencies

We, Urano Co., Ltd., are a machining company mainly in the field of aerospace (structural and engine), semiconductor production equipment and Energy (wide variety of blades). Starting from parts for Boeing 757, Urano has been accumulated more than 30 years experience of parts manufacturing for aviation industry. We specialize in hard-to machine materials such as Inconel and Titanium and complex shapes for structural and engine parts. Our products, large shape titanium fitting of structural parts, are used for B777s, B787s, B747-800, Embraer ERJs, Airbus A350s, Bombardier Global Express G7000 and MRJs. Recently, we have successfully entered into machining engine parts for GE Passport, Rolls-Royce Trent XWB and Pratt & Whitney PW1100G even with robotics in process of machining and inspection. We have nearly 100 machining centers and offer delivery dates with 24 hours/ 359 days operation. We have established an integrated production system with our suppliers, and material procurement and NDT process done in house together with machining.

Certs

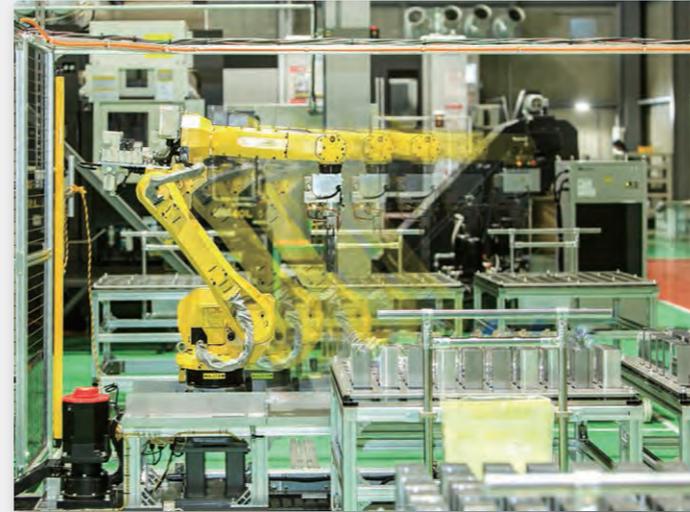
JISQ9100
ISO14001

Contact

Future Project Promotion
m-kobayashi@kk-urano.jp

Website

<http://kk-urano.com/>





Yamato Gokin Co., Ltd.

Core Competencies

Yamato Gokin is specializing in manufacturing plates, bars, and discs of special copper alloys including chrome copper, beryllium copper, and special aluminum bronze alloy. We have accumulated orders of materials for aircraft landing gear and actuator bushing/bearing from domestic and oversea MROs (including AMECO and SAFRAN), tier-1 manufactures (including SHIMADZU and NABTESCO) and landing gear OEMs (including SAFRAN and LIEBHERR).

We produce more than 100 types of various copper alloys to satisfy customers' needs, even in small amount of materials with short delivery time.

Certs

JIS Q 9100
ISO 9001

Contact

Reiichi Endo
reiichi.endo@yamatogokin.com

Website

<http://www.yamatogokin.com/english/index-e.html>





YUKI Yuki Precision Co., Ltd.

Core Competencies

Yuki Precision manufactures parts for aircraft & space industries, medical equipment and electrical or electronic devices. They are both for experimental production and for mass production. We also design and produce satellite components, satellite engine test benches and equipment used in special environment (high and low temperature, in a vacuum condition).

Certs

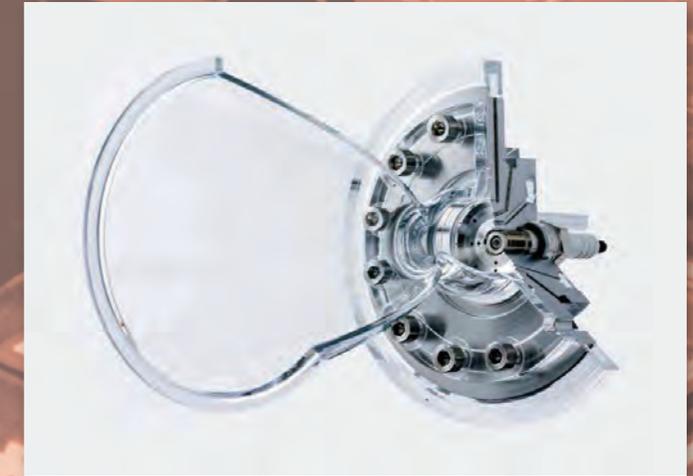
JIS Q 9100
ISO 9001

Contact

Masaki Kasahara
info@yukiseimitsu.co.jp

Website

<http://www.yuki-precision.fr>





Tokyo Metropolitan Industrial Technology Research Institute

Business Guide

Our mission is to promote the development of small-and medium-sized enterprises through industrial technology by research, consulting and testing, and thus to contribute the quality of life for the citizens in Tokyo.

Testing service

We perform tests, measurements, and analysis to meet the needs of customers. We can offer technical advice based on these results.

For examples,

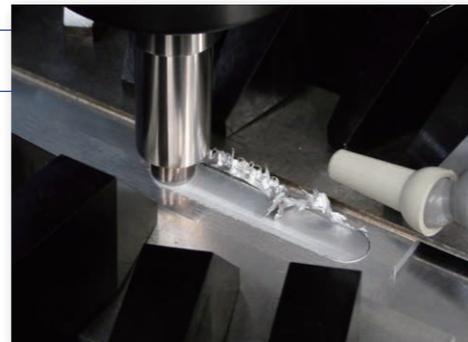
- Non Destructive Testing
- Vibration Testing
- Shock Testing

Research and Development

Basic research refers to the research which TIRI plans and implements independently for the purpose of developing new technology or for coming up with solutions for issues confronting many SMEs.

For examples,

- Dissimilar Metal Joining by Friction Stir Welding
- Press Forming of Titanium Alloy sheets



Certs

ISO/IEC 17025

Contact

Mechanical Technology Group
tiri-aviation@iri-tokyo.jp

Website

<http://www.iri-tokyo.jp/site/kikai/aviation.html>

TIRI has been providing technical assistance to newcomers and established enterprises to the aviation industry, mainly aviation industry clusters "TMAN" and "AMATERAS" established by Tokyo Metropolitan Government.



Aviation Industry Support Laboratory

TIRI established "Aviation Industry Support Laboratory" on 13 Dec. 2017, to enhance technical support for aviation industry, for example: specialized testing service for aviation standards, advice for technical verification on preproduction parts, etc.

Support Contents

Specialized testing service for aviation standards (paid services)

The acceptance of specialized testing services for aviation standards are starting on 20 Dec. 2017.

Start accepted from 20 Dec. 2017

- Standard Test Methods for Determining Average Grain Size (ASTM E112)
- Standard Test Methods for the inclusion Content of steel (ASTM E45 Method A)
- Standard Test Methods for Rockwell Hardness of Metallic Materials (ASTM E18)
- Standard Test Method for Knoop and Vickers Hardness of Materials (ASTM E384)

Scheduled for start accepting in April

- Salt spray test (ASTM B117)
- Flammability test (FAR 25.853)
- Vibration Test (UN 3480)

Support for technical verification on preproduction parts (For aviation industry cluster "TMAN")

TIRI provides the support for technical verification on preproduction parts mainly for aviation industry clusters TMAN.



JAPAN INTERNATIONAL AEROSPACE EXHIBITION 2018 TOKYO

November 28 (Wed.) to 30 (Fri.) 2018

Venue : Tokyo Big Sight(Tokyo International Exhibition Center)

Organizers :  The Society of Japanese Aerospace Companies(SJAC)
Tokyo Big Sight Inc.

Special Cooperation :  TOKYO METROPOLITAN GOVERNMENT

Welcome to TOKYO - the city developing towards 2020

Tokyo is a city where a lot of information, culture and entertainment get together. Tokyo has many different types of area; from streets preserving the historic atmosphere to downtown crowded with skyscrapers.



- Japan is the second largest economic country in Asia.
- good transportation from all over the world
- a variety of hotels
- entertainment; traditional live performance (Kabuki, Noh), museum and amusement parks
- coexistence of modern and old culture
- food culture; Washoku, Sushi and many restaurants with international reputations



TOKYO BIG SIGHT

(Tokyo International Exhibition Center)
3-11-1 Ariake, Koto-ku, Tokyo, 135-0063, Japan
www.bigsight.jp

- the biggest Exhibition center in Japan(95,420 m²)
- placed in the heart of Tokyo
- good transportation; trains, monorail and waterbus
- in 2016, the number of events was 304, and the number of visitors was 14.7million.
- Tokyo Big Sight Inc. is both venue owner and exhibition organizer.

