



Achieving State of the Art Technology with Sand Casting and Machining

## External Machined Geometry:

Shaped with 5-axis machines to achieve precise and thin walls.

Minimum wall thickness: 3 mm (0.118")

## Internal Cast Geometry:

Shaped with 3D-print sand molds to achieve a completely free design from the pattern which unifies all passages into one part. Passage diameter:  $\phi$ 6 mm (0.236")

Tier-2 Supplier for Aerospace Engines

## Products:

Accessory Gearboxes, Transfer Gearboxes, Auxiliary Power Unit Gearboxes, Cylinder Heads, Scrolls, Housings, Covers, Brackets, Ducts, Frames, Vanes, etc.

## Special Process:

Sand Casting

Welding

Material Testing

**Heat Treating** 

Penetrant Testing

Radiographic Testing

Chemical Processing

### Cast Materials:

Aluminuim alloy: A354, A355, A356, A357, original low-Si alloy, etc.

Magnesium alloy: AZ91, ZE41, EV31, etc.



# **TANIDA's Integrated Capabilities**







### **MACHINING**

# 20+5-Axis Machine Spindles : Machining Equipment :

MAKINO T1 《with Turning Spec.》 Max work: Φ1500 x 1500 mm (Φ59 x 59 in)

DMG MORI NVL1350MC Max work: Φ1600 x 1100 mm (Φ63 x 43 in)

Target Material : Ti, Ni, Al, Mg, Alloys and Rolled Material

### **MACHINING**

# 200+ Automatically Operated Pallets : Machining Equipment :

MAKINO a82

Max work:  $\Phi$  1060 x 1280 mm  $(\Phi$  42 x 50 in)

MAKINO a500Z

Max work: Φ630 x 500 mm (Φ25 x 20 in)

ZOLLER venturion 600 Tool Presetter System

#### **INSPECTION**

# Various Quality Inspections : Inspection Equipment :

Digital X-ray Scanning (DDA) YXLON Y.MU2000-D Max work: Ф800 x 1500 mm

(Ф32 x 59 in)

CT X-ray Scanning (CT) YXLON FF85CT

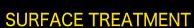
Max work : Φ800 x 1100 mm (Φ32 x 43 in)

CR X-ray Scanning (CR)
GE Oil & Gas CR x Flex

 $Max\ work: 2000\ x\ 2000\ x\ 2000\ mm$ 

(29 x 29 x 29 in)





# Various Treatments :

Anodic Coating (MIL-A-8625F)

Hard Chromium Plating (AMS2460 A)

Chemical Conversion Coating (MIL-DTL-5541F)

Passivation Treatment (AMS2700E)

Paint Process (MIL-F-18264D)



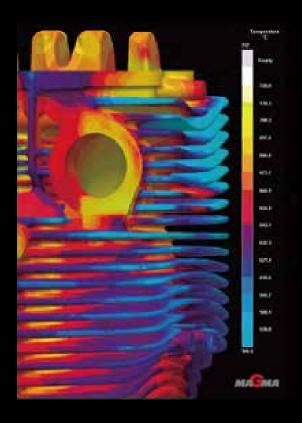
## SAND CASTING

C ounter Pressure Casting + Additive Manufacturing

Sand 3D-Printer:

Max work: 1800 x 1000 x 700 mm (71 x 39 x 28 in)

Counter Pressure Casting System: Max Work: 1200 x 1200 x 1200 mm (47 x 47 x 47 in)



## SAND CASTING

Magnesium + Atmospheric Management

## Gas Management System:

Fill inert gas into cavity during pouring for activation prevention.

#### Pressure Management System:

Compress or decompress gas to allow complete material runs into the sand pattern.

New perspectives in craftmanship we make, giving evolved values to our partners.

This is the lifeblood of TANIDA, All products and services are created through our deep and profound experiences built within this.

The very importance lies in our frame of mind and approach to overcome the technological limitations, and teamwork that determines the speed and performance.

Based on this idea, we strive to continue to grow together with our partners and go beyond the limit!





Kahoku / Kanazawa, Japan

#### Certifications:

AS9100 (Certified in Apr 2009) Nadcap (Certified in Jan 2015)





Materials Testing Laboratories NonDestructive Testing Chemical Processing Heat Treating Welding