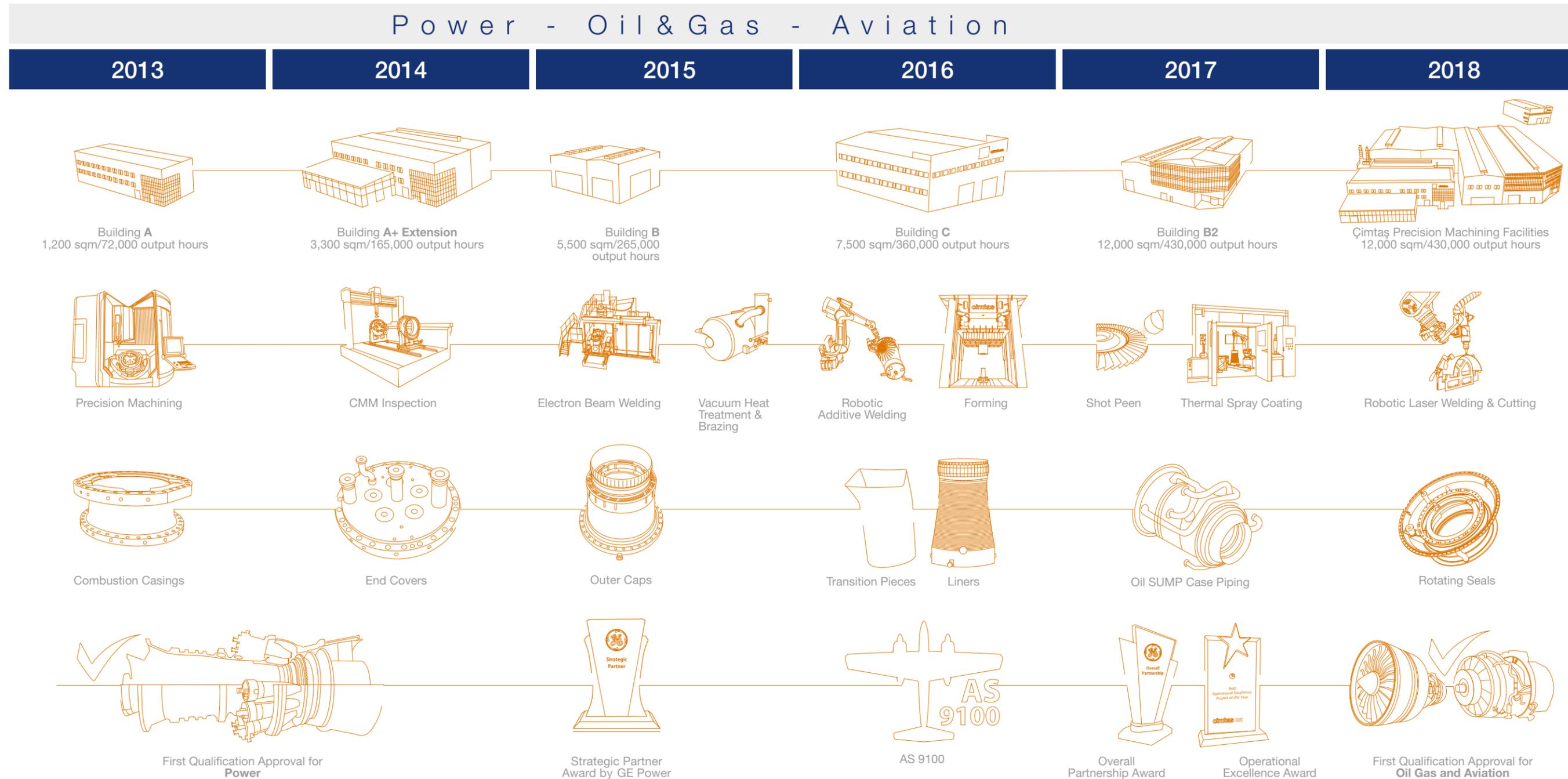


cimtas | MACHINING
WELDING
PRECISION



HISTORY MILESTONES



ÇİMTAŞ PRECISION MACHINING ABOUT US



12,000 sqm
(129,166 SQ FT)
Fenced Area



11,400 sqm
(121,700 SQ FT)
Covered Area



430,000
Output hours



ÇİMTAŞ PRECISION MACHINING Industries and Trading Ltd. Co., a subsidiary of Çİmtaş Group, is located in Bursa Free Zone to manufacture complex performance-critical gas turbine components for aviation, power, oil & gas industries. The company is also globally recognized for its vertically integrated manufacturing systems and expertise in advanced materials.

Çİmtaş Group

- A subsidiary of ENKA with more than 40 years of experience
- 7 production shops, located 6 in Turkey and 1 in China
- Over 135,000 mt/year fabrication capacity and 150,000 mt/year manufacturing capacity
- 2,500 employees

ENKA

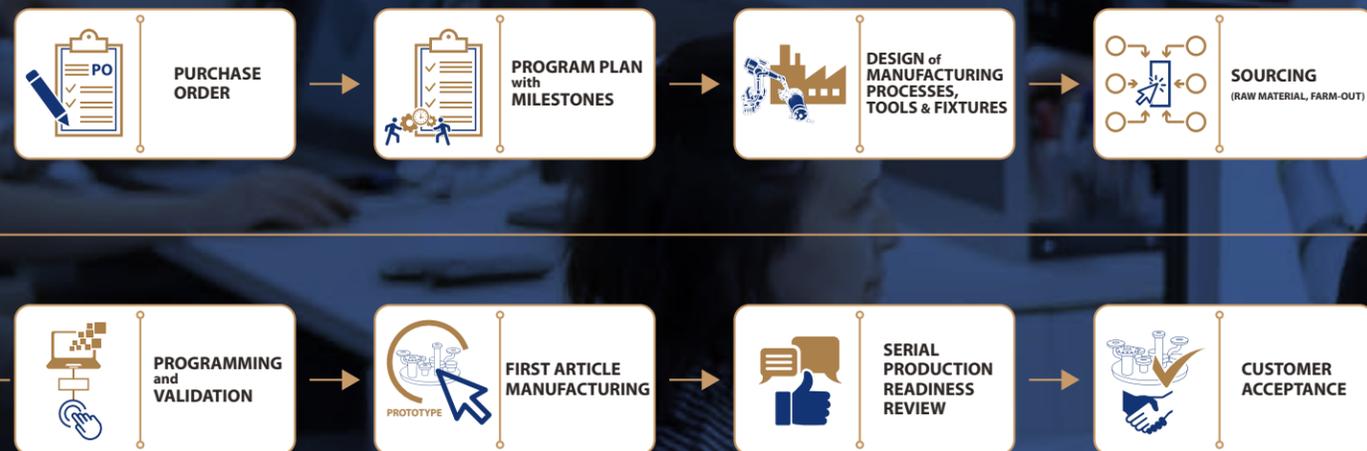
- More than 500 projects in 45 countries with historical value of US\$ 45 billion
- 72nd in ENR International Contractors List
- More than 30,000 employees

PRIME LOCATION for GLOBAL SUPPLY
4 International Deep Sea Ports Within 2 km



NEW PRODUCT INTRODUCTION at a GLANCE

NPI Process



Key Assets

- Fabricated, Structural & Rotating Parts
- Expertise in Superalloys
- Concurrent Engineering Capability (Design for Manufacturing)
- Short Lead Time from Design to Market
- Process Optimization (Using Continuous Improvement Tools; 6 Sigma, Lean, SPC)
- PMP Certified Project Managers
- Integrated Change Management
- JD Edwards Oracle ERP

Engineering

- Esprit 2 + C + Y + B Simultaneous (CAM)
- Catia V5R20 (CAD)
- Unigraphics NX 10.0 (CAD)
- PAM-STAMP & AutoForm for Mold Design & Optimization
- Minitab

MANUFACTURING CAPABILITIES METALLURGY AND CERTIFICATION

METALLURGY

INTERNATIONAL STANDARDS

CERTIFICATES

NICKEL BASED & SUPERALLOY, SPECIAL SHEET MATERIAL

Hastelloy X - AMS 5536	Alloy 263 - AMS 5872
Inconel X750 - AMS5542	Alloy 282 - AMS 5951
Alloy 188 - AMS 5608	Inconel 718 - AMS 5596

STAINLESS STEEL

ASTM A 312 TP304L	ASTM A 965 Gr. F347
ASTM A 182 Gr. F304L	15 - 5PH - AMS5862
ASTM A 403 F 304L / WP304L	17 - 4PH - AMS5355
ASTM A 240 Gr. 316L / Gr. F347	Jethete M152

CARBON STEEL

ASTM A 105 / 106 Gr. C	ASTM A 516 Gr. 60 / Gr. 70
ASTM A 266 Gr. 4	ASTM A106 Gr. C

LOW ALLOY

ASTM A 387 Gr. P22	Hykro - BS S106
ASTM A 182 F 22	

TITANIUM

Titanium 6Al - 4V

ALUMINUM

Alloy 7075



AS EN 9100

ISO 9001:2015

ISO 14001:2015

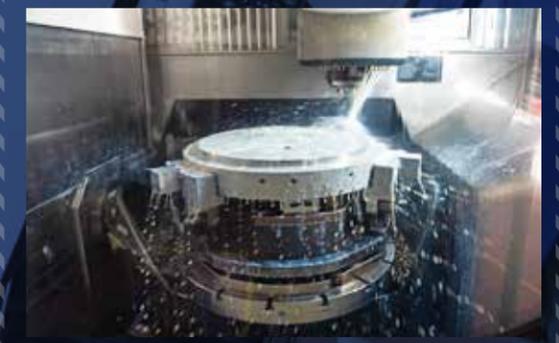
OHSAS 18001:2007

ISO/IEC 27001:2013



MANUFACTURING CAPABILITIES

MACHINING



Simultaneous 5 - Axis Turning & Milling
• Parameter Controlled Machining
per Customer Specs

MANUFACTURING CAPABILITIES

FORMING



Vertical Hydraulic Presses

- 1,000, 2,000 and 2,500 tons with 1,000 tons Integrated Extruder

Hydraulic Expander

- 150 tons Hydraulic Pressure

- AutoForm & PAM-STAMP Forming Simulation for Mold Design and Optimization

SPECIAL PROCESSES

ELECTRON BEAM WELDING



High Vacuum Electron Beam Welding Equipment

- 15 kW, 3.1 m³ (110 ft³)
- 30 kW, 11.3 m³ (400 ft³)
- Qualified in Various Steels, Nickel Alloys, Superalloys and Dissimilar Materials
- 0.7 mm (0.02") - 100 mm (4")

SPECIAL PROCESSES

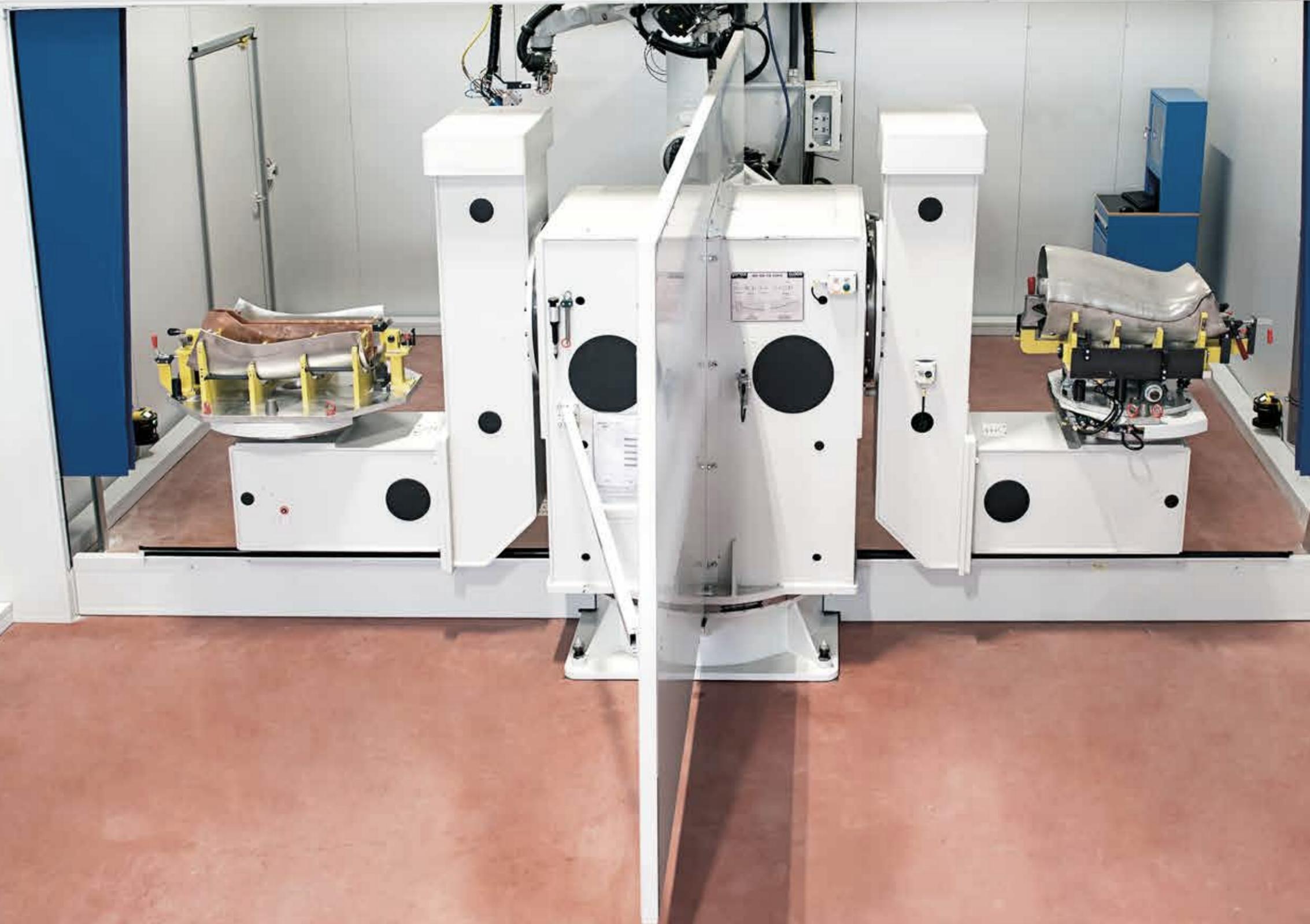
CONVENTIONAL WELDING



- Manual & Automated Welding
- GTAW, SMAW, FCAW, GMAW, STT/RMD/CMT, SAW & PAW
- 2,500 PQR and 6,400 WPS in Library
- IIW/EFW Certified Welding Engineers
- In-House Fit-up & Welding Operator Training Center

SPECIAL PROCESSES

ADDITIVE & LASER WELDING



Additive Welding Robot

- Additive Welding Application on Nickel & Superalloys

Tailor Made Robotic Laser Cutting & Robotic Laser TIG Welding Operations

- 6 kW Fiber Laser Power and Capable for a Power Capacity Enlargement up to 15 kW
- 35 m³ (1,236 ft³) Cell Volume with a 1,000 kg (2,200 lbs) Max. Weight of Part Loading

SPECIAL PROCESSES

HEAT TREATMENT AND BRAZING



Vacuum Furnaces

- Certified to Class 1 as per AMS 2750
- Ar/N₂ Quenching
- Specially Designed for Annealing, Stress Relieving, Stabilization, Precipitation Heat Treatment & Brazing
- Max. Weight of Load
 - 3,700 kg (8,150 lbs)
- Max. Temperature
 - 1,315 °C (2,400 F)

SPECIAL PROCESSES

SURFACE TREATMENT AND COATING



HVOF & Plasma Arc Spray
• GE Power Approved HVOF and TBC Qualifications



Shotpeen
• Auto Dual Media Change



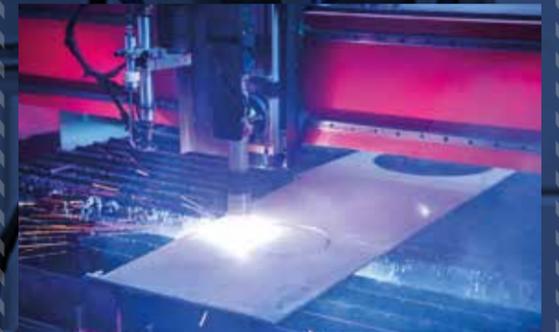
Wet Grid Blast, Tailor Made Automated Grit Blasting, Glass Bead Peen



Ultrasonic Cleaning, Alkali/Etch Cleaning, Passivation

SPECIAL PROCESSES

CUTTING AND TRIMMING



Robotic Laser Cutting

- 6 kW Fiber Laser Power
- 35 m³ (1,236 ft³) Cell Volume with a 2,205 lbs Weight of Part Loading

4 Axis Waterjet

- 2,000 mm x 3,000 mm
- Dual Head CNC
- 6,200 bar

Plasma Cutting

- 2,000 mm x 3,000 mm
- Plasma and Oxyfuel Cutting

LABORATORY AND MEASUREMENT SYSTEMS INSPECTION AND TESTING



Mechanical Testing & Metallography Laboratory



Accredited Mechanical & Metallography Laboratory (ISO/IEC 17025:2005)

- Plasma Test Coupon Evaluation
- NPI Cut-Up & Testing
- Welding PQR Tests

Inspection & Testing

- Radiographic Particle Inspection
- Magnetic Particle Inspection
- Fluorescent Penetrant Inspection
- Liquid Penetrant Inspection
- Macro Etch Inspection
- In-House Level I, II, III NDT Personnel - SNT-TC-1A & PED 97/23, EN 473 & NAS410
- CMM Dimensional Inspection
- Air Flow Inspection
- Contact Ultrasonic Testing
- Hydrostatic Testing
- Form Tracer
- Positive Material Identification (PMI)
- Video Boroscope Inspection

INDUSTRY 4.0

DIGITAL MANUFACTURING



Best Operational
Excellence Project
of the Year

Collect

- Sensors, Automation Systems and Robotics

Analyze

- Descriptive Analytics, Diagnostic Analytics, Machine Learning, Predictive Analytics and Prescriptive Analytics

Act

- Real-time Stream Processing, Trigger Events / Alerts Based on Complex or Dynamic Criteria, Interface to Local Systems, Collaborative Manufacturing Environment

- Zero Human Touch

- Minimized Operational Time

- Fully Integrated Engineering and Manufacturing Systems

- Real-time Production Monitoring

- Performance, Quality, Availability, OEE Analysis

- Easily Configured

- Improved Quality

- Machine Learning



ÇİMTAŞ GROUP COMPANIES



ÇİMTAŞ STEEL

Gemlik - Turkey

160,000 sqm Fenced Area
62,000 sqm Covered Area
70,000 t Annual Fabrication



CİMTAŞ PIPE

Gemlik - Turkey

120,000 sqm Fenced Area
60,000 sqm Covered Area
162,000 t Annual Manufacturing & Fabrication
42,000 t



CİMTAŞ NINGBO

Ningbo - China

55,250 sqm Fenced Area
27,000 sqm Covered Area
20,000 t Annual Fabrication



ÇİMTAŞ MODULE & SHIPYARD

Gölcük - Turkey

270,000 sqm Fenced Area
55,000 sqm Covered Area
35,000 t Annual Fabrication

OUR MISSION

To deliver advanced technology metal and alloy metal products with the **highest quality** standards, **safely, on time** and **at the least total cost** of our each customer.

OUR VISION

To be the **preferred partner** for the leading customers in **Energy and Aviation** Industries by growing continuously with our competent employees in **advanced technology** new products.

OUR VALUES

- Safety, competency, development & leadership of our **employees**
- Satisfaction of our **customers** through operational excellence & flexibility
- Effective use of advanced **technology & information**
- Identification and roll-out of **best practices & lessons learned**
- Being **innovative** in everything we do & willingness to **change**
- Being ethically, environmentally & socially **responsible**



Prime Location for Global Supply

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