

High precision machining and welding of metallic parts and assemblies

GPS coordinates (latitude, longitude) N41° 38' 42", W0° 55' 56"

GPS coordinates (decimal degrees) +41.645, -0.9







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ENERGY AERONAUTICS AEROSPACE RAILWAY MECHANICAL TRANSMISSIONS



- Over 80 years experience
- Qualified and expert team
- Flexibility
- High Quality Standards
- State-of-the-art Machinery
- In-house design of processes and toolings



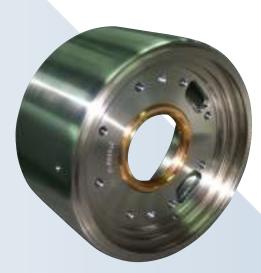
## Over 80 years of expertise

Started in 1934, CMASA has provided machining and welding solutions for the most demanding industrial sectors, manufacturing over 5000 diverse references in a broad variety of materials: aluminium, stainless steel, nickel-chromium based alloys...

CMASA relies on a highly experienced and trained team, in cooperation with an important network of approved suppliers.

Some examples of components manufactured in CMASA:





Turbo Compressor labyrinth Ø220 x 120 mm.



Axle Block Ø1000 x 1280 mm. Naval Industry. 3000 kg.



Turbine Disc Ø1200 mm.

Aeronautics.



Turbo Compressor Axle

Ø65 x 350 mm.

Planet Carrier. Wind Power.

2870 kg.

Rocket Engine Liner. Aerospace.



Cylinder Head. Diesel Locomotive.



Turbo Compressor Axial Diffuser 200 x 75 mm.



Gearbox Housing. Wind Power. 2650 kg.



Bearing Housing. Railway Ø310 x 200 mm.

## State-of-the-art Technology

### **Means of Production:**

- 1 boring machine up to 3000 x 2500 x 2200 mm, 4 axes
- 9 machining centres up to 2000 x 1500 x 1200 mm, 4 axes
- 3 vertical lathes up to Ø2700 x 1800 mm
- 4 horizontal lathes up to Ø1050 x 4000 mm
- 5 Axis milling and turning up to Ø640 x 1300 mm
- MAG & TIG Welding. 15085-2 **CL1** Certification

### **Quality Control:**

- 2 MMC machines up to
- machine: 0.4 micron
- MT, PT & UT
- X600 Z600

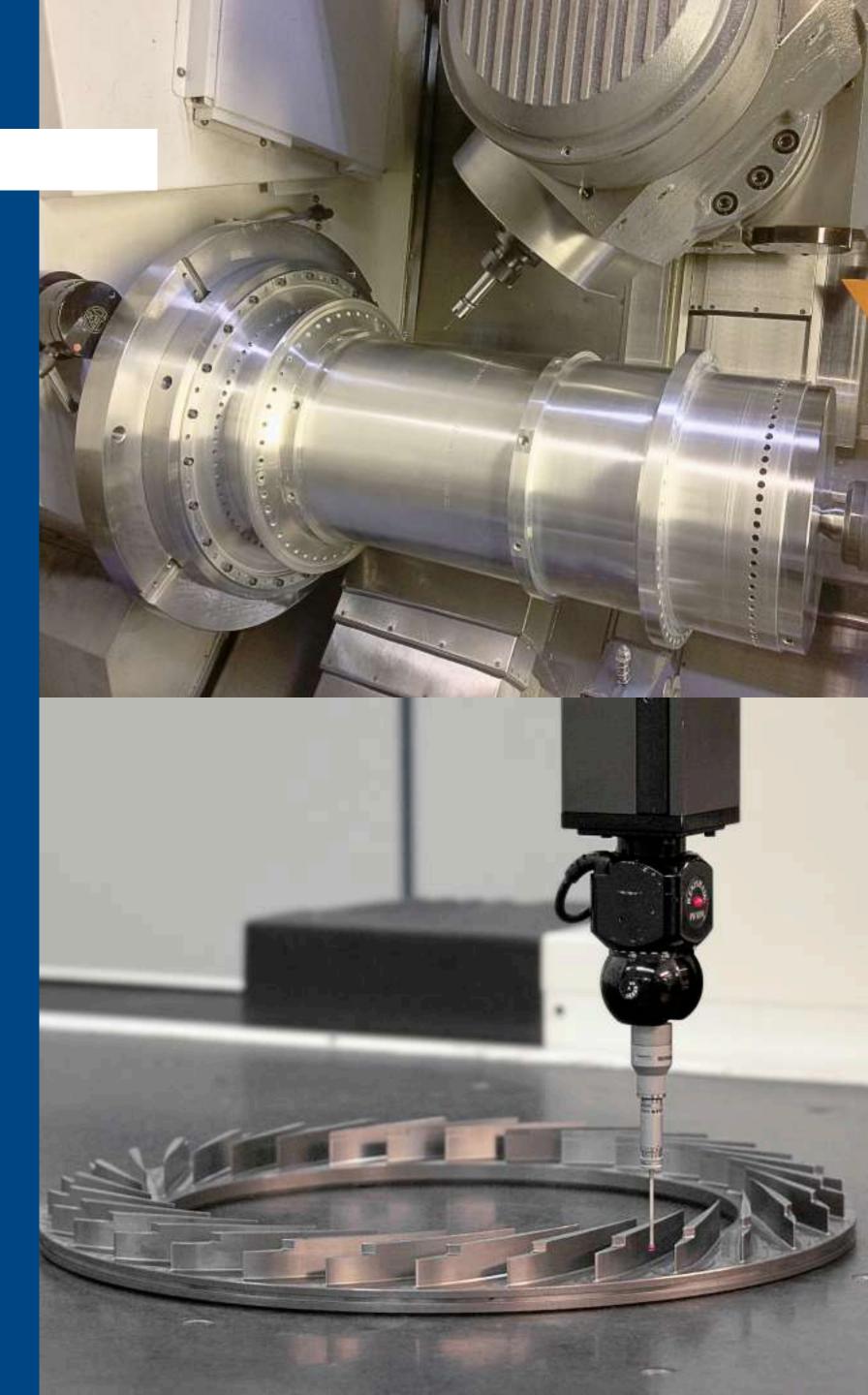


4000 x 2000 x 1500 mm

• 1 high precision calibration

• Level II non destructive testing

High Precision Tool Presetter



## High Quality Standards

Our Management System is certified according to ISO 9001:2015 and EN 9100:2018, leading us to a continuous improvement of the efficiency and effectiveness of our processes.

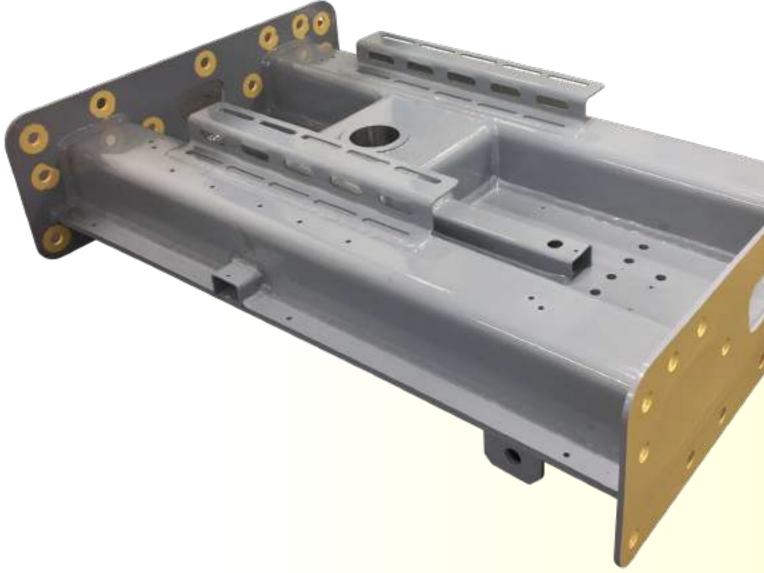
Welding procedures certified according to railway's highest standard EN 15085-2 CL1











Damper Support. High-Speed Railway



High precision milling and turning of big dimension components, up to X3000 Y2500 Z2200 mm and Ø2700 Z1800 mm

start ??

THE REAL

PAMA



TMD-23

TMD-23

# CONSTRUCCIONES MECÁNICAS ARAGONESAS, S.A.





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