



Technology development

PASSIONATE ABOUT OUR CUSTOMER'S SUCCESS

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A photograph of two business professionals in an office setting. One person is pointing at a laptop screen while the other holds a pen over documents. The scene is brightly lit, likely by natural light from a window, creating a warm and professional atmosphere. The text 'Our company' is overlaid in white on a dark horizontal bar.

Our company

We are a Mexican Company that provides **multi-process** solutions and Engineering development to help our customers reach their most critical goals in a global competitive market.



Who we serve?

Working mainly with the aeronautical industry, however we are ready to commit to the challenges of other industries that are looking for high quality suppliers.

Our Capabilities:



Engineering
CAD/CAM/CAE



High Precision
Machining (5 μ)



Finishing
Processes



Special
Processes



Mechanical
Assembly



Certified
Welding



Quality
Control



Lines of Business



Airworthy Parts

- | AOG Condition.
- | High mix low Volume productions



Composite Materials

- | Repairs.
- | High performance molds.



Fixtures, assemblies & molds



Ground Support Equipment

- | Manufacture and deliver.
- | Aftermarket services.



Certified Welding



Die Casting

Distinctives



Custom Made
Projects



Specialized



Reversed
Engineering



Quality Accreditation

We are committed to the quality of our products and services to fulfill the requirements of the industry standards, by the implementation of the following:

- AS 9100 D implementation and certification.

- Certified welding processes by AWS.

- FOD Prevention Program according to NAS 412.

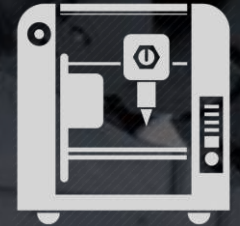
- Continuous, external and On The Job, **Training** for all the personnel.





High precision machining

(GSE) Maintenance Tools for Aeronautic MRO's
Molds and counter-molds.
Composite material machining
Fixtures.
Devices, Assemblies and Dies.
Airworthy Parts.
Automatized Tooling.
Other applications: Automotive and forging Tooling.

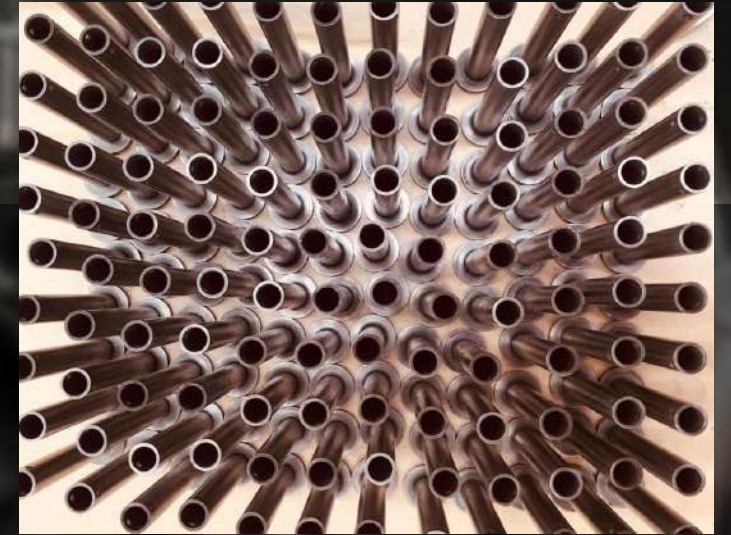


Lathes
Milling machines
3 axis CNC
4-FULL axis CNC
5 axis CNC
Grinding machine

High Mix, Low Volume

We are leaders of machined high precision parts.

We have the expertise in developing and fabricating parts made of different raw materials like:



Alloy Steels and
Low carbon steels
(4140T, A36, 1018, etc.)



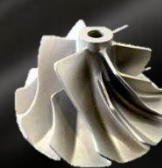
Bronze &
Titanium



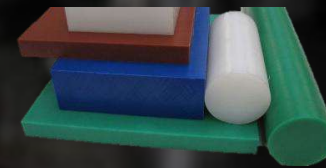
Aluminum
(6061, 7075,
etc.)



Stainless Steel
(304, 316, 15-15PH
H900, 17-4, etc.)



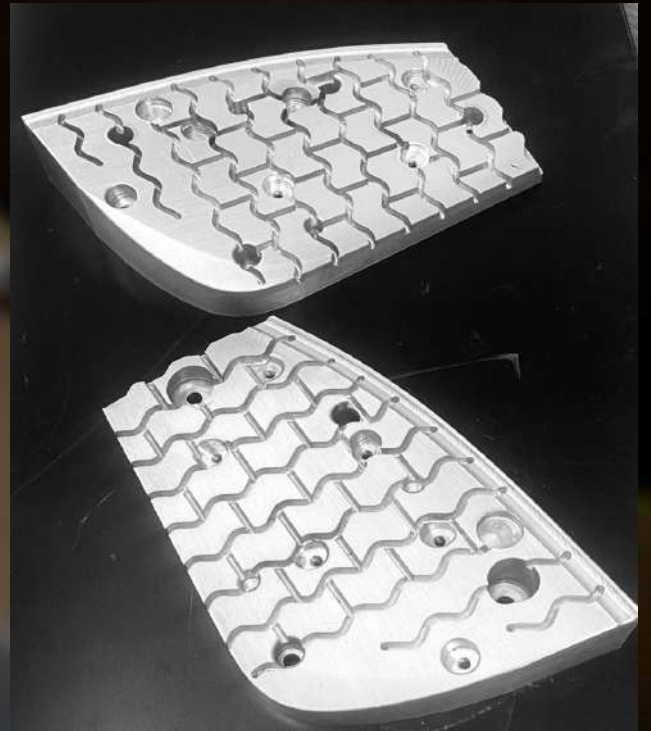
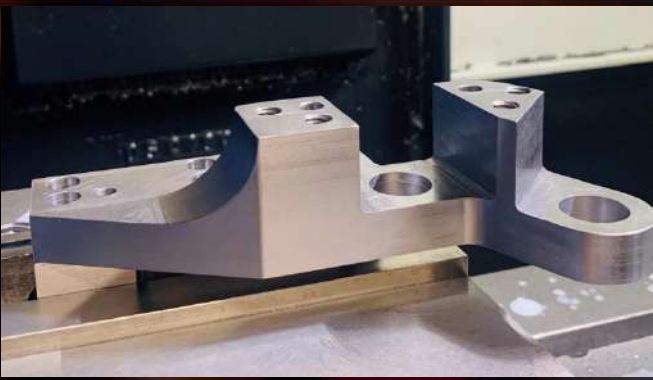
Inconel 718



Polyethylene
(Nylamid, etc.)



H13 for
forging tooling



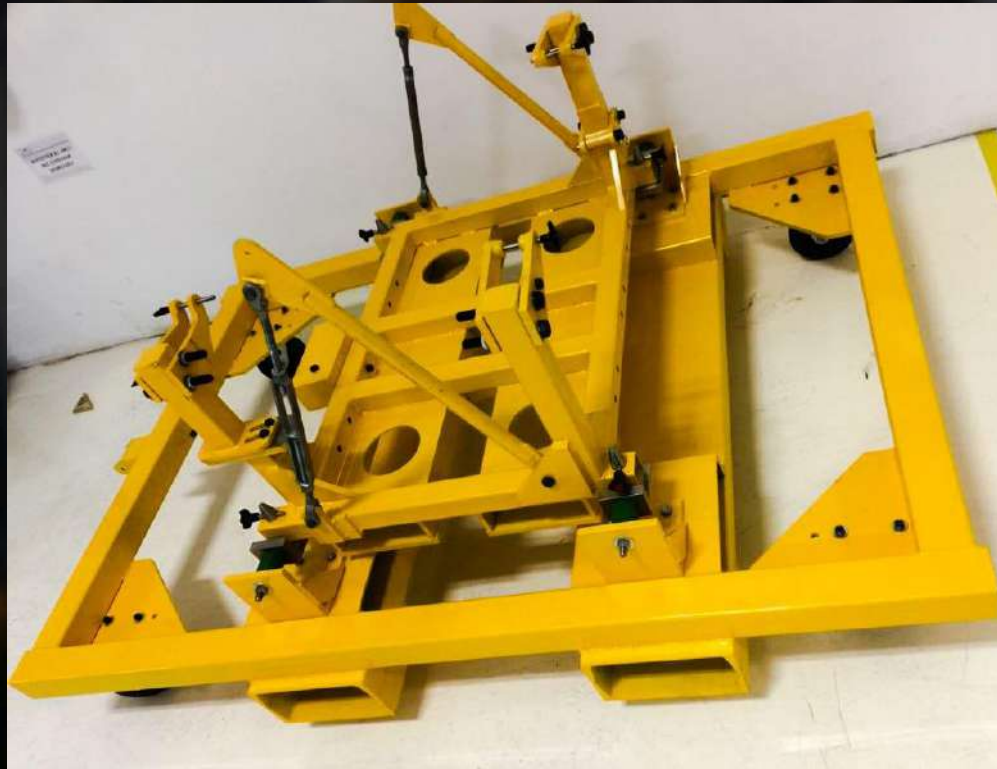
Maintenance tooling and GSE for aeronautic MRO's



Development of custom-made tooling with the processes: design, machining, heat treatments, superficial treatments, assembly, welding, marking and/or painting.

- Fixtures for seals in landing gear.
- APU Dolly.
- Radome Dolly.
- Reverse Dolly.
- Balancing Jig.
- Landing gear handling trolley, etc.







Molds

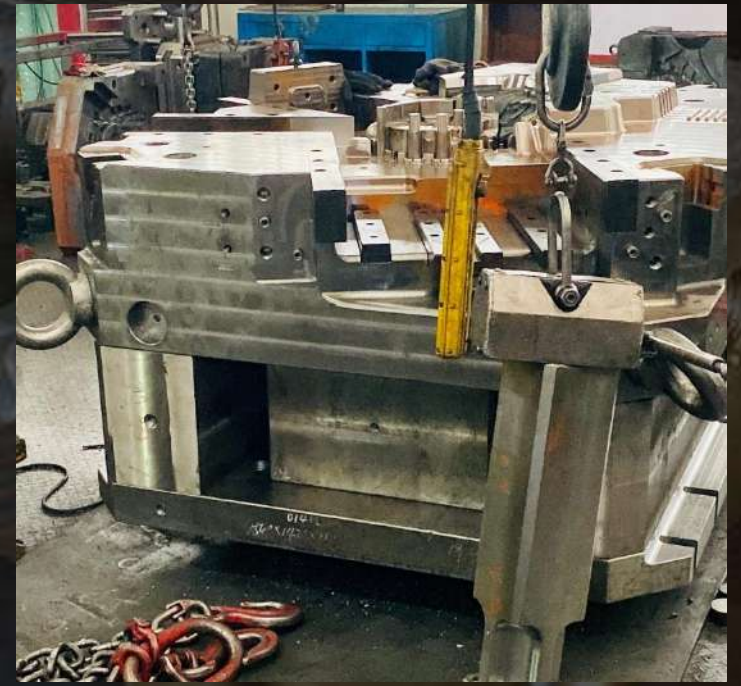
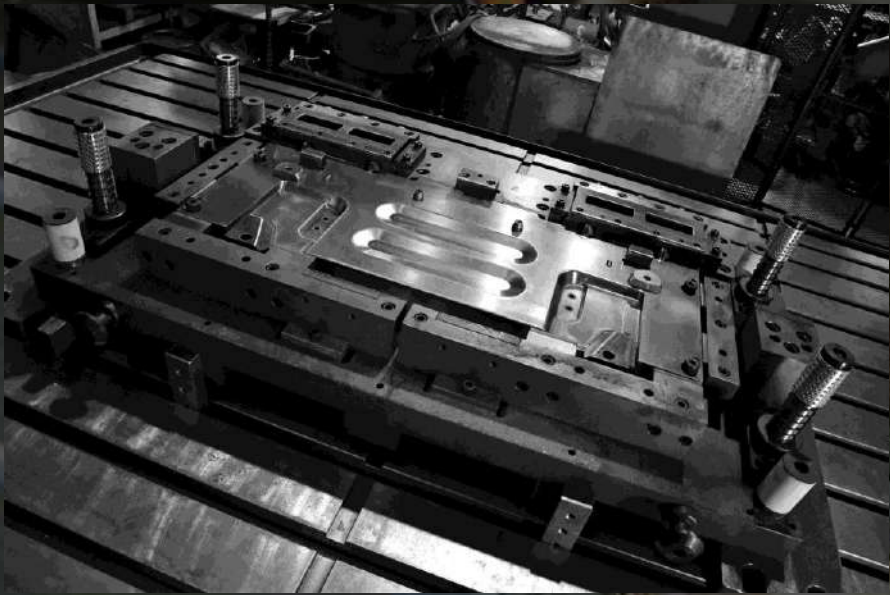
Machining of open and closed molds for serial production of parts.

Plastic injection.

Thermoforming.

Wet lay-up molds

Die casting molds



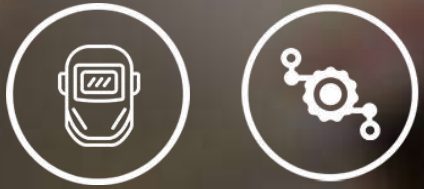


Die Casting

- High Pressure Die Casting
- Cold Chamber
- Specialized in Aluminum parts (600 Ton Capabilities)

We have the capabilities of high precision machining the castings parts, also buying commercial parts and make the assembly.





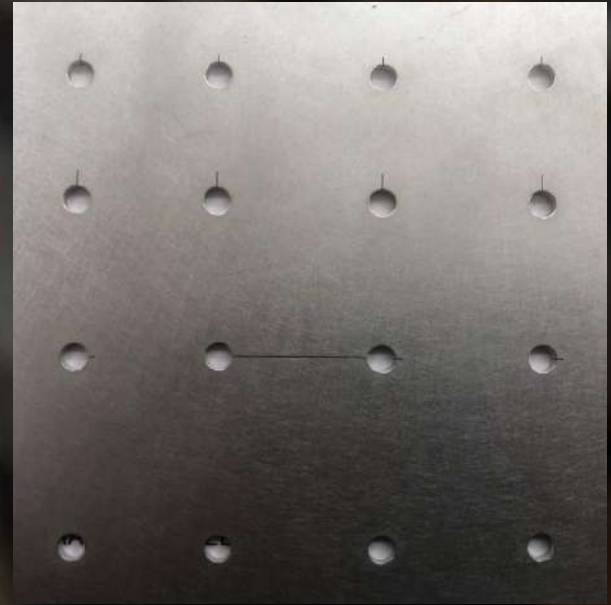
Devices, Assemblies and Dies

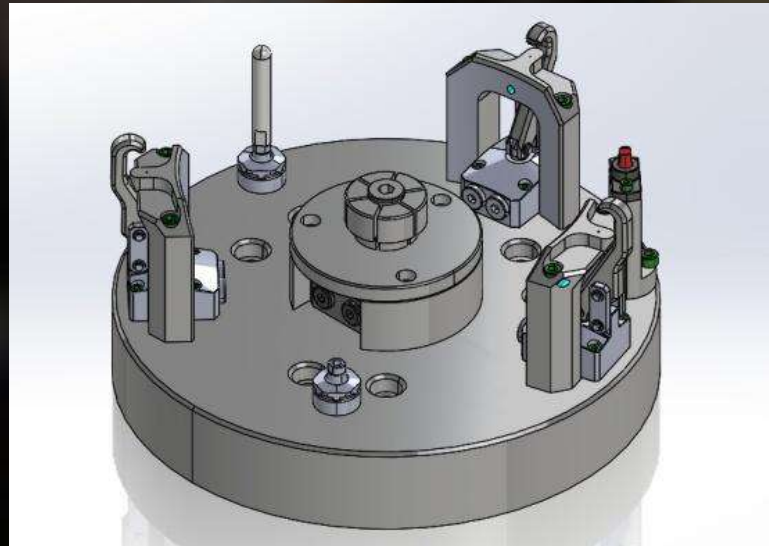
Machining of different types of tooling to assure the correct production our clients.

- Assembly tooling.

- Drilling Tooling.

- Poka Yokes and Gages







Airworthy Parts

We are specialists on the production of airworthy parts for aerospace industry. With a strong experience, we develop customized parts for AOG (Aircraft on Ground) projects: reversed engineering, advanced machining and assembly with the quality inspection and certificates of conformity for an adequate traceability.

Frames

Stringers

Brackets

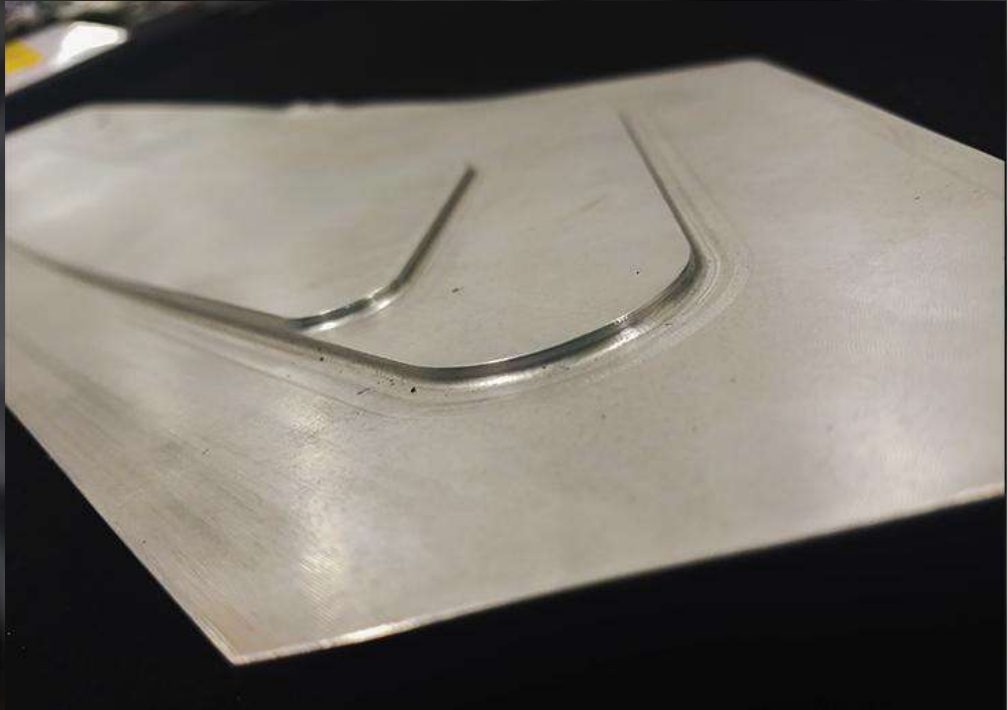
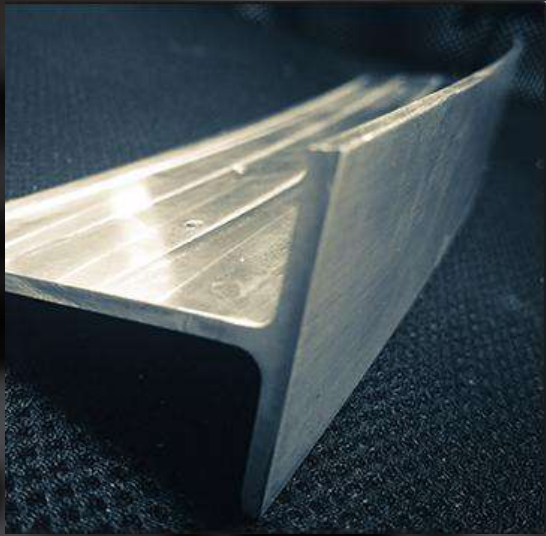
Flange

Longerons

Fittings

Bushings





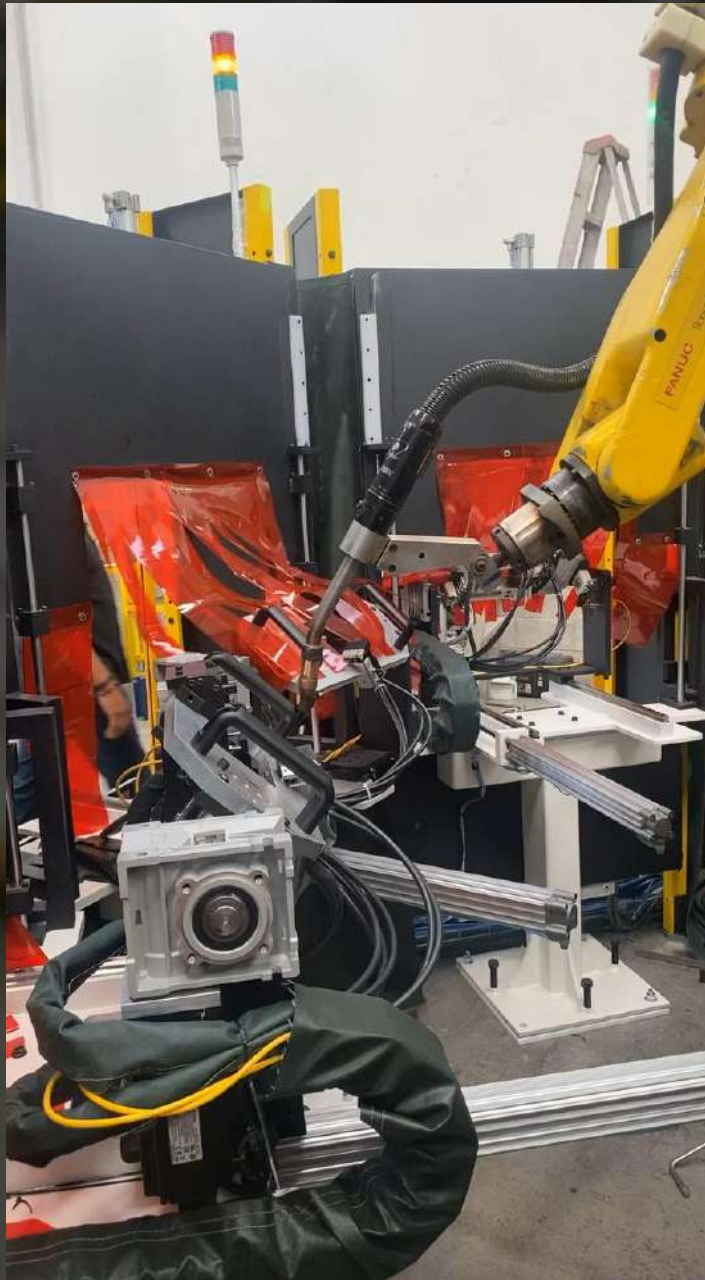
Automatized tooling

With pneumatic systems, hydraulic systems and programmable logic controllers (PLC), we develop customized tooling for the automatized function of precise processes on diverse industries.

Atomataized machine

- Riveting automatized tooling.
- Automated tooling to lower the landing gear.





Design

Fundamental part of our Company. Certified to give courses

Sheet Metal Aerospace Design

Structural Design

Molding Design.

Composite Design

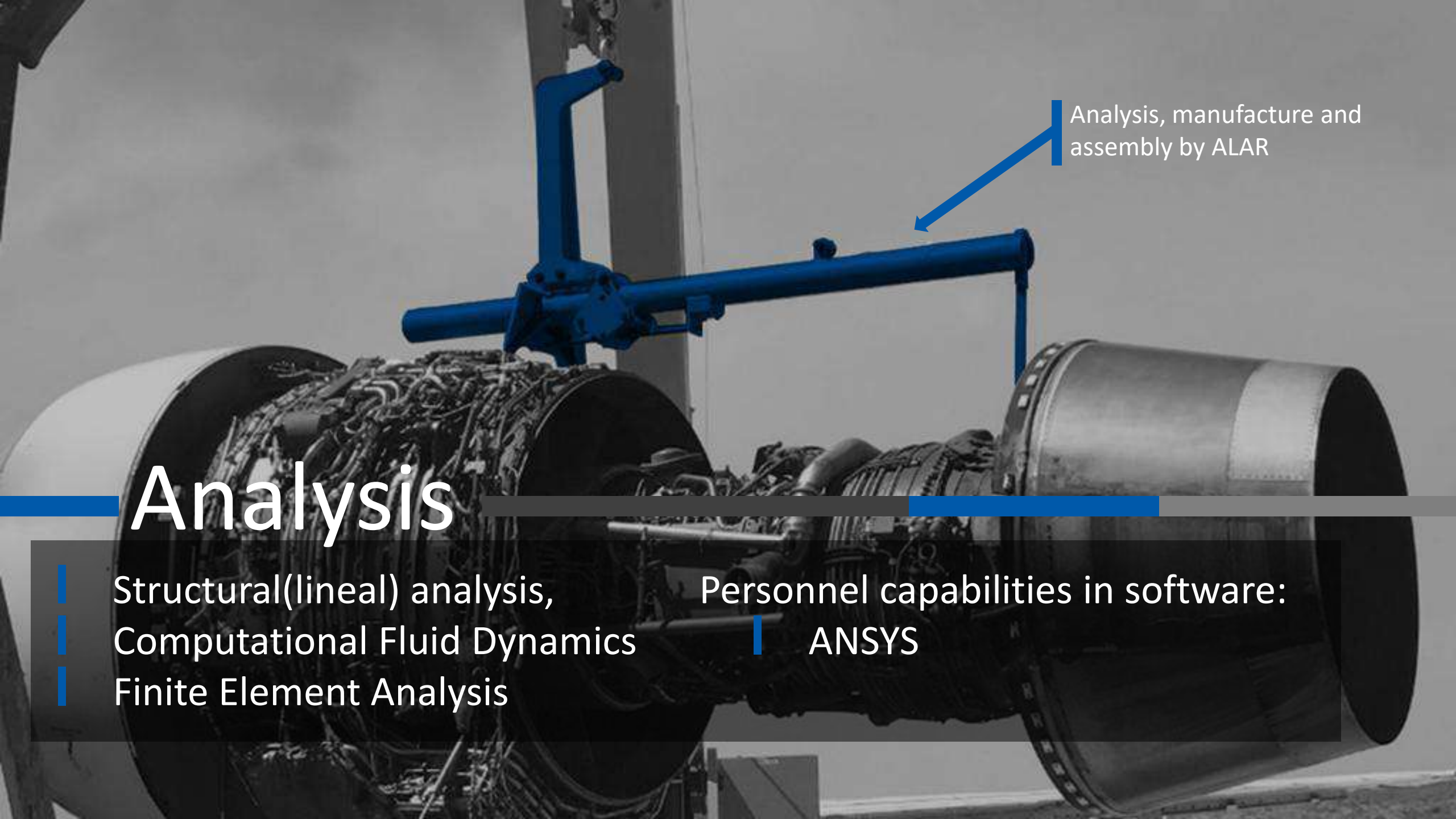
Mechanical Design.

Shape Design.

Parametric Design.

*Certified personnel in CATIA Assembly design module, Part design module, Surface design module.

**Certified suppliers to the STPS, to provide training on CATIA.

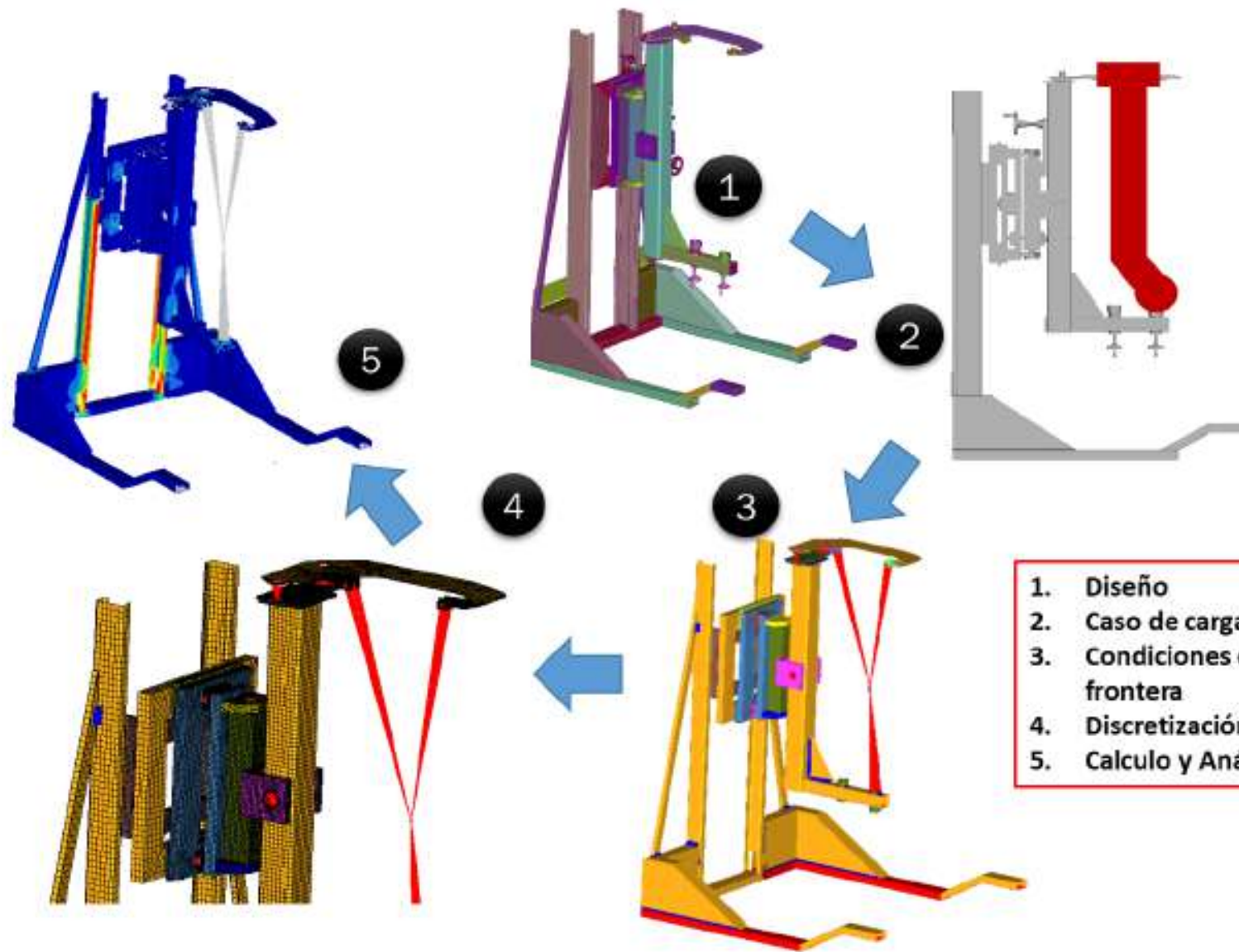


Analysis, manufacture and
assembly by ALAR

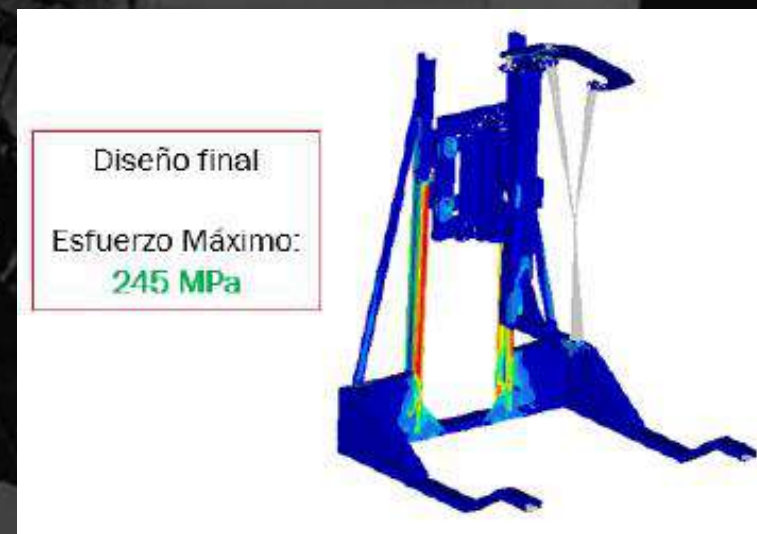
Analysis

- Structural(lineal) analysis,
- Computational Fluid Dynamics
- Finite Element Analysis

Personnel capabilities in software:
ANSYS



- 1. Diseño
- 2. Caso de carga
- 3. Condiciones de frontera
- 4. Discretización
- 5. Calculo y Análisis



Composite Materials

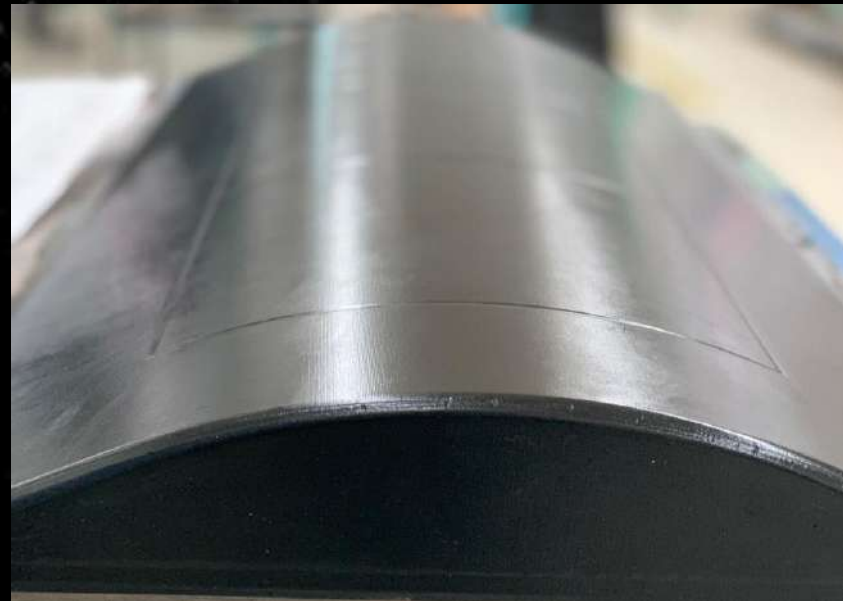
- Specialized in the design and fabrication of structural molds in carbon fiber and Fiber glass.

- Vacuum Resin Infusion.

- Wet Layup repairs and manufacture.

- Pre-impregnated





Reverse engineering and Quality Control

We make analysis *in-situ* in order to deduce design features from products with changes or from original parts to develop internal procedures for manufacture and assembly.

3D models and dimensional reports are issued if necessary, for engineering development, reports to the client or quality control inspection.





Certified welding

WPS – Welding Procedure Specifications for:

- Low Carbon Steel A36/1018

- AL6061/6082

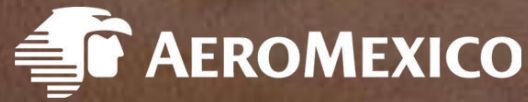
- 4140

- SS-304

PQR – Procedure Qualification Record for all WPS.

WQTR – Welder Qualification Test Record for all individual welders

Some Clients



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