Company

C*Blade Forging & Manufacturing is a company specialized in the manufacturing of forged blades for thermal and nuclear steam turbines and forged compressor blades for gas turbine in the field of power generation. C*Blade can produce a wide range of blades in terms of size, weight and finishing grade: from envelope forged blades to those ready to fit, from the biggest forged to the smallest, machined from bar. Working in this sector since 1963, C*Blade is one of the few companies in the world able to produce machined blades with overall length up to 1500 mm (59 inch) and initial weight up to 180 kg (400 lb).

C*Blade has been always looking for improvement and completion of the manufacturing process, working accordingly to ISO 9001:2008 standard and complying also to ISO 14001 and OHSAS 18001 standards.

ADVANTAGES

- Capability to forge blades up to 1500 mm of overall length
- Fully integrated production process and supply chain
- Over 50 years of experience and knowledge
- Capability to supply ready to fit blades
- Knowledge of the main technology types
- Co-design capability
- Reverse engineering capability
- Quick manufacturing
- Reliable deliveries
- Excellent quality
Processes

C*B* Blade is specialized in the forging and manufacturing of stainless steel and titanium alloys turbine blades. The materials are bought only from certified suppliers working in the power generation sector and in compliance with the customers specification and the most strict international standard:

Martensitic stainless steel  
Precipitation hardening stainless steel  
Titanium alloys

From the drawing to the finished blades, each step is carried out inside the company thanks to the knowledge of the technicians and high qualified processes. The team of C*B* Blade is able to design the dies and produce any kind of turbine blade starting from 3D model, from the drawings or even from reverse engineering. Highly qualified personnel can perform a wide range of controls in compliance with the most rigorous standards and with the customer requirements.

MAIN EQUIPMENT
Hot preforming hydraulic press with 4 axis control  
Drop-forging hammers with respectively 50000 kgm, 35000 kgm and 12500 kgm of power  
Water jet robotized cutting system  
Heat treatment furnaces  
20 spindles CNC milling machines with 4, 5, 6 axis  
Metabo CNC polishing machines  
Coordinate Measuring Machines (CMMs)  
Structured-light 3D scanner  
Vibration and momentum measurement stations
Steam Blades

C*Blade produces forged and machined blades with overall length up to 1500 mm and initial weight amounting up to 180 kg. Expertise and equipment allow the company to manufacture big low pressure blades quickly and with excellent quality.

TECHNOLOGY REFERENCE LIST
ALSTOM-ABB, GEC-Alstom
ANSALDO
FRANCO TOSI
GE
HITACHI
MAN
PARSONS
SIEMENS, KWU, AEG
SKODA
TURBOATOM
URAL
WESTINGHOUSE
ZAMECH
Compressor Blades

*C*Blade is able to supply several types of blades, from the bigger stages, forged and machined, up to the small ones machined from bar. Thanks to its know-how, *C*Blade can manufacture complex shapes for the big stages of blades and vanes quickly and with excellent quality.

TECHNOLOGY REFERENCE LIST
ALSTOM
ANSALDO
MITSUBISHI
SIEMENS
WESTINGHOUSE
**Locations**

**C*Blade** facilities are located in Maniago. Maniago is a part of the Friuli-Venezia Giulia region in north-east Italy. The small city founded in 981 AD by Romans, has over 550 years of history in blacksmith industry and in particular in the forging of blades. We are easily reachable from Venice Marco Polo Airport.

**Plant A**
Offices, forging, incoming warehouse
Via D’Aronco, 34 - 33085 Maniago (PN) - ITALY
Phone +39 0427 735411 - Fax. +39 0427 700141

**Plant B**
Heat treatments, machining and polishing, inspections and shipment
Via Genova, 1 - 33085 Maniago (PN) - ITALY
Phone +39 0427 735411 - Fax. +39 0427 733509

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