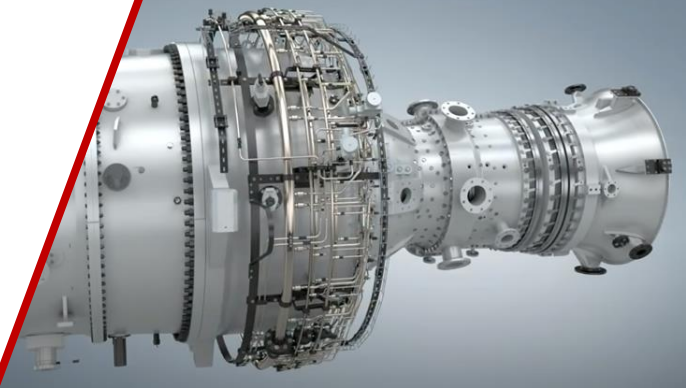
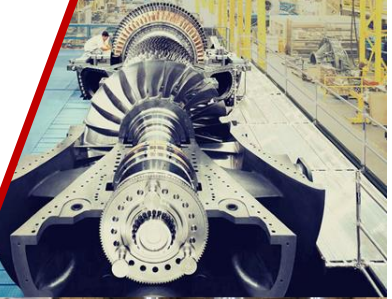




Cooper Turner Beck
Fasteners for Safety Critical Applications

Power Generation

Manufacturing Special Bolting
and CNC Machined Components



ctb Quality is our Hallmark

The Cooper Turner Beck Group

Established over 150 years ago, we are manufacturers of special bolting and CNC machined components for use in **Safety Critical Applications**.

We manufacture bespoke components to recognised standards such as BS, DIN, ISO, ANSI, or to customer specific requirements by means of drawings or samples.

Our scope of supply covers all materials, and we specialise in components for use in Heat Resistant, Pressure Resistant or Corrosion Resistant applications.

Our mission is simple: to supply the very best quality products at competitive prices, always being flexible and agile, but more importantly being easy to do business with.

Manufacturing....an enviable reputation

We are able to offer a wide range of production options to suit your unique requirements in terms of quantity, type of product and material.

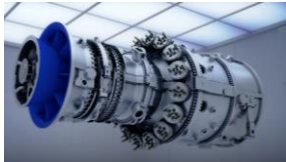
Quantity: We manufacture to order, ranging from one-offs, to small and medium batch quantities.

Size Range: M2 to M200 (and imperial equivalents), all lengths available (lengths in excess of 4 metres can be catered).

Hot Forging: We can manufacture headed components (Hex Bolts, Socket Head Capscrews, etc.) in all grades of alloys.



Service and Delivery...an unrivalled performance



We have a globally recognised proven track record in the supply of bespoke components for a diverse customer base.

Whatever the industry, whatever the demands, we are able to satisfy your requirements in terms of the level of service offered.

As a service orientated company, we strive to offer quality products and flexible lead times to our customers.



Production...excellence in quality

- Thread forms:** All metric & imperial thread forms.
Bolts & Screws: Hexagon, 12 Point, Socket, Slotted, Square.
Studs: Double Ended, Waisted, Collar, Studbolts.
Nuts: Hexagon, 12 Point, Capnuts, Round, Slotted, Barrel.
Washers: Round, Square, Spherical, Spring, Taper, Tab.
Machined Parts: Clevis Blocks & Pins, Tie Rods, Shafts, Spindles.



Excellence...in our components



MACHINED COMPONENTS

A selection of some of the more specialist and precision components that we manufacture, which are not typical threaded fasteners. They represent requirements from all sections of industry, and materials shown include Inconel®, Nimonic® and Hastelloy®.



STEAM TURBINE COMPONENTS

A selection of bespoke special bolting for use in Steam Turbine applications.
Products shown: Stud, Hexagon Flange Bolt, Cap Nut and Slotted Nut in materials grades Durehete™ 1055 and Nimonic™ 80A.



GAS TURBINE COMPONENTS

A selection of bespoke special bolting for use in Gas Turbine applications.
Products shown: 12 Point Bolt and 12 Point Nut in 422 Stainless Steel, and Body Bound Stud, Cap Nut, Hexagon Bolt and Socket Head Cap Screw in B16 material.



PIPELINE & PROCESS EQUIPMENT COMPONENTS

A selection of bespoke components typically manufactured for our OEM customers within the Pipeline and Process industries.
Products shown include Hexagon Bolt, Hexagon Nut, Socket Head Cap Screw and Double-Ended Stud.

Testing & Certification... for demanding environments

All products can be supplied with testing and certification to suit your specifications and requirements.

Destructive or Non-Destructive testing can include:

- Chemical Analysis
- Mechanical Test
- Ultrasonic Examination
- Magnetic Particle Inspection
- Dye Penetrant
- Shear Testing
- Stress Corrosion
- Salt Spray Testing

Products can be released with certification against your testing and inspection requirements. Where specified we can offer third party witness by inspectorates such as Lloyds, DNV and TUV.

Certification can include Certificate of Conformity, 3.1.A, 3.1.B, 3.1.C, 3.2 and Original Mill Certification.

Quality Assurance... for the highest standards

We operate a formal Quality System accredited by LRQA to BS.EN.ISO 9001, however, we are able to integrate customer specific standards and Quality System requirements to ensure continuity with your demands.

Our Quality System lays down mandatory procedures and controls for all elements of our supply from full traceability on material purchase, to order completion, and is further complemented by our on-site XRF spectrometry of all incoming material and finished products.

As most of our products are used in **Safety Critical Applications** it is imperative that we supply a high integrity product to our customers, therefore Quality Assurance is an integral part of every process of our supply, and we continue to invest heavily in this field to ensure total customer satisfaction.

Raw Materials...quality from the start

We have many years experience in the manufacture of bespoke components in a wide range of materials. Our range of strategic bar stock gives us the ability to offer a rapid delivery response time in order to meet customer requirements. Our scope of supply includes, but is not limited to, the grades listed below.

- 304, 304L, 304H
- 316, 316L
- 310
- 321
- 410
- 904L
- 317L
- RA330
- 347SST
- Alloy 20
- C276
- Monel 400
- Duplex 2205
- A193 B7, A193 L7
- Inconel 718 & 800
- Brass
- A36
- 1008
- 1018
- 1020
- GR.50
- GR.55
- Copper
- Aluminium



All manufactured components can be supplied with full material certification, to ensure full traceability of components throughout the production and certification processes.

Our safety critical fasteners meet the strict requirements and standards of the power generation industry. The following are important performance characteristics for fasteners for power generation:

- Excellent corrosion and oxidation resistance
- High tensile, shear, and fatigue strength
- Heavy-duty construction for high-strength applications
- High immunity to wear and vibration to prevent loosening
- High wear resistance
- Capable of operating under extremely harsh environments, including low and high temperatures and pressures

Surface Coatings...the finishing touch

We are also able to supply products with additional processes such as surface coating and heat treatment, including but not limited to:

SURFACE COATINGS

- Xylan / PTFE
- Zinc Plated
- HDG
- Phosphated
- Molykote
- Sherardized
- Silver Plated
- Nickel Plated
- Zinc Nickel Plated
- Copper Plated



HEAT TREATMENT

- Case Hardening
- Tempering
- Plasma Nitriding
- Solution Annealing
- Age Hardening
- Nitro Carburising
- Normalising
- Strengthening
- Quenching



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