



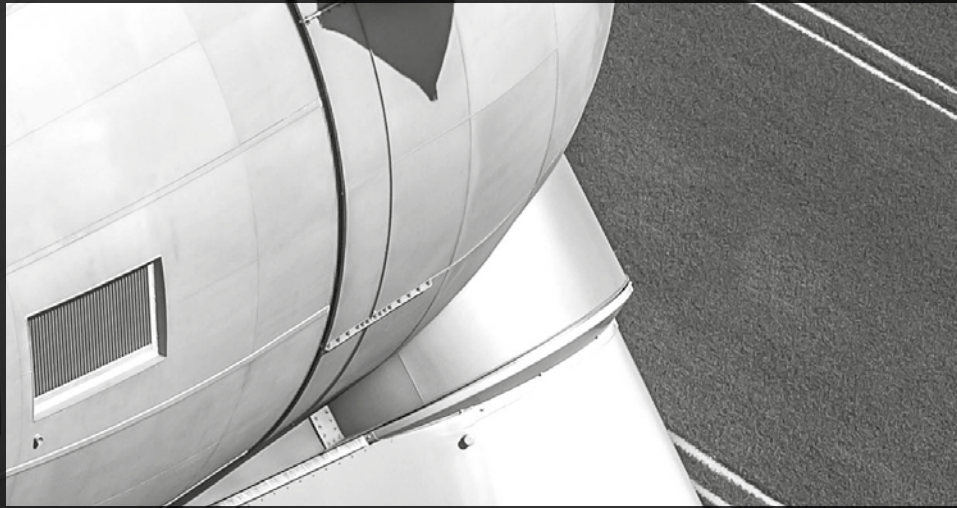
**RIGHTON**

**BLACKBURNS**

**METALS & PLASTICS**

EXPERTISE • COLLABORATION • INTEGRITY

# POWER GENERATION



[www.rightonblackburns.co.uk](http://www.rightonblackburns.co.uk)



Righton Blackburns' range of high performance metals includes stainless steel, copper and nickel alloys specified for the exacting demands of safety critical industries including aerospace, marine, defence and oil & gas.

Our customers, who range from nuclear fuel processing to onshore/offshore oil & gas and petrochemical plants, are confident in our ability to work to the highest industry standards.

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## METALS & PLASTICS

EXPERTISE • COLLABORATION • INTEGRITY

The specialist supplier of metals & plastics to the power generation & utility



### Stainless Steel

The many beneficial properties of stainless steel are particularly well suited for the power and energy industries, from traditional coal-fired power plants to the newest forms of renewable energy. Its excellent corrosion resistance is a necessity when dealing with the extreme environments in which power plants must be located. Other attributes include the metal's high strength to weight ratio, weldability, machinability, durability, wear resistance and its ability to withstand extremes of temperature.

#### Grades

**Commercial:** 1.4125 (440C), 1.4404 (316L), 1.4307 (304L)

**Precipitation Hardening:** 1.4542 (17-4)



### Copper Alloys

**Aluminium bronzes** are inherently resistant to all kinds of corrosion, including pitting, crevice, stress and erosion. In offshore applications they are used for pumps, impellers, firewater systems and many other casting applications. Aluminium bronzes also have the key characteristic of being non-sparking, making them an ideal option for hazardous environments including offshore oil & gas installations.

**Copper nickel alloys** are used in steam turbine condensers, oil coolers, auxiliary cooling systems and high pressure pre-heaters at nuclear and fossil fuel power plants. Well-suited to heat transfer processes including steam generators, heat exchangers, coolers, condensers, tanks, pipework, valves and fittings, the alloys can also be used in different environments, from clean seawater to brackish, fresh and cooling tower water. Their resistance to chloride crevice corrosion and stress corrosion cracking makes them favoured in warmer climates.

#### Grades

**Aluminium Bronzes** - B150 C63000, B150 C63200, C95500, C95800, CW307G, CA104

**Copper Nickel Alloys** - NES 779 DEFSTAN 02-779 (90/10), NES 835 DEFSTAN 02-835, DEFSTAN 02-879 (70/30)

**Hardial®:** AMS4596, AMS4597, AMS4598



### Duplex & Super Duplex

Duplex stainless steel pipe is stronger than 300 series stainless and has high resistance to pitting, crevice corrosion and stress corrosion cracking. It is used in pipes for the production and transportation of oil and gas, structural and mechanical components, heat exchangers, cooling pipes and power industry FGD systems.

The unique properties of Super Duplex means that it is in high demand for a wide range of applications, including structural and mechanical components, utility and industrial systems, high strength wiring solutions, cargo vessels and heat exchangers.

#### Grades

**Duplex:** 1.4462 F51, LDX 2101

**Super Duplex:** 1.4501 F55, 254 SMO





### Carbon & Chrome Moly Steel

Steels are used in every part of the power generation and utilities sector, from production and processing to distribution of refined products. Carbon steel pipes have a wide range of applications including the low pressure conveyance of gas, water, oil, air, steam or other fluids. In addition, machinery, buildings, sprinkler systems, irrigation systems and water wells all offer opportunities for the use of carbon steel.

#### Grades

ST35.8/P235GH - ST45.8/P265GH -  
15Mo3 - 16Mo3 - 13CrMo44 -  
10CrMo910 - 15NiCuMoNb5 -  
12CrMo195/X12CrMo5 - X12CrMo9-1 -  
X20CrMoV12-1 - X10CrMoVNb9-1



### Nickel Alloys

Nickel alloys have excellent mechanical properties at extremely low and high temperatures, as well as outstanding resistance to pitting and corrosion. In fossil fuelled power plants, nickel alloys are used for high temperature strength and oxidation resistance. They are commonly employed in producing coal nozzles, as well as other internal boiler parts like tube supports, tube shields, and temperature probes. In wind energy the largest use of nickel is in ductile iron castings in rotor hubs, gearbox housings, base plates, gears and shafts.

#### Grades

Alloy 400  
Alloy 500  
Alloy 625  
Alloy 718

In addition to our extensive product portfolio, we offer a variety of complementary services including:

- **Mechanical Testing** - In addition to NACE MR0175, we can offer bespoke mechanical testing including:
  - Brinell & Rockwell hardness testing
  - Charpy impact testing
  - Multiple directional testing
  - Lateral expansion testing
- **Non Destructive Testing**
  - Ultrasonic & dye penetrant testing
  - PMI
  - X-ray
- **Type 3.2 Inspection** - Third party inspection with witnessed test results and verification of materials identification and traceability
- **Secure On-line Certification Access**
  - We provide a password protected service to allow customers to access certificates
- **Heat Treatment** - Our range of high performance alloys can be supplied in a variety of conditions dependent on the application, many of which are attained through heat treatment
- **Cutting** - The latest automatic cutting equipment enables us to cut all grades of material
- **Boring, Turning & Machining** - Our services include: deep hole boring, gun drilling and milling & turning
- **Forgings** - A rapid turnaround service for the production of open and closed die forgings which can be manufactured proof machined, finished machined, fully tested and released to bespoke requirements



## METALS & PLASTICS

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Righton Blackburns is an independent metals and specialist plastics stockholder and distributor. We have been a trusted supply partner for premium quality products for over 100 years.

Today we are recognised as the leading supplier to a diverse customer base including safety-critical markets, government agencies and departments, and FTSE 100 companies.

Our reputation is founded on both the efficiency and integrity of our business dealings, as well as our proven ability to innovate and respond to change. This strength and agility remain true today.

Operating from 10 Service Centres across the UK, we are well placed to service any requirement from one-off supplies, to direct-to-line feed services and long term contracts.

Dedicated to the continued development of new business and backed by our ISO9001-2015 status, we guarantee that exceptionally high-quality products and service will always be the Righton Blackburns' standard.

### Specialist Markets

For further information on the full range of products we supply into our specialist markets, please contact your local Service Centre to request a copy of the brochures dedicated to those specific markets.



Aerospace & Defence



Architecture & Infrastructure



Automotive & Transport



Marine & Shipbuilding



Precision Engineering



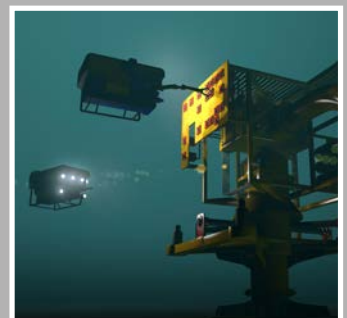
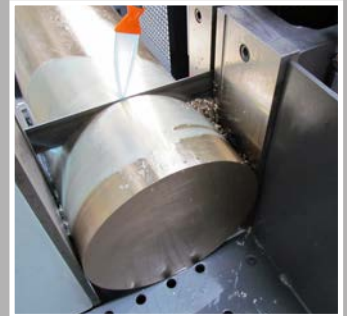
Process Plant



Sign & Display



Bespoke Aluminium Extrusions





Contact your local Righton Blackburns  
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AS 9100 REV D

AS 9120 REV B

Righton Blackburns Aerospace is part of  
Righton & Blackburns Limited