



ROSS & CATHERALL

Focus on our dedicated in-house Air Melt Foundry

Our Air melt foundry manufactures
Carbon, High Alloy Steels, Nickel
and Cobalt Alloys

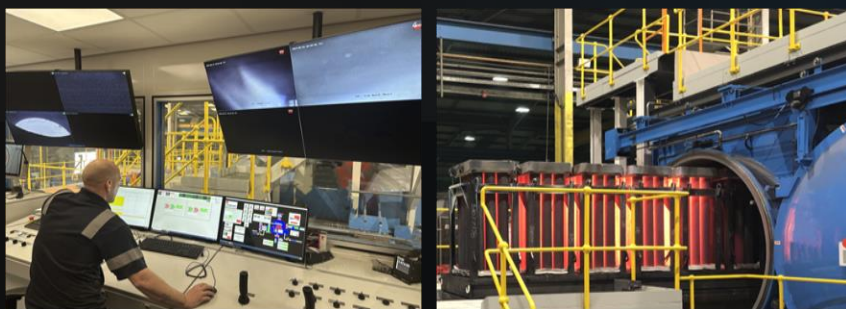
Turning Metals into Motion

Manufacturing footprint

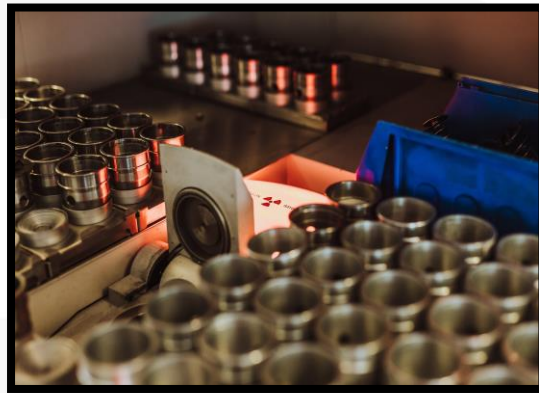


Plant: Ross & Catherall Ltd.

Location: Sheffield, UK



Air melt foundry manufacturing excellence



- Air melting for over 50 years ✓
- Over half a century of air melt, development, manufacturing and processing experience ✓
 - Two Coreless Induction Furnaces (CIF) with capacity options of 1t & 2.2t ✓
 - Markets served: Aerospace, IGT, and biomedical sectors ✓
- Manufacturers of various grades of air melt alloys to the Investment Casting foundry sector ✓
 - Long history of product and process development ✓

In-house Revert Processing - Sustainability is possible using your in-house revert

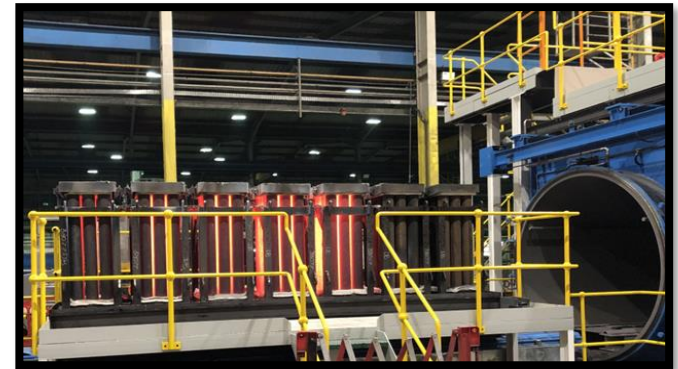


- Our commitment to sustainability drives us to adopt environmentally friendly practices and reduce our carbon footprint, ensuring that our production processes are as sustainable as they are efficient
- Customer revert segregated, prepared & cleaned for melting
 - Revert storage “closed-loop” guaranteed
- Revert ready for use in one of our 2 air melt furnaces



We provide both Air melt and Vacuum melting options

- Supply chain confidence ✓
 - Known element prices/availability for all alloy requirements for 3,6,9 & 12 months (based on volume commitment)
 - Guaranteed melting slots and volume commitment*
 - Latest furnace technology of any superalloy cast bar stick manufacturer worldwide
 - Known, programmed deliveries
- Flexibility ✓
 - Scheduled melting and delivery to align with your customers forecasts/demands*
 - Largest range of VIM melting furnace capacities from 500kg-7200kg (8 furnaces in total) – widest choice worldwide
 - Air melt foundry produces full range of grades from Carbon, High Alloy Steels, Nickel and Cobalt Alloys
 - Revert managed, prepared in-house and available to meet known melt demand
- Location ✓
 - Centrally located for deliveries worldwide
- In-house revert processing & preparation facility ✓
 - Revert managed and shipped from customers worldwide
 - Revert prepared, stored and available to meet known melt demand – readily available*
 - Revert is utilised sooner and alloy cast bar stick is delivered in time, in full



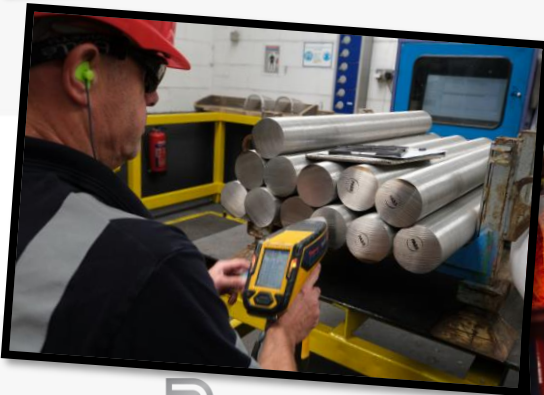
In-house Laboratory Services

- Chemical analysis of Nickel, Cobalt & Iron based alloys ✓
- All testing conducted to ISO17025 & NADCAP accredited standards ✓
- Advanced analytical testing equipment including ✓
 - XRF
 - OES
 - Inert Gas Fusion & Combustion for bulk analysis
 - GDMS (Glow Discharge Mass Spectrometer) for readings down to parts per million
- In-house laboratory operating 24 hours, 6 days per week ✓



Our people are our strength!

- Mastermelt principle melters - continuity of workforce with over 150 years* experience and knowledge
- Senior Management Team - average tenure 10 years at Ross & Catherall, several with over 30 years industry experience
- Technical and Laboratory specialists, many with over 25 years industry experience in superalloy metallurgical development and chemical services
- Established programmes for investment in technical excellence, people, capability and plant capacity



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Advantages of using Ross & Catherall

Ross & Catherall hold a prestigious position within the investment casting sector for the manufacture of Air Melt and Vacuum melted superalloy, leveraging over 50 years of expertise and continuous innovation in superalloy production, while supplying our knowledge to your specifications

- We are a technological, quality and service orientated supplier with the most flexible melting capabilities of any superalloy manufacturer worldwide.
- Largest volume capacity options worldwide of any superalloy cast bar stick manufacturer - choice of 8 VIM furnaces ✓
- Located “centrally” to all major Aerospace & IGT producers ✓
- Fully accredited laboratory with ISO17025:2017 & Nadcap approvals ✓

Your trusted partner in advanced superalloy solutions

Customer Approvals

- Safran (Aircraft - Lab 445; Helicopter - AA14507).
- Rolls-Royce
- Honeywell Aerospace
- Pratt & Whitney Canada
- GE Aviation
- Mitsubishi
- MTU
- ITP Aero
- Approvals include supply of 1st, 2nd & 3rd generation SX alloys.



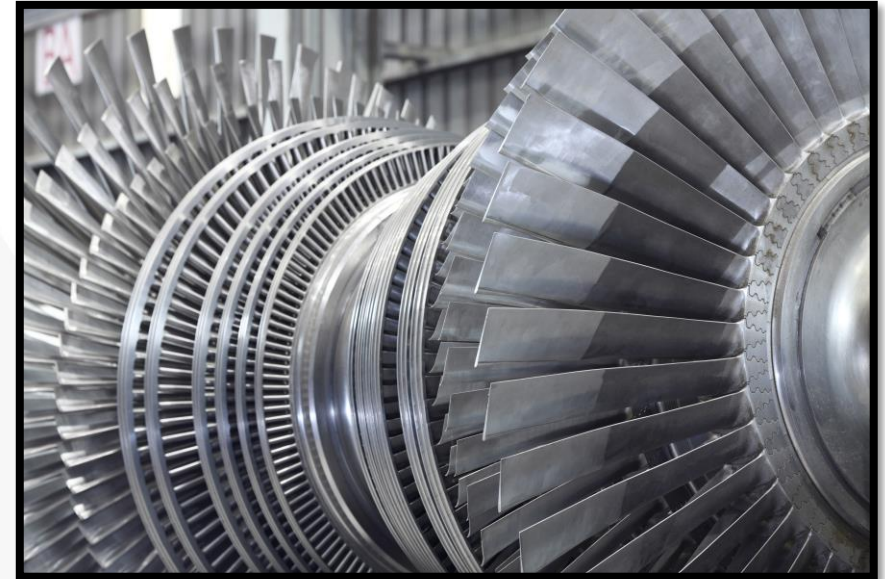
Industry Approvals

- AS 9100: Rev D / ISO 9001: 2015
- ISO 14001: 2015 Environmental Management Standard
- ISO 45001: 2018 Occupational Health & Safety Management
- ISO17025: 2017 Testing and Calibration Laboratories
- Nadcap (MTL)

Copies of all certificates can be provided



Materials Testing Laboratories



Air melt & Vacuum melting expertise and experience on one site

Air Melt & Vacuum Melting Superalloy Excellence

- Air melt and Vacuum melting capabilities on one site
- World's largest selection of VIM furnace capacity options utilising the latest melting technology
- Aerospace, IGT, Additive Manufacturing, Space Exploration and biomedical sectors
- Supplying to the Investment casting and Additive Manufacturing industries
- Over 50-year history of product and process development
- Our expertise adds value to chemical elements to meet customers exacting “chemistries”



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SERVING THE GLOBAL INVESTMENT CASTING COMMUNITY FOR OVER 50 YEARS