
ROSS & CATHERALL
Do you have sufficient revert for your secured orders?
If we do not receive your revert, we cannot melt your order!
Turning Metals into Motion

Insufficient revert will delay your scheduled melt slots

- Review, and if required, amend your revert ratios to avoid rescheduling of your confirmed melt date
  - If we do not receive your revert for the ratio requested on your PO, we cannot sequence the melt!
  - Revert not delivered “on-time” will result in missed slots, and rescheduling of the cast to meet the next available melt sequence
    - Melts cannot be rescheduled until your revert^ arrives on site and is prepared for melting
    - This could result in several weeks delays and rescheduling costs for melting from the advised date
- To overcome this reduced revert generation you must consider
  - **Increasing the virgin* content to allow the revert volume to normalise**
  - **Utilise one of our 8 furnace capacity options to match your revert availability**

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*This will result in a cost review (requote) and rescheduling costs
^ As per revert specification document

Revert generation and replenishment actions

- **Actual Revert availability** – ready for despatch, should be monitored and used to determine your ratio prior to order confirmation
  - **If there is insufficient revert for the required ratio, the ratio must be changed to meet available revert**
- Optimised melt sequencing can be maintained if effective revert management is followed. If the revert is not available for a “typical” ratio, amend the ratio so that alloy can be made to meet your volume demands
- Melt rescheduling costs will be applied for orders delayed because of revert shortages

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Various Melting options to maximise your revert levels

Furnace capacities kgs (lbs)	Bar Diameters mm (inches)
500 (1,100)	75 (3"), 88 (3½"), 100 (4"), 125 (5"), 150 (6"), 175 (7")
2 x 2800 (6,200)	
4000^ (8,800)	
7200 (15,800) *	

ˇ Furnace yields approx. +/- 10% of stated capacity, * 3 x 7200kg & 6000kg furnace bodies ^ New furnace commissioned Q4 2023

- We are confident that we can meet your varying volume alloy demands using any one of our 8 VIM furnaces, combined with our revert processing cell – guaranteeing a truly sustainable “circular economy” of your revert stream




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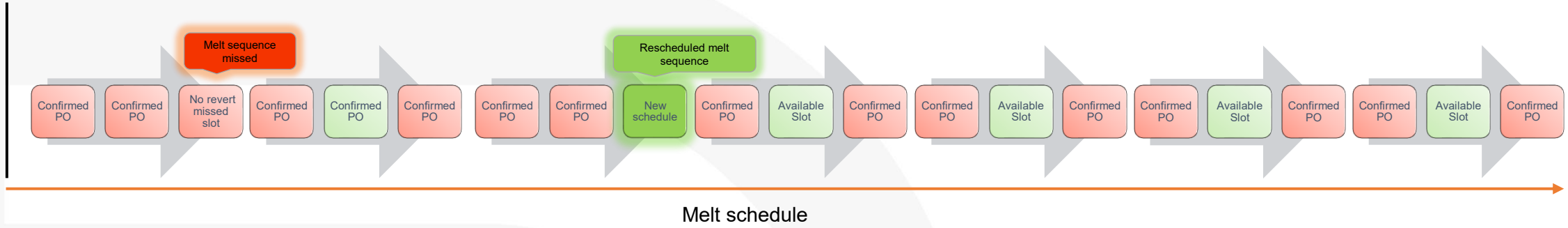
Revert delays impact our melt plan and your alloy delivery!



Impact of delayed/insufficient revert to production

- Revert bearing melt ratios must have the required revert delivered to R&C on time^ to allow sorting & cleaning to make “furnace ready” to meet the melt chemistry sequencing schedule
- Revert not delivered “on-time” will result in missed slots, and rescheduling of the cast to meet the available sequencing, this has an impact to our production, and your facility in terms of revised element costs*, your alloy manufacture delayed - as such the lead-time could increase significantly to meet the melt schedule
- If the revert is not available for a “typical” ratio, amend the ratio, or chose an alternative **furnace** size option, to meet your delivery requirements
  - Revised revert ratio melts **WILL NOT** impact the melt chemistry sequencing schedule!
  - Insufficient revert **WILL** impact the schedule as the order cannot be melted or sequenced!

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^ As per revert specification document

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 8 furnaces

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In-house “closed loop” revert recycling - The sustainable use of foundry revert a truly “circular economy” of production and consumption!

- Revert is processed & melted from customers worldwide ✓
- Revert value fully optimised ✓

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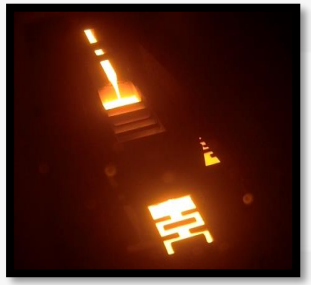
Ross & Catherall…



…are a leading supplier of vacuum melted nickel and cobalt based superalloy cast bar stick

…supply alloys to aerospace, IGT, space exploration, and additive manufacturing

…have major OEM and industry leading cast house approvals for Aerospace and Gas Power Turbine, Space and Additive Manufacturing

…have a global supply footprint for sales, technical support and deliveries

…have a long history and strong capability of alloy development and technical support

…have established alloy revert chains to ensure cost-effective melting solutions

…have established programmes for investment in technical excellence, people, capability and plant capacity

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Superalloy manufacturing excellence

- Vacuum melting from 1968 ✓
- 145 employees
- Over half a century of superalloy melting, development, manufacturing and processing experience ✓
- World's largest selection of VIM furnace capacity options utilising the latest melting technology ✓
- Markets served: Aerospace, IGT, Additive Manufacturing, Space Exploration, and biomedical sectors ✓
- Manufacturers of cast bar stick to the Investment Casting foundry sector ✓
- Long history of product and process development ✓

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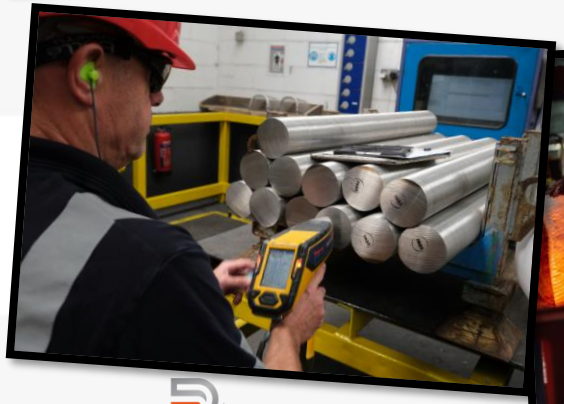
Our people are our strength!

- 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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*based on combined years of service