

Mass Flow Mold Calibration

APPLICATION

Billet casting tables equipped with air-cast mold technologies

BENEFITS

- *Reduces scrap rates*
- *Achieves air-cast mode quickly*
- *Reduces bleed outs*
- *Improves billet surface quality*
- *Improves graphite ring and transition plate life*
- *Minimizes thimble bubbling for easy scull removal*
- *Improves mold table refractory trough life*
- *Improves operator safety*



Mass Flow Mold Calibration reduces scrap rates and consumable costs. Scrap rate reductions are due to accurate mold calibrations and high air pressure capability during cast start. This results in the billets going into air cast mode quickly. The air pressure is then ramped down to a low run pressure so that there is minimal to no bubbling from the thimbles during the rest of the cast. This reduces scrap rates, improves billet surfaces, and improves the life of consumables such as graphite rings, transition plates, thimbles, and mold table trough linings. The potential for reducing the butt crop length is also a possibility. It is also safer for the operators because there are no adjustment required to the flow meters during the cast because they are set prior to cast start.

FEATURES:

- Easy to setup and calibrate each mold for correct airflow
- Installs easily into existing flow meter locations
- Rated for 150 psi high pressure service
- Includes pressure transducer feedback to verify correct pressure at table
- Stainless steel protective covers with position nametags included

UTILITY REQUIREMENTS:

- 24 VDC 10 amp electrical service supplied to each side of the mold table
- 4 to 20 mA Transducer shielded wire feedback to Customers PLC
- Dry air or mixed gas source capable of 150 psi pressure during cast start

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Operator & Mold Room Training Program

APPLICATION

Expert mold room and casting pit operator training program.

Includes

- *Expert Classroom Instruction*
- *Focus Of "How & Why We Need To Do It"*
- *Hands-On In The Pit Operator Training*
- *Hands-on Mold Room Training*
- *Furnace Batching Training*
- *Tests That Verifies Knowledge & Understanding*
- *Supervisor Training For Implementation & Ongoing Follow-up*

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R. J. Collins Incorporated offers the billet producer expert training and support. With over 35 years of experience in billet casting, training and process troubleshooting and being named in multiple innovative design patents in the industry, Richard Collins can provide a tailor made program to fit your needs that includes:

- Classroom and "hands-on" shop floor training for casting pit operators, furnace batchers and mold-room personnel
- Casting pit operator training that includes cast setup, cast start and end of cast procedures, between cast maintenance, and billet defect cause and corrective action
- Mold room training that includes end of campaign maintenance, table storage, preparation for casting setup and mold and table troubleshooting procedures
- Furnace batching training that focuses on the "whys" of the key batching procedures that impact metal quality and casting pit recovery
- Supervisor or casting coordinator training for ongoing support and reinforcement of the basic training. The principle is you only learn a percentage of what you are taught so repetitive training and follow-up is needed to insure success and continuous improvement

Each training module can be coordinated with and supportive of the companies standard work procedures. This gives the very best opportunity for success as illustrated by the following testimonial:

"Richard Collins has developed and presented several training packages that can be customized to an individual casting operation. These packages include the basics of various casting technologies. They also cover the reasons and corrections for various scrap conditions and the metallurgical background of what is happening during the casting process. All of this is presented in a format that is beneficial for anyone from a first time casting operator to an experienced Metallurgical Engineer.

John Rennekamp—Metallurgical Engineer

If your company wants to improve their operators' performance, reduce scrap rates, increase productivity worth hundreds of thousands of dollars per year, contact R.J. Collins Incorporated for technical training and support.



Scrap Rate Reduction Program

APPLICATION

Expert assistance and support in troubleshooting and solving cast-house problems.

BENEFITS

- *Solves Casting Problems*
- *Reduces Scrap Rates*
- *High Return On Investment*
- *Increases Productivity*
- *Minimizes Bleed-outs*
- *Improves Life Of Consumables*
- *Reduces Operating Costs*

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For those companies wishing to reduce scrap rates, consumable costs, operating costs, and improve billet quality and productivity that is worth thousands of dollars per year, contact R.J. Collins Incorporated for expert technical assistance and support in:

- Troubleshooting billet defects and complex problems between casting equipment and process interactions,
- Audit of casting process and consumable costs comparing results to best world benchmark producers,
- Classroom and "hands-on" shop floor training programs for operators, furnace batchers and mold-room personnel,
- Maximizing performance and productivity by optimizing new or existing casting parameters and casting processes,
- Providing tooling and casting equipment design and retrofit consulting, and
- Installation and startup assistance for billet casting technology retrofits and upgrades.



Named in multiple innovative design patents and over 35 years' of experience in billet casting and process troubleshooting enables Richard Collins to help companies troubleshoot and solve problems in their cast-houses. This is illustrated by the following testimonial:

"Richard Collins offers a comprehensive background of knowledge that is beneficial for any company involved in the casting of aluminum. One of his main advantages is being able to look at the entire process instead of only concentrating on the casting parameters and casting station equipment. His understanding of batching practices, alloy additions, metallurgical interactions, fluxing and degassing systems and filtering can result in an overall improvement in metal quality that ultimately results in improved pit recoveries. He has a holistic approach to improving the process that results in obtaining the maximum benefits of the services he provides. This approach, coupled with an extensive network of industry contacts, has resulted in meaningful improvements in all the projects in which I have had the pleasure to work with Rich."