



WORK INSTRUCTION

Mold Marking Criteria & Metal Pouring Temperature for Sand Mold and Instructions to Run Permanent Mold & Cooling Tube Coating

REVISION: 02

PROCEDURE NO.: WI-8.2.4.24

DATE EFFECTIVE: 05/30/17

Sand Mold Marking Criteria for Alloy

	Metal Alloy	Sand Mold Symbol
1.	Aluminum 319	No Marking Required
2.	Aluminum 356	356
3.	Bronze	Bronze
4.	Yellow Brass	Brass
5.	Cast Iron	Iron

Manufacturing Instructions to Coat Cooling Tube for Brass and Bronze Casting Alloy for Sand Mold

1. Preheat tube at 250°F to 500°F for 30 minutes minimum
2. Remove tube from the oven and spray refractory coating material over the tube to cover completely
3. Oven cure tube at 250°F to 500°F for 30 minutes minimum
4. Repeat steps 2 and 3 until entire cooling tube is covered with refractory material

Manufacturing Instructions to Run Permanent Mold

1. Pull out mold from rack
2. Check for damage and wear
3. Repair damaged or worn out mold
4. Add or remove inserts as necessary
5. Run mold according to permanent mold setup and run procedures (setup sheet). Consult supervisor if changes are required to the setup sheet. Make a note on the setup sheet and submit it to supervisor after the job is completed.
6. Visually inspect the mold after the job is completed. Make a note on the setup sheet if the mold is damaged, worn out or requires repair and submit it to supervisor.



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Metal Pouring Temperature for Sand Mold

	Metal Material Type	Mold Marking Codes (*)	Lower Limit of Pouring Temperature in Degree Fahrenheit (°F)	Upper Limit of Pouring Temperature in Degree Fahrenheit (°F)
1.	Aluminum 319	H	1380	1400
		M	1340	1360
		C	1270	1300
2.	Aluminum 356	H	1380	1400
		M	1340	1360
		C	1270	1300
3.	Bronze	H	2300	2350
		M	2250	2280
		C	2200	2250
4.	Yellow Brass	H	1950	1990
		M	1920	1950
		C	1880	1920
5.	Cast Iron	Iron	2460	2500
If in Doubt, Consult Foundry Manager or Supervisor				

(*): Sand mold should be marked with a code or a temperature range.



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REVISION HISTORY

REVISION LEVEL	DATE OF REVISION	SECTIONS	DESCRIPTION OF CHANGE
00	06/01/09	All	Initial release
01	06/02/15	All	Revised all sections of work instructions
02	05/30/17	All	Revised pages 1, 3 and 4. Removed page 2.

AUTHORIZATION

POSITION	HELD BY	AUTHORIZATION SIGNATURE OR INITIALS
Prepared By: Product Engineering Manager	Samir Patel	
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