

J-M MOLTEN METAL MARINITE offers these 7 imps

J-M MOLTEN METAL MARINITE is a new board insulation made of amosite asbestos fiber, diatomaceous silica and an inorganic binder. It is an ideal material for feeding and conveying molten metals up to approximately 1350F.

Molten aluminum, zinc, lead, and other non-ferrous metals (see table adjoining page), do not wet the surface of Molten Metal Marinite. They do not adhere, even when they cool and solidify, so there is no metal contamination.

Two Types

Furnished as Molten Metal Marinite for most uses—with a density of 36 pcf and an average Modulus of Rupture of 1200 psi.

Molten Metal Marinite-SG is for use where stronger material with more wear resistance is desired—density of 45 pcf and an average Modulus of Rupture of 1800 psi.

Eliminates Pre-heating

Because of its thermal insulating value, melting and holding furnaces do not have to run at higher temperatures to compensate for the normal heat loss throughout the system. Nor do components have to be heated before the first pour, and kept hot between pours. This improves metal quality and yield.

Wide Variety of Uses

Molten Metal Marinite is widely used in the aluminum industry for launders and troughs, trough linings, distribution boxes, pouring boxes, pouring spouts, floating baffles, and ingot mold liners.

Many of these components are used in conjunction with the "D.C." (Direct Chill) semi-continuous casting process.

The metal-feed system of many continuous casting machines is made of Molten Metal Marinite. This includes the launder, tap-out box, distributor, and metal-supply nozzles of the Hunter Engineering continuous sheet-casting machine. It also includes the reservoir and metal distributor of the Hunter-Douglas strip-casting machine.

Heat Treating

In many applications, Molten Metal Marinite is used as received. Among such uses are launders and troughs, trough linings, distribution boxes and pouring boxes.

For greater life and improved machining characteristics of machined components, many customers heat-treat the material at approximately 1000F. This removes the major part of the shrinkage that would normally occur at that temperature.

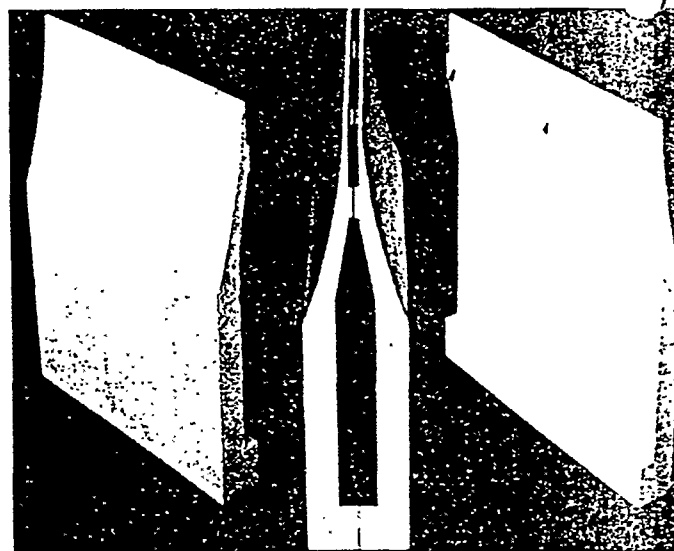
Heat-treating ovens should have high air velocity. Also, the Molten Metal Marinite sheets should be separated by spacers. After they are heat-treated, the sheets or machined components should be stored in a heated room, or some dry location, to minimize subsequent moisture pickup.

Recommended Procedures *

The recommended heat-treating procedure for Molten Metal Marinite is as follows:

1. Place in an oven at a temperature not over 250F, and raise temperature uniformly to 1000F over a period of 1-1½ hours.
2. Maintain 1000F for 5 hours for 1"-thick material; 8 hours for a 2" thickness.
3. Allow to cool gradually in the oven.

When heat-treating Molten Metal Marinite-SG, a more extended procedure is recommended, due to its higher density, as follows:



NOZZLES—Section of the Molten Metal Marinite Metal-Supply Nozzle for the Hunter Engineering Continuous Sheet-Casting Machine.

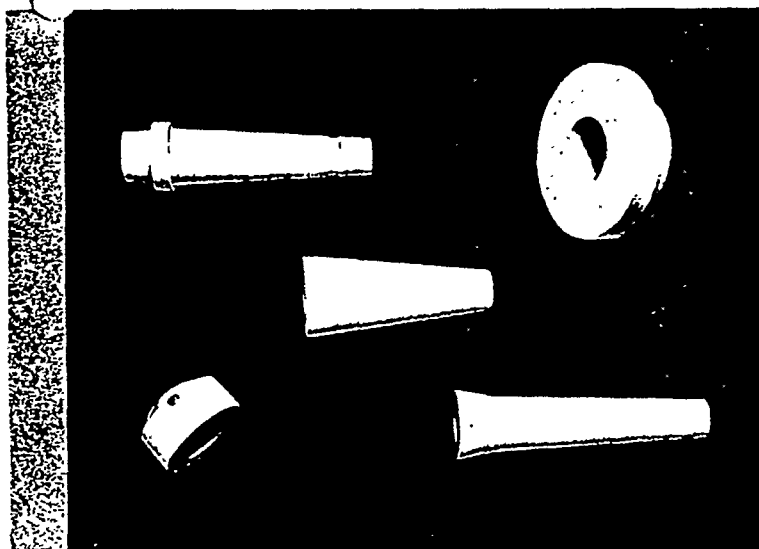
tant advantages

- Not wetted by molten metals—requires no foundry facing wash
- "Skull" easily removed
- No metal contamination
- Readily machined and fabricated
- Holds metals at uniform temperature
- No pre-heating necessary
- Maintains strength at high temperatures

1. Place in an oven at a temperature not over 250F and hold for 4 hours.
2. Raise temperature to 300F and hold for 4 hours.
3. Raise temperature to 400F and hold for 4 hours.
4. Raise temperature uniformly to 1000F over a period of 12 hours.
5. Maintain 1000F for 4 hours.
6. Allow to cool gradually in the oven.

*Although it in no way affects the material, it is interesting to note that Molten Metal Marinite changes color at high temperatures, thus indicating the temperature to which it is being subjected.

For example, the normal white color turns to gray after subjection to 1000F. At 1200F, the color becomes an orange-red; and brightens to a coral shade at 1300F. It should also be noted that if heat-treating is conducted in a reducing atmosphere, the color change will not occur.



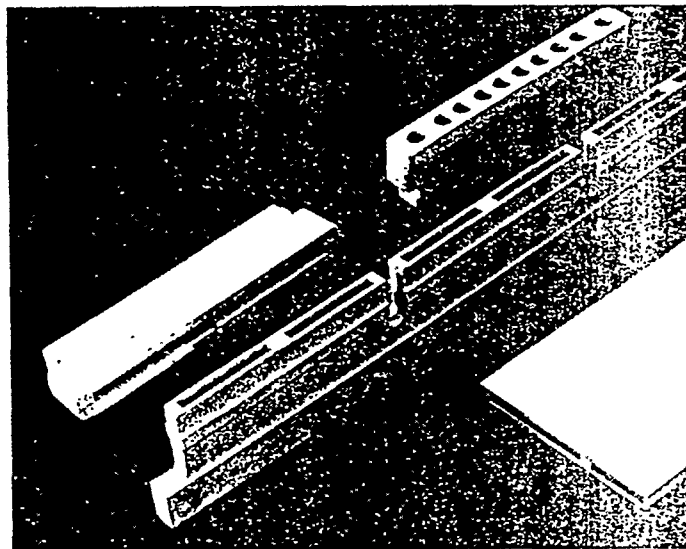
SPOUTS AND BAFFLES—Molten Metal Marinite Pouring Spouts and Floating Baffles used in the D. C. (Direct Chill) Semi-Continuous Casting Process.

MOLTEN METAL MARINITE CAN BE USED WITH THESE NON-FERROUS METALS:*

Metal	Melting Point, F
Aluminum	1220
Zinc	787
Die-casting metal**	710
Lead	621
Bismuth	520
Tin	449

*Can also be used with alloys of these metals.

**Such as Kirsite A of National Lead Co.; Typical composition = 90-92% Zn, 4% Cu, 3.5-5% Al, less than 1% Mg.



DISTRIBUTORS—Parts of the Molten Metal Marinite Distributor for the Hunter-Douglas Continuous Strip-Casting Machine.