

[Macawber](#) Installation Bulletin:  
**Sand/ Dust – Gemini – Iowa Cast Plaque, Decorah, Iowa USA**  
Macawber Representative: [\[R&S Process Equip. Sales\]](#)

**IN BRIEF**

Gemini fully opened its new 30,000 ft<sup>3</sup> Cast Plaque Foundry in Decorah Iowa in the spring of 2008. This facility is one of seven Gemini production facilities in North America, and produces cast bronze and aluminum, etched, ADA, Bas Relief, ceramic inserts, Giclée, and Photo Relief plaques. Already operating several Macawber Denseveyors and Sandpumps for their pneumatic conveying needs, Gemini sought another Macawber dense phase system to transport a mixture of reclaimed sand and dust. The answer came in with the acquisition of a new Macawber 0.75/6-2 Ashveyor system. Because of the relatively small volume of material, the Ashveyor's 0.75 cubic foot capacity proved more than capable of automatically moving this material the length of a football field without exposing any employees to the hazardous fumes. Macawber provided Safety, Automation and Savings.

**MATERIAL CHARACTERISTICS**

|                  |  |
|------------------|--|
| Material         | Foundry Sand and Dust                      |
| Bulk Density     | 70 lb/ft <sup>3</sup> aerated bulk density |
| Size             | particle size < 1 mm max                   |
| Temperature      | 300 °F                                     |
| Moisture Content | 0%   |
| Condition        | Free Flowing, Dry                          |

**SYSTEM OBJECTIVES**

1. Recover mixture of reclaimed sand and dust
2. 350 ft conveying distance, with 2 vertical lifts
3. 200 lb/hr
4. Reduce new foundry sand purchase requirements (cost savings)
5. Reduce used foundry sand disposal requirements (cost savings)
6. Increase plant operational value

**SYSTEM PERFORMANCE**

|                    |             |
|--------------------|-------------|
| Transfer Capacity  | 2,100 lb/hr |
| Conveying Distance | 350 ft      |
| Reception Points   | 1           |
| Air Consumption    | 10 scfm     |

1. Automated on-demand operation minimizes utility req's
2. Small robust design fit easily in existing space
3. New sand and waste disposal costs were minimized

