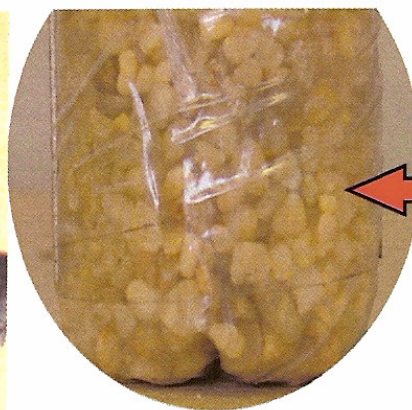
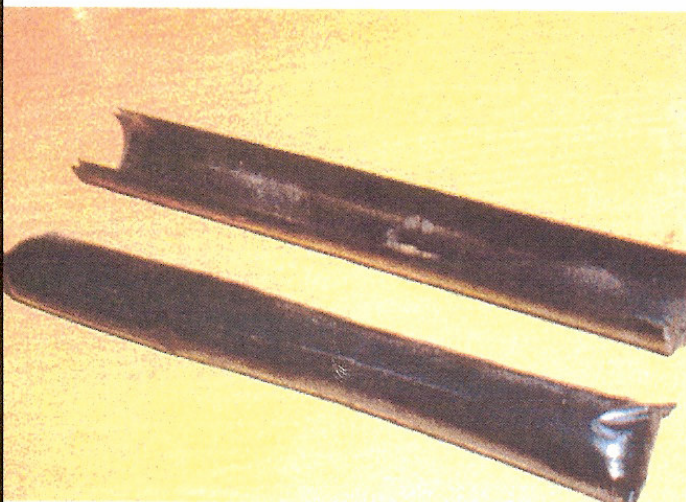
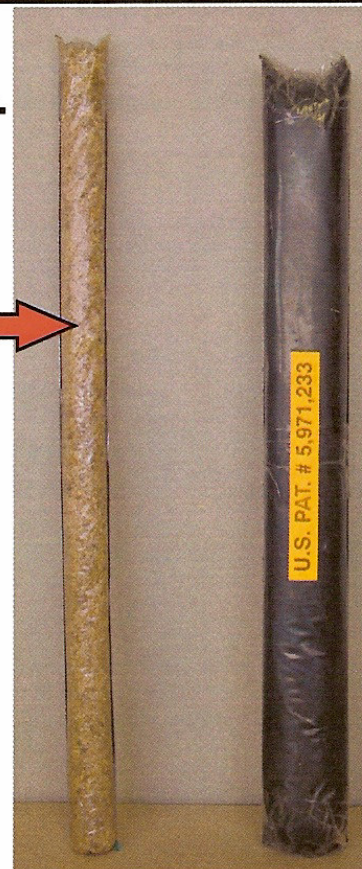


AJF INC. SANDING CARTRIDGE SYSTEM

.. An extremely practical solution to your non-free open problems.



Enlarged view of coarse silica filled cartridge.



The picture above shows two types of cartridges one containing coarse silica, and the other standard CFLS-30 "Clean

The Cartridge is a Focused Sanding Delivery System

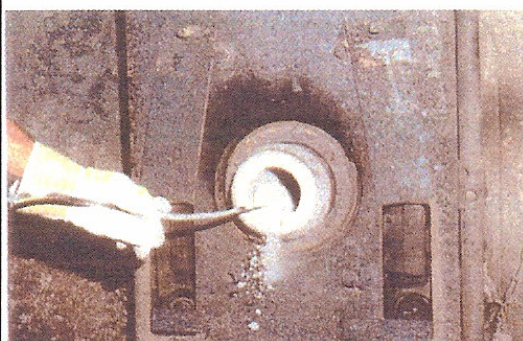
The **Clean Flow Cartridge System** is a unique device designed to ensure the free flow of steel from ladles with bottom pour gates. Cartridges are custom made to each mills individual specifications. Ladle nozzle, and well block size determines the dimensions of the cartridge, while practice, and non free open issues determine the cartridge fill material.

The cartridge prevents anything which may cause a non free open from entering the nozzle when the ladle is set upright after prep, and prior to sanding the well. The cartridge also allows the use for more than one nozzle sand. For example the cartridge delivers course silica to the nozzle area, while standard blend clean flow is placed in the

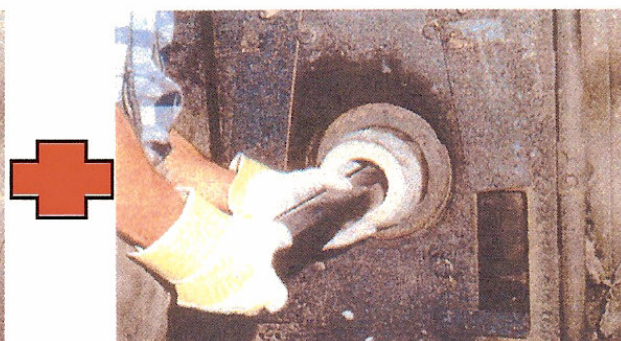
**U.S. Patent
5,971,233**

SANDING CARTRIDGE SYSTEM

.. Safe, Clean Productive, Cost Effective, and above all , Easy to use.



STEP 1: Clean The Nozzle Area



Step 2: Insert The Cartridge

**Increase
In
Free-Open
Percentage**

The Cartridge is inserted while the ladle is on its side in the ladle prep area (Fig. 1) and with the gate open . After insertion the gate is closed and the ladle is set upright. (Fig.2) The material in the cartridge fills the nozzle as much or as little as is required by the customer.

The cartridge guarantees that the nozzle is filled, however additional sand must be added to fill the well block just prior to tapping.