

THE MOLDMAKER JOURNAL

QUARTERLY NEWSLETTER FOR THE PLASTICS INDUSTRY • MOLDMAKERS DIVISION •

"Method Imparts Minimal Heat"

FIRM OFFERS SPOT WELDING PROCESS FOR MOLD REPAIR

A system of non-arcing spot welding for mold and die repair is available through Rocklin Manufacturing Company of Sioux City, Iowa. The company produces the Rocklin MoldMender Micro Welder which imparts the absolute minimum amount of heat to the mold or die itself.

The non-arcing spot welding process, Rocklin asserts, translates to three key advantages: (1) universal hardness across the weld, (2) no shrinking next to the weld and (3) no splatter on adjacent areas.

Repairs are made by bonding a piece of .008" thick ferrous ribbon material or .020" or .010" diameter wire to the desired areas on a steel workpiece. The ribbon material or wire usually is in the annealed state before welding but will be in the hardened state after being bonded in place.

The hardness will vary, of course, according to what material is used as the repair material, which should have the same or similar properties as the workpiece. Stainless steel, nickel alloys and mold steels, such as P-20, S-7, H-13, A-2 and 420 stainless are some of the more common materials recommended.

The ribbon material is bonded by pressing down firmly with the electrode, then triggering the machine either manually or automatically with the foot switch while slowly rolling the electrode across the repaired area.



MoldMender Model 912

This will bond approximately a 1/32" diameter spot each time the unit is triggered. The entire area must be covered with these interconnecting spots to ensure a 100% bond. If greater build-up is desired over the initial built-up layer, repeat the process by applying another layer of ribbon material or wire. No finishing is required between the layers, and an unlimited number of layers can be applied.

To repair areas along an edge or corner, bond the material along one face allowing the ribbon material to extend over the edge. Fold the material over the edge using the electrode while repeatedly triggering the machine. In this way, the ribbon material or wire can be molded to any

contour like a piece of putty and bonded in place at the same time.

Small pin holes and D.C. arcs may be easily repaired using the metallic paste. Place a small quantity of paste in the pin hole, place the electrode so it is positioned in the pin hole, and trigger the machine. Next, slightly lift the electrode allowing more paste to fill the hole. Press down with the electrode and again trigger the machine. Repeat this process until the pin hole area is built up above the surrounding area, wipe the area clean, and then go back over the area treating the repaired area using the same procedure as described above for a piece of ribbon or wire material. This ensures a dense repair that will finish off exactly like the surrounding mold or die surface.

After a mold or die is run for an extended period of time, a nick, a scratch, or some other imperfection often appears in the molding area. Or, perhaps the parting line starts to wear, and the mold or die must be repaired. It would be impractical to attempt these small repairs by TIG welding; however, it is possible to spot-weld them using the MoldMender Micro Welder.

The MoldMender weighs just 65 pounds and is very portable, allowing repairs to be performed anywhere in the shop including molds in the injection molding machine. No previous welding experience is required to operate the MoldMender. It uses standard 110-volt A.C. power.

The product has six low power selections and eight high power selections which adjust the weld pulse length to accommodate different welding situations. Also, the weld speed (number of welds per minute) has six selections.

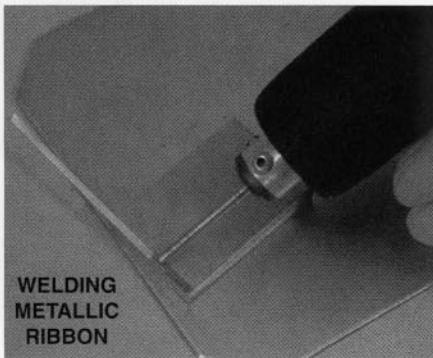
Repaired areas exhibit the same characteristics as the parent or base metal as long as the same repair material is used. Repairs are in the hardened state and may be finished by

standard procedures such as: grinding, machining, lapping, EDM'ing, plating, etc. Diamond laps work well since all repairs are in the hardened state. If care is taken during the "forming" steps, as explained earlier, much of the finish work can actually be performed by the MoldMender making the final process much easier and faster.

All units are shipped complete with power source, applicator, welding materials and instruction manual.

The Rocklin MoldMender Micro Welder is manufactured in the U.S.A. by Rocklin Manufacturing Company. The firm is based at 110 South Jennings Street, Sioux City, Iowa 51102.

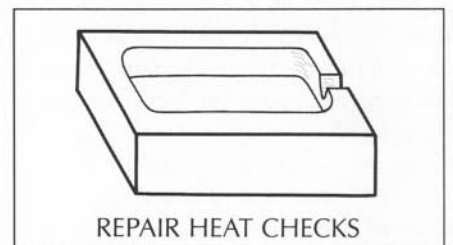
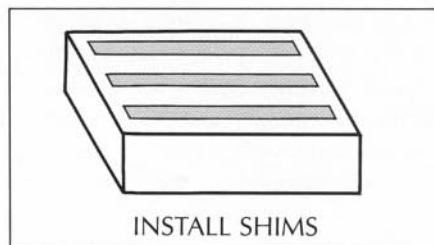
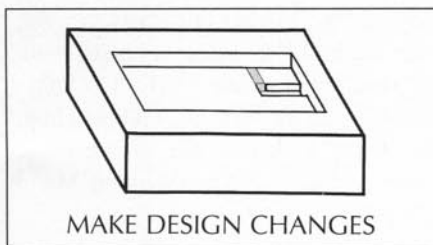
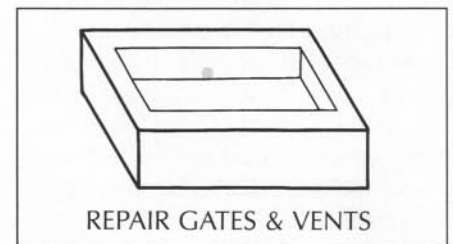
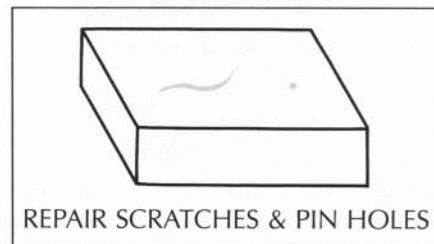
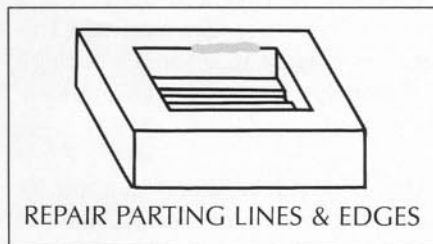
Interested parties are invited to contact the manufacturer at 800-255-6046, FAX 712-252-5619.



WELDING MATERIAL AVAILABLE

A - 2	0 - 1	17 - 4 PH
H - 13	P - 20	312 SS
INCONEL	S - 7	316 SS
M - 2 (D - 2)	W - 2	410 SS
NICKEL	STELLITE	420 SS

TYPICAL APPLICATIONS



ROCKLIN
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