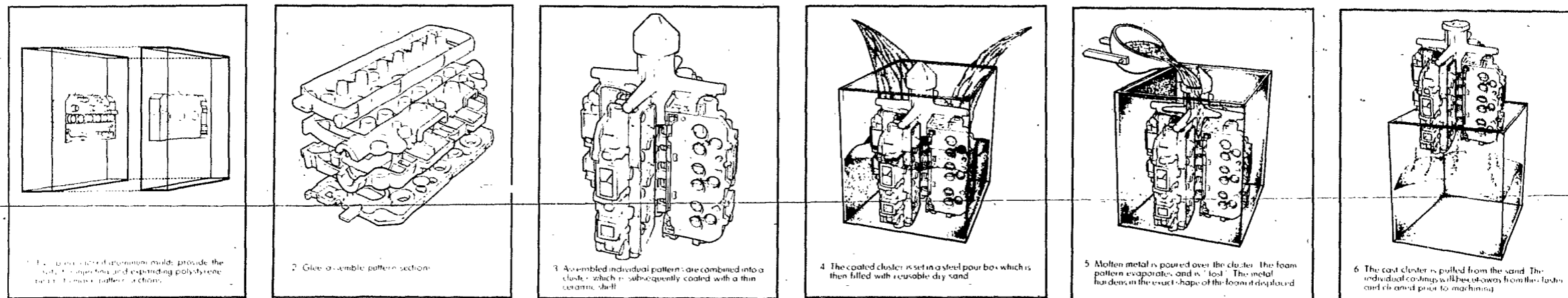


Central Foundry's Lost-Foam Process



Here's An Explanation Of How Aluminum Castings Are Made At The GM Plant

MASSENA.—The Central Foundry plant on Roosevelt Highway in the Town of Massena is producing about 400 aluminum cylinder head castings for automotive engines each day.

The lost foam process, known as "lost foam" aluminum cylinder heads are used extensively by European manufacturers. Central Foundry market studies show potential for as much as 20,000 aluminum heads per day in the American automotive market as well.

What is the Lost Foam process? How does it work? Ross Johnson, superintendent of Lost Foam Operations at the Central Foundry plant here says, "Lost Foam is a casting process in which you first make a polystyrene pattern shaped exactly like the part you want to cast. You give the pattern a thin ceramic coating and bury it in

dry sand. Then you pour in molten metal through the top of the foam pattern."

The hot metal causes the foam to evaporate, or become "lost." The

ceramic coating keeps the metal from burning the sand. The sand is used only to support the thin ceramic shell left after the foam evaporates.

The sand is reused many times before it becomes too powdery for further use. The sand is not harmful to the environment, and recycling reduces the volume of material going to municipal landfills.

"In addition," Johnson said, "vapors and residues that come from the pouring operations are easily controlled and are not a threat to air or water quality. A characteristic aroma emitted from the styrofoam when the hot metal hits it is normally captured in the plant exhaust system."

Many other foundries in the world—especially iron foundries—use molds made of sand. The mold is usually made in two halves with an opening in the top half to pour in the molten metal.

Foundry sand can be reclaimed, but the process is expensive, and it

uses large amounts of energy. The sand is used only to support the thin ceramic shell left after the foam evaporates.

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The exhaust system includes a catalytic incinerator with a ceramic honeycomb and a platinum catalyst. Exhaust gasses are heated to 600°F. and are broken down into harmless water and carbon dioxide.

Lost foam castings are recognized in the industry for being dimensionally accurate, and the process can be adapted to many other types of castings in addition to cylinder heads. There is considerable competition for the casting business, however.

Many other foundries are experimenting with the Lost Foam process, and there is very active competition for cylinder heads from people who use the semi-permanent mold process. Low wage-rate foreign competitors are also making serious challenges for many types of castings used by American manufacturers.

Massena Plant Manager Alan K. Steefe said, "Our advantage here is that we have an existing manufacturing operation, experienced people, and established contacts with customers who have needs for a competitive, American-made aluminum casting."

"On the other hand," Steefe observed, "the plant will definitely

need more business volume to succeed. We need to earn our customers' confidence that the Lost Foam process will provide them with a reliable source of

casting. The lost foam process is a quality management process. The production of the 10 liter cylinder head will be a critical selling point

in Central point in Central Foundry's effort to attract additional business."

Central Foundry has plans to phase out the majority of its local operations in the near future. Approximately 325 employees at its local operation.

Book Store Celebrates 6th Year

Living Stones Bookstore celebrated its sixth anniversary in business at the Aubuchon Mall, Potsdam, in September 1986. The store continues to attract new customers from throughout St. Lawrence County who are interested in books, music, Bibles, and gift items which will enrich the spirit as well as the mind.

Several new lines of merchandise were introduced or expanded in 1986, including the Bob Siemon jewelry center. Now, in addition to

Siemon's costume jewelry which has been carried for several years, Living Stones' customers can purchase a wide variety of men's and women's wedding bands, engagement sets, rings, charms, pendants, earrings, lapel pins and tie tacs, in both 14K gold and sterling silver. The variety of costume jewelry has increased as well, as the addition of the jewelry center quadrupled the jewelry inventory.

Living Stones has recognized the need for family-oriented video

cassettes with the popularity of VCRs in St. Lawrence County homes. Families are assured of high quality viewing in the areas of entertainment, teaching, full length movies, and children's films. The tapes are for sale or rent from a store inventory of approximately 50 tapes.

As we enter 1987, Living Stones Bookstore continues to be directed by manager Cindy Letarte, assisted by an able staff of part-time workers.

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Worden's Sees Best Year Yet For Auto Sales

For years Larry Worden has been selling cars to Ogdensburg-area residents.

But 1986 was the best year yet for his Riverside Drive car dealership, says Worden.

Worden and his son, Larry Jr. attribute their high number of sales to their car warranty, which Worden calls "the best warranty possible."

The Wordens sell used cars as well as new ones. The new cars are also serviced, they say.

They specialize in custom exhaust. "We bend the pipes to fit your car," their slogan reads.

The reason the dealership does so well is because "we're small enough to care and large enough to offer the best in all your vehicle needs," the Wordens say.

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