



Your One Stop Source for All Metal Castings

NETCASTER

ICI EXPO EDITION, AUTUMN 2007

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Buyers/Designers
of metal castings

buyCASTINGS cuts
costs and adds value

ENTER

Foundries

Reduce cost, access
new markets

ENTER

Suppliers

to foundries
buyCASTINGS
expands markets

Digest



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Drawings to CAD
Overnight



Breakthrough in Investment Pattern Technology...

Throughout the ages, ever since metal castings have been around, the lost-wax process has been virtually the only way to make investment cast parts...until now.



FOPAT, a **FO**am **PAT**tern material has been introduced. Being dubbed **The Next Generation Investment Casting Pattern Material**, FOPAT is multi-component foam that is pushing the design envelope of wax-based investment cast parts.



Investment Tooling for FOPAT Patterns

As shown below, a long thin FOPAT pattern was successfully injected in January and February 2007. The size of the die cavity was 6" wide x 24" long with a thickness of 0.040" on one end and 0.060" on the other end. This demonstrates FOPAT's capability to fill a long and thin cross-section AND the ability to remove such a pattern successfully in one piece.

The benefits offered by FOPAT over wax patterns include:

- Minimal pattern shrinkage gives stable pattern
- Minimal pattern shrinkage gives stable pattern
- No shell cracking due to little or no pattern expansion
- Can withstand temperatures up to 300 F
- Cost effective for a given pattern
- Durable patterns for thin sections
- No chills required
- Shippable patterns - good handling & stability
- Potentially quicker and lower cost tooling
- Potential to eliminate leaching of soluble cores



Cross-Sectional View Above



FOPAT work began in the 1990's but was accelerated during the past few years through the efforts of a team of industry members working with government sponsored programs. Over the past two years, almost a million dollars in funding has been allocated to help complete the feasibility and viability analysis which will now

be followed by scale-up, tooling, and process optimization work. FOPAT LLC was created to commercialize the new technology.

Continued on page 7



GIVE ME 3 STEPS - buyCASTINGS.com Guide to Buying CASTINGS

Saying all castings & foundries are created equal is like describing every tributary of water as a "stream" (the streams may all contain water, but no two are exactly alike), and so too with castings.

Many factors play a part in finding a suitable source for castings. Even the obvious factors, of size, metal type, and castings process have exceptions. So when you get to quantities, finishes, cost efficient production, quality certifications and manufacturing availability and add in literally tens of thousands of facility choices for production, it indeed can become a daunting task to find the suitable home for a particular group of produced castings.



Generally it is not the major corporations where buyCASTINGS assistance is most helpful. **A typical buyCASTINGS.com client tend to be a lean, mid or smaller manufacturers maybe a machine shop who doesn't have unlimited resources for searching the globe for the right foundry.** The cast product needs for this group call for a good match for casting product type, process, and quantities for a fair price. These companies tend to use buyCASTINGS as a development and problem solving resource. One of our primary targets is to **decrease the risk of buying the right product without spending large amounts of time and money** for researching facilities and quality systems or processes. There are over 800 foundries, with 500+ in North America, represented in buyCASTINGS.com system. Our partners have a wealth of experience in solving engineering issues and making quality castings for fair prices.

This unique diverse structure of suppliers allows buyCASTINGS.com representatives to narrow in on the best matches without spending months on research or bring prejudices about the production process. (All process types are represented.) Our foundries have willingly documented into our system their capabilities and capacities so they can spend their time working on projects which fit their facilities. When a request for castings is placed into the buyCASTINGS online system, our first step is to utilize this list to narrow the production facilities to a reasonable group.

The question of importing castings has become an important part of doing business. It is sometimes a complicated formula to determine if a suitable savings is worth the additional risks. We set out years ago to develop relationships with foundries and set up buyCASTINGS affiliated agents in China to assist our buyers in mitigating the risks. Our associates from across the globe help to communicate directly with foundries to overcome issues before they become problems and solve problems when they inevitably do arrive. **This partnership has served us well allowing us to ramp up overseas casting development projects in record times, combining the efforts and resources of multiple facilities and integrating supplies from across the globe.**



It is indeed a rare occurrence when buyCASTINGS cannot provide a match to a casting resource for any given cast product. You may feel lost in your search for castings, but with buyCASTINGS we may be able to get onto the right stream!

It's All about Value-Added Service in a Deflationary World

By Neil Chaudhry, COO buyCASTINGS.com, inc.

Manufacturing is a deflationary force. In the manufacturing world, by and large the prices have been going down for two decades now. They are certainly NOT going up like they are in the service sector. In services like health care, education, legal, financial, advertising...the prices continue to rise steadily but surely. No wonder, the hardware guys such as the cell phone manufacturers, computer and printer manufacturers are virtually giving away the hardware. Why? Because they know that the money is made in services like selling you the warranties, the monthly subscriptions, and the consumable supplies after they sell you the hardware.



The IT world realized this a decade ago or so. IBM started selling services to expand out of the PC box business. They started focusing on consulting, problem solving and value added services like customized software development rather than the manufacturing and selling of hardware. Why? **Because the margins are a lot nicer, the pricing power is great, and there is little or no competition if you provide a niche solution.**

Long term, this bodes well for internet services, IT customized services, product designers, anyone who is clearly providing value added service that is not easy for others to provide.

So, how does the foundry industry take advantage of this trend? We need to define our customer's need not just with respect to pricing and terms but with respect to service, delivery, solutions, bundling of services, and what do they value the most. Every customer has needs that go well beyond what they are coming to you for. It's our job to discover those needs, define solutions, define our value added service and show how we can satisfy those needs.



The difficult part is putting a value or a price on the value added services. The customer has to be willing to pay for the value added services, otherwise there is no value added or perceived value to the customer. How do you put a value on value added service? The value is the

price that both parties agree on and if that price is less than your cost of providing that service than there is perceived value but no deal unless you are willing to take a loss for some other long term benefit perhaps. **Ideally, you should be able to mark up your service if there is a significant perceived value to the customer.**

In a manufacturing world where the price of the tooling, the castings, and the hard goods is stable or going down, there is no choice but to charge for value added services to grow your margins and profits.

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Your One Stop Source For All Metal Castings

buyCASTINGS.com Opens an Office in Cincinnati, Ohio

In September 2007, buyCASTINGS.com officially opened a new office on the north side of Cincinnati. The office is located at 9319 Cincinnati-Columbus Rd in West Chester, Ohio.

With more and more casting buying activity in the Cincinnati area, it was important for buyCASTINGS to service its customers efficiently and quickly.

With buyCASTINGS.com having approximately 1,000 foundries in its network, buyers in the Cincinnati area can now have access almost immediately to the buyCASTINGS.com foundry and associated supplier network that will allow them to obtain the castings and services they need.

At the present time, Bob Dzugan, President and Dave Rauen, Project Manager, buyCASTINGS will be located in the Cincinnati offices, but expect to expand with more casting personnel in the coming months.

The headquarters in Dayton will now have additional space for expansion as well, especially for upcoming government programs.

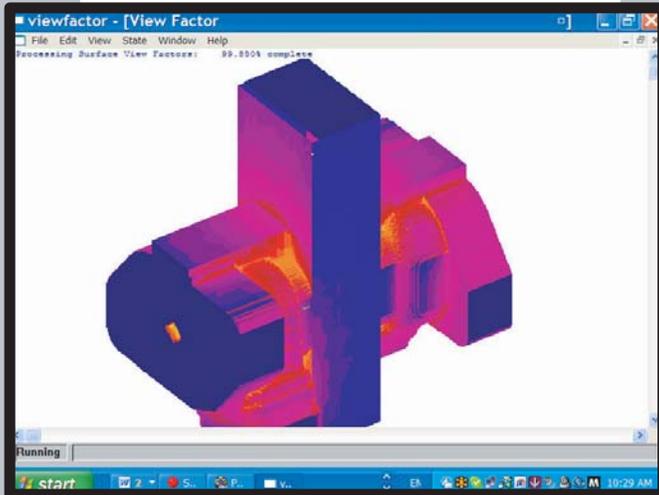
Front Entrance of buyCASTINGS New Cincinnati Office



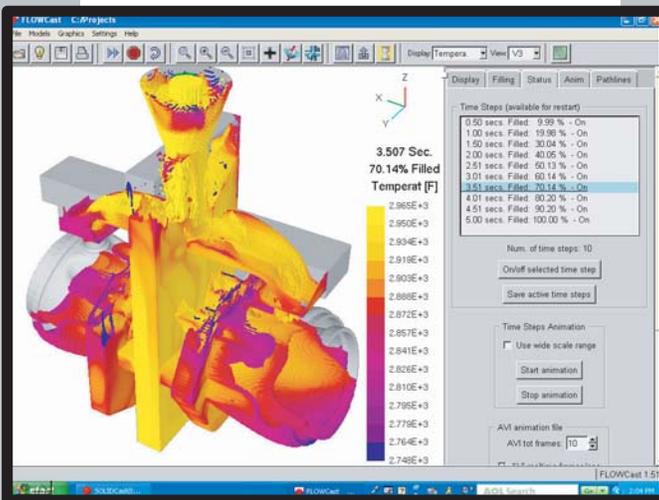
"It is important to us to be able to serve our customer needs as quickly as possible. With the new location, casting buyers in Cincinnati and Northern Kentucky can expect buyCASTINGS.com's representatives to be at their facility at any time within an hour." Bob Dzugan, President of buyCASTINGS Inc.

Why software from Finite Solutions?

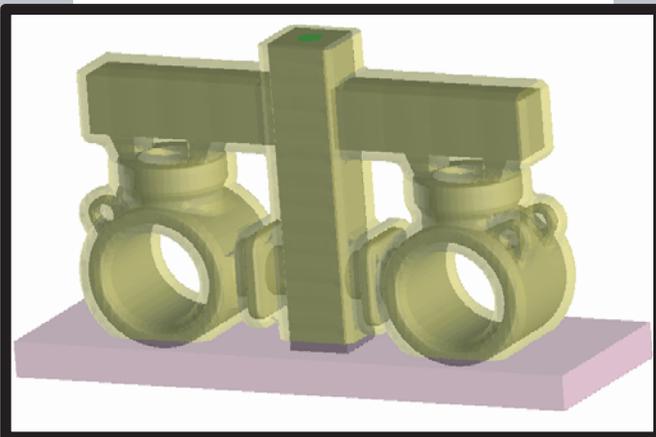
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Your One Stop Source For All Metal Castings

buyCASTINGS.com matches requests for castings to an expansive group of qualified foundries. With over 150 years of experience in materials, metallurgy, metal castings, tooling, prototypes, foundry supplies and production of metal castings of all metals and all casting processes, buyCASTINGS.com serves customers in defense, aerospace, transportation, chemical, industrial, electronics, research and other manufacturing sectors. http://www.buycastings.com/how_to_request_casting_quote.html



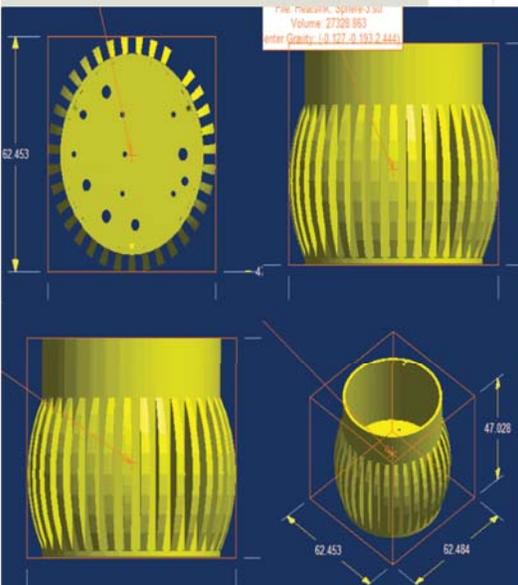
- Database of 600+ foundry partners to match castings
- Reduce manufacturing costs
- Casting process optimization
- Prototype metal castings
- Reduce request quote times
- Casting sourcing assistance
- Manage procurement teams
- Metal and Plastic prototypes
- Alternate material analysis
- Program management

ALL CASTINGS TYPES
ALL CASTING PROCESSES
RAPID PROTOTYPES
RAPID TOOLING
FOUNDRY EQUIPMENT
DESIGN/ENGINEERING



3-D Model of Coil

COMPUTED TOMOGRAPHY,
REVERSE ENGINEERED
RAPID PROTOTYPED,
INVESTMENT CAST REPLICA
OF THE ORIGINAL LIBERTY
BELL



Procast, Opticast, Optistrut,
All major CAD packages

References: DOE, PPPL, General
Electric, WPAFB, P & G

Contact:

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<http://www.buycastings.com/>

Dayton, Ohio



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Breakthrough in Investment Pattern Technology...

con't from page 1

The project details will be displayed at the FOPAT Booth at the upcoming Investment Casting Institute's 55th Technical Conference & Expo in Cleveland, OH, October 14 - 17, 2007. However, in brief, there are several cost and energy savings, which are being explored and quantified in the Phase II SBIR project by the FOPAT team. A few examples of the patterns, tooling, and some of the castings are shown below:



FOPAT Patterns with Cores



Pattern with Cores Removed



As Injected Showing a Complex Shaped Part



Relatively Thick FOPAT Pattern as injected



A Strut with Cores to be Cast Using FOPAT Next

Project Mission Statement

Develop an Advanced Pattern Material to Enable More Affordable Higher Performance Investment Castings for Production of Jet Engine Components

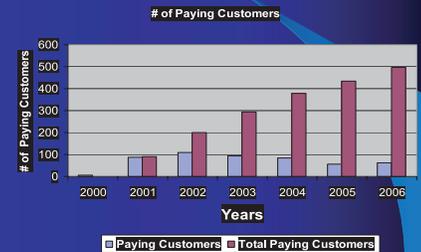
FOPAT offers the potential for saving energy, reducing cost, and extending the design capabilities of investment cast parts for defense and commercial components.

Please contact Mr. neil chaudhry at nchaudhry@buyCASTINGS.com or call 1-866-buyCAST to learn more about the various buyCASTINGS technology development & collaborative projects

buyCASTINGS by the Numbers

- 800+ Foundries Worldwide
- 1700+ Buyers Worldwide
- 399+ Suppliers to Foundry Industry
- Average 100,000 "hits" per month
- 100% Focus on the Metal Casting Industry

Number of Paying Customers



What our customers are saying...

"I'll let you guys talk technical with the manufacturers; I just appreciate the good quality parts."

Purchasing agent regional retailer east coast

Thank you for quick response.

Product Development Manager

"Great job!!!!"

Casting buyer in Ohio

You guys are too fast!! How can you have the tooling done that fast?!

Machine Shop in Ohio Upon Receiving Casting Samples

"You guys really know what you're doing."

Ohio Foundry

"With you guys providing the castings, and us doing the machining, we make a good team."

Kentucky Manufacturer

VISIT US AT THESE UPCOMING TRADE SHOWS

October 13 - 17, 2007
Investment Casting Institute Technical Conference & Expo
Cleveland, Ohio

December 3 - 6, 2007
Defense Manufacturing Conference
Las Vegas, NV

December 11 - 13, 2007
PowerGen International
New Orleans, LA

April 3-9, 2008
3D Systems North America Stereolithography Users Group
Costa Mesa, CA

May 17-20, 2008
APS CAST EXPO
Atlanta, GA

Drawings to CAD Overnight

On two recent occurrences, Mr. John Eric Voltin of Agile Technology services in Austin Texas has been a savior; converting 2D machining drawings to 2D fully dimensioned casting and associated 3D CAD files basically OVERNIGHT!!!

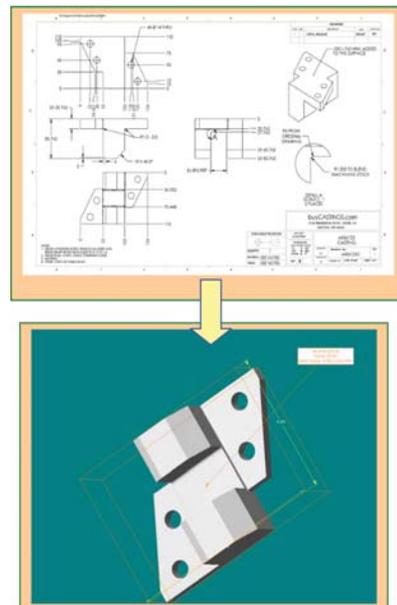
John Eric Voltin is one of the responsible suppliers in the buyCASTINGS.com network that allows our team to successfully compete and win many casting orders.

In the last six months, John has been involved in several projects where buyCASTINGS Inc. has a buyer that has final machined drawings but no casting drawings and files. In all situations, John Eric Voltin has risen to the occasion, understanding where to add machining stock and converting the 2D files to usable CAD and drawings for our foundries. The best part about this is that they have been done almost overnight. In a recent "panic situation", Agile started with only 2D drawings and within 2 days made casting drawings and files for 7 parts. Some of the cad files were done within hours, allowing the tooling to start immediately and allow for the

buyCASTINGS team to complete investment casting tooling for 7 parts within 2 weeks. These parts were for the newly introduced MRAP military vehicle and required cast parts within weeks.

In another MRAP related part series, Agile started work about 5PM one evening and completed 6 complete casting drawings and files by noon the next day.

For more information about John Eric Voltin of Agile Technology or casting success stories, please contact Bob Dzegan at buyCASTINGS 937-259-1341.



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