

NETCASTER

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ICI EDITION

Your One Stop Source for All Metal Castings

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Reduce cost and access new markets

Suppliers

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SOLAR POWER & LIGHT Expands — MCM Precision Castings Goes Solar



Solar panel arrays installed by SP&L at the MCM Precision Castings location in Weston, Ohio. The system will help maintain the company's competitiveness by controlling spiraling energy costs.

photos courtesy of MCM Precision Castings

In the Spring Netcaster, Issue 24, buyCASTINGS announced their new venture SOLAR POWER & LIGHT, LLC (SP&L). The buyCASTINGS' team has a strong passion for investment castings going from prototype to production. In these economic times buyCASTINGS knows that industries are constantly looking for ways to improve the bottom line, offer competitive prices, improve lead time on orders, and deliver outstanding quality. Launching SOLAR POWER & LIGHT has become a business opportunity to demonstrate what solar can bring to foundries and other commercial industries.

Recently SOLAR POWER & LIGHT commissioned a 66.2kW system at MCM Precision Castings, Inc. located in Weston, Ohio. SP&L designed a more complex system that could take advantage of the unused section of land adjacent to the foundry. 33.3kW was installed on the roof and 32.9kW on the ground. Each required its own inverter to prevent mismatching losses that occur from combining arrays that operate under unequal conditions. Don Marion, President of MCM always stressed the importance of environmental awareness. MCM had already invested in energy-savings equipment so when SP&L approached Don about go-

ing solar, MCM made a conscious decision to install solar arrays and lead the way in renewable energy with their facility. Don commented there was a lot of excitement when MCM started this project because of what going "Green" meant to them.

Doug Marion, MCM Plant Manager is also environmentally conscious. In conversation with Doug, he expressed "We learned all through our scouting lives that when we hike or camp we should leave no trace. What that means is that we should leave nothing behind except for footprints. We should leave our environment in better condition than we found it." Marion stated that message has carried over into their foundry as well. He remarked "We try our best to make products and not pollute our environment. Going solar has helped us to keep skyrocketing energy costs under control which helps us to hold our pricing down so that we can stay competitive in the markets that we focus in."

Since buyCASTINGS launched SOLAR POWER & LIGHT (SP&L), SP&L's rapid ascent of the solar industry led to its expanded strategic focus beyond just foundries. Its customer base now includes industrial, municipal, educational, and nonprofit.

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This has proven to be a successful strategy for SP&L, evidenced by the 276kW it has installed so far in 2011, and the 5MWs it has contracted to install by year end. In addition, SP&L has a 30-50MW pipeline of projects that are actively being developed with innovative partnerships and investment teams.

SP&L has been able to step ahead of its competitors by leveraging its core competence. Neil Chaudhry, COO of buyCASTINGS and CEO of SOLAR POWER & LIGHT along with Bob Dzugan, President of buyCASTINGS, together have a tenure of over 50 years experience in strategic partnering and business development. They have the knowledge and ability to lead a business and achieve the competitive advantage by structuring win-win opportunities for themselves and their partners. This talent allows them to build multi-faceted teams that are necessary for taking solar projects from winning the RFP, to the financing, design and installation. SP&L will monitor the operations and maintenance of the solar system along



The ground mount solar array installed by SP&L for the Village of St. Paris, Ohio.

photos courtesy of Village of St Paris

with the selling of SRECS. Bob and Neil's passion, coupled with their strategic partnering expertise has proven an unstoppable combination that is catapulting SP&L ahead of other solar companies.

SOLAR POWER & LIGHT can offer other options other than roof mounting solar arrays. SP&L installed a 64.24kW Ground Mount Solar Array for the Village of St Paris, Ohio. Village Administrator Joseph Sampson and his Economic Development Manager Dave Faulkner met with SP&L and the Village realized that this project supports the Village's "Green Growth" initiatives. The Village's Community Improvement Corporation looks to help finance green energy systems for existing and new businesses through power purchase agreements with green energy developers. This approach supports the new green business park developing on the Village's west side, and envisions green electricity

buyCASTINGS.com— at the Forefront of New Technology

Technology is changing so quickly within industry that as a buyer, designer, and/or engineer of metal castings you may not realize the vast amount of resources that are available to assist you in producing parts from prototypes to production. Over the past several years, advances in RP (Rapid Prototype) technology have paved the way for companies to reduce lead-times and cost in developing and delivering new parts and devices to their customers in half the time it takes using traditional methods.

Recently a technology known as Additive Manufacturing, is becoming more widely used within the product life-cycle from pre-production to full scale production of metal castings and other cast components. Additive Manufacturing (AM) can be defined as the application of layer manufacturing techniques and free-form fabrication of materials to make objects from 3D (3-dimensional) model data. This advanced automated process typically uses Stereolithography (SLA), Select Laser Sintering (SLS), Fused Deposition Modeling (FDM), Laminated Object Manufacturing (LOM), and Direct Metal Laser Sintering (DMLS), just to name a few through use of 3D digital printing technology. These processes provide the ability to create parts used directly in the final product. It allows

manufacturers to produce casting shells & cores, molds & patterns made from various polymers, sand, and metals, as well as the capability to produce end products from powdered metals that are fully functional and ready for use.

buyCASTINGS is able to offer Additive Manufacturing (AM) services to our customer base. We are at the forefront in technology that enables buyers, designers, and engineers the ability to move from concept to reality in their designs. This enables you to take advantage of lowering costs that might otherwise impact a project, especially when producing small quantities for prototype testing and short run productions.

As a long-time member of the 3DS User Group, now AMUG (Additive Manufacturing Users Group), buyCASTINGS is connected to a variety of foundry experts who have adopted these new technologies. These experts include several of the top manufacturers such as 3D Systems, EOS Electro Optical Systems, Stratasys, and Z Corporation, which now provide AM processes used in their day-to-day operations. buyCASTINGS welcomes the opportunity to review and work with you and your company on any projects that may be a perfect fit for the Additive Manufacturing technology! ✨

production capability distributed across the Village, at or near the point of consumption wherever the business may be located in the Village. Ultimately, locally produced green energy sources would also be developed for residences.

Joseph Braden, the Village's Mayor commented on the solar electric system saying, "Using green energy systems is our "new normal" approach to help control the costs of public services, and to help our local business community take control of its energy future." Mr. Sampson and Mr. Faulkner would definitely recommend solar power for other municipalities and even schools. The Village of St. Paris has offered their website to read more about the project. Here is their link: <http://www.urbanacitizen.com/main.asp?SectionID=3&SubSectionID=5&ArticleID=157843>

During both installations there were no interruptions of business which made it

"Using green energy systems is our 'new normal' approach to help control the costs of public services, and to help our local business community take control of its energy future."

Joseph Braden, Mayor, St. Paris, Ohio

easy for the organizations to conduct business as usual. SP&L attributes much of its early success to the strong team building culture of its parent company, buyCASTINGS.com. ✨

FOPAT Production Inc. Adopts New Proven Method to Conduct ISO 9001:2008 Internal Audits...

Traditionally, when companies first started implementing ISO 9001 within their organizations in the early 90's, the internal auditing process was based on a series of formatted questions that followed a standard checklist procedure; element (clause) by element (clause) to achieve compliance. According to Tim Large, Quality Systems Manager and Lead Internal Auditor at FOPAT Production Inc. (FPI) and buyCASTINGS.com Inc. (BCI), Miamisburg, OH, many companies found this to be an impractical and ineffective approach to assessing their quality management system (QMS) efficiently. This was mainly due to the lack of knowledge and understanding among internal auditors and their management team. They realized that many

grasp the details and subtleties of their company's quality management system (QMS). As a result, most of these internal auditor students come away from the training confused and frustrated due to improper training methods that traditionally focus on general compliance issues. The training should be focused on process auditing techniques that can help them understand the flow and process performance which will lead to further added-value in improving their companies QMS.

In 2000, the International Standards Organization (ISO) released a new version of the Quality Management Systems standard promoting a "process approach" to conducting assessments (audits) to improve upon the effectiveness of a quality

in Figure 1) that would create a method for exploring the QMS more in-depth, including: Clause 4.0 – QMS documentation; Clause 5.0 – Management Responsibility; Clause 6.0 – Resource Management; Clause 7.0 – Product Realization; and Clause – 8.0 Measurement Analysis and Improvement. The transformation was based on Shewhart's "PDCA Cycle" (which in Japan became known as the "Deming Cycle") that stands for "Plan, Do, Check, Act." Today, PDCA has become a staple of the quality and business planning process within many organizations across the United States and throughout the World.

Only until recent years, since the release of ISO 9001:2008 in November of 2008, has this "process approach" to

Today, PDCA has become a staple of the quality and business planning process within many organizations across the United States and throughout the World.

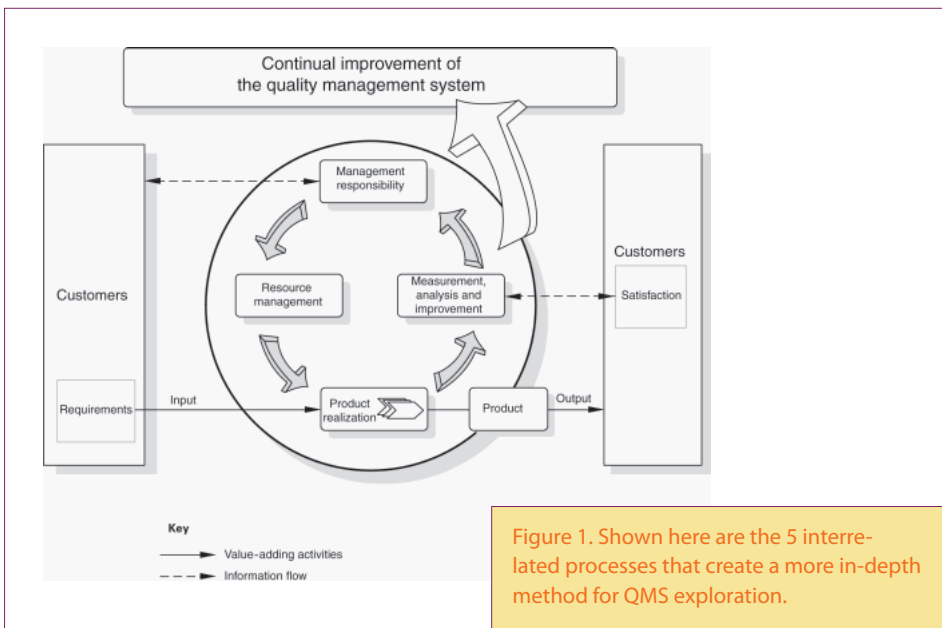


Figure 1. Shown here are the 5 inter-related processes that create a more in-depth method for QMS exploration.

of their day-to-day activities performed, whether they were a large and/or small business, have interrelated processes (interactions) that provide both inputs and outputs to the overall operations and/or QMS of the organization.

Tim alluded to the fact that many internal auditors and/or internal audit teams within a particular business are normally made up of shop floor/production staff members and support personnel outside of the traditional quality department. Once trained, (which typically involves a fast pace 2-day course), they begin their journey as new internal auditors trying to

management system. This new approach was aimed at enhancing customer satisfaction by meeting customer requirements through efficient feedback that would become essential for recognizing the need and potential for further improvement. The idea here was to identify and manage numerous linked activities between individual processes within the value stream system for achieving customer satisfaction and sustaining the organizations quality objectives. This was accomplished by transforming the previous version's 20 activity-focused elements into 5 major interrelated processes (shown

conducting internal audits been embraced as a standard way of practice. For years, internal auditors and audit teams have relied on traditional methods of using a checklist approach to formulate a series of questions around each element (now clause's or sub-clause's). Many companies still use this method today as a basis to start their assessment process. "You may say that old habits are hard to break," as mentioned by Tim Large, in referring to the various types of internal audit training materials and resources available that still utilize this format for conducting ISO 9001:2008 audits.

Recently, FOPAT adopted the PDCA approach to their internal auditing process. This new approach using PDCA, has now taken on a complete new method continued on page 4

Dinosaurs Still Roam the Earth

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and meaning, thanks to Author Paul C. Palmes, who recently released his second edition book entitled: *Process Driven Comprehensive Auditing: A New Way to Conduct ISO 9001:2008 Internal Audits*. This book was written for the novice internal auditor, as well as for the experienced auditor in search of a more significant approach to conducting highly effective QMS audits. It simplifies a complex series of actions through examination and guided application of Shewhart and Deming's PDCA Cycle. According to Tim, this book is not only a great reference tool for understanding the foundational aspects of conducting internal audits, but provides excellent guidance in the planning, implementation, evaluation, and actions for effective process management in achieving real performance results. The use of these new PDCA methods has enabled FOPAT's internal audit team the ability to effectively communicate and deliver precise and competent information to top management in preventing and uncovering risks factors while providing measurable data for continuous process improvement for their QMS. It has also been instrumental in demonstrating their conformity to the requirements for certification under the ISO 9001:2008 standard, which FPI achieved in January 2011. These same PDCA methods are now being applied to the overall processes within the entire organization as the parent company, buyCASTINGS (BCI), enters the journey towards ISO 9001:2008 registration/certification later this year. Tim indicated that using this new approach coupled with proven quality methodologies such as APQP (advanced product quality planning) and PFMEA (process failure mode and effects analysis) has eliminated the obstructions once encountered and allowed the internal audit team to achieve meaningful results towards the success of implementing a sound quality management system they can rely on!

To learn more about the implementation process of PDCA approach and/or using Process Driven Comprehensive Auditing techniques, please feel free to contact Tim Large, Quality Systems Manager, FOPAT Production Inc. (FPI) & buyCASTINGS.com Inc. (BCI) at tlarge@buycastings.com or you can obtain information about this publication and others through the American Society for Quality (ASQ). *



buyCASTINGS President Bob Dzugan (right) is honored by the Additive Manufacturing Users Group.

In the late 1980's when Rapid Prototyping began, known today as Additive Manufacturing, there were a few hard creatures that evolved as the first adapters of a new technology based on "STEREOLITHOGRAPHY". Over 20 years have passed and while it is not 20 BILLION years, the close knit and ever expanding industry refers to these early adapters as DINOSAURS.

Most people would take offense to being called a dinosaur, but not Bob Dzugan, President and Founder of buyCASTINGS, Inc.. Earlier this year in Miami, FL at the 22nd annual 3D Stereolithography Users Group (3D SUG) now the Additive Manufacturing Users Group, Bob was honored by his peers as a "3D SUG DINOSAUR". He joins a select group worldwide of less than 50 professionals with this title.

Bob has been involved in the Additive Manufacturing industry since its inception in the late 1980's. He used some of the first Stereolithography (SLA) patterns while at General Electric as patterns for metal casting. When Bob moved on to EMTEC, (Edison Materials Technology Center), he worked with the University of Dayton and with a consortium of US companies using the 6th SLA machine that was ever made. Today there are thousands of these types of machines all over the world.

In one of the best books ever written on Rapid Prototyping, Rapid Prototyping & Manufacturing: Fundamentals of Stereolithography, author Paul Jacobs called Bob a "pioneer" for being one of the first to inject wax into an SLA mold to make investment casting patterns. In the mid



Close-up of the 3D SUG DINOSAUR awarded so far to only 50 people worldwide.

1990's, Bob and buyCASTINGS' co-founder Neil Chaudhry actually owned several Rapid Prototype machines that they leased to foundries and service bureaus. During that time period Bob worked being the "Johnny Appleseed" for the now very common "QuickCast" application of SLA. Bob would visit many investment casting foundries around the country providing "seed" funding to use this new technology. Nowadays, virtually every investment casting in the United States uses "Quickcast" as an important development tool.

Since attending his first 3D SUG meeting in Tampa, FL in 1995, Bob has attended every meeting and has been a regular presenter. He has built a reliable network of companies that can help assist buyCASTINGS along with its buyers and suppliers to achieve rapid results using Additive Manufacturing methods and metal castings.

Bob has been known to say that he may move like a dinosaur, but all those years of experience are at your disposal to make your projects quickly and successful. *



(L to R) buyCASTINGS President Bob Dzugan and COO Neil Chaudhry proudly hold the 2011 issue of INC. magazine which lists the private company as one of America's fastest growing.

We Did It Again!

buyCASTINGS.com Makes INC 500/5000 List of Fastest-Growing Companies in America

We did it in 2008 - We did it in 2009 - We did it in 2010 - and we did it again in 2011! buyCASTINGS.com, Inc. made the INC500/5000 list four years in a row as one of the fastest growing private companies in the United States.

There is no doubt that the economy has been tough. And, frankly buyCASTINGS did not expect to make the INC500 list this year. But we stayed focused on our goals which was to plant seeds to grow the business. Neil Chaudhry, Chief Operating Officer at buyCASTINGS.com stated "rankings and awards are NOT the goals; they take care of themselves. If we just focus on what we can control which is growing our businesses and if we make the INC500 that's great. If not, then others must be doing better so good for them."

Neil along with Bob Dzugan, President of buyCASTINGS have managed the businesses to keep things in the right path for continuous improve-

ment and growth. Both continue to ask themselves and their teams how can we do better, what can we do more of, where can we expand, and how do we deploy our people to do what they are good at.

buyCASTINGS has diversified the business from castings - to research and development - to project management - to production of patterns - and recently to solar power. Bob and Neil are looking to grow the foam composites side along with solar energy. At the same time, buyCASTINGS.com, Inc. will continue to pursue new customers and projects in castings and pattern businesses. Dzugan stated "We're proud that the dedicated hard work of our employees has ended up with being recognized like this. With the continued support of our customers, partners and employees we will grow the business from "two men with an idea" to a successful small business that everyone will be around for a long time." ❖

HOW DO WE CREATE JOBS

(Economic Prospective from Neil Chaudhry, as of Aug. 26, 2011)

The issue is how do we get our economy growing again...jobs will come with it. It's not going to be the housing industry this time that helps us grow out of this slow growth economy. Nor is it the financial sector. Both of these sectors were in a bubble that busted in 2008-2009. Like the last internet bubble, it will take about 8-10 years before those sectors expand again in a meaningful way.

So, how do we grow the economy and thus create jobs? This time it will have to be the manufacturing sector and business to business spending. Capital investment by large companies into manufacturing in the USA is the only way out. Let's make stuff in this country that the world wants. Yes, we can make things to export. That is the best way to grow and create

We have the largest consumer market, despite the recessions and slow downs and the high debt loads.

jobs AND reduce the trade deficit, all with one step. Another added benefit of manufacturing jobs, is that unlike financial services or any other service industry jobs, there is 3-7x multiplier effect...that is, each mfg job creates demand for other goods and services leading to creation of 3 to 7 other jobs. This is the reason why Germany has done so well compared to the rest of the European economies. It is a manufacturing engine that produces high tech products for the world.

Devaluation of the dollar is a good thing, for now, in order to help us export more. This will also make imports more expensive. This will also continued on page 7

buyCASTINGS IN THE NEWS



Bob Dzugan and wife Jackie are ready to giddy up and go for the American Cancer Society's Cattle Baron's Ball, a local charity event.

Recently buyCASTINGS.com was a proud sponsor for the Dayton, Ohio Cattle Baron's Ball. This is a local charity event for the American Cancer Society bringing awareness and financial support in research, education, and service programs.

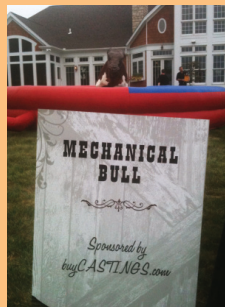
No it isn't Jock Ewing and Miss Ellie, but it is Bob Dzugan, President buyCASTINGS and his wife Jackie, who dusted off the Western wardrobe that was popular in the Urban Cowboy days in the early '80's. The event was definitely in Texas style with buyCASTINGS sponsoring the mechanical bull ride so folks could saddle up and ride their evening away enjoying the festive atmosphere. Approximately 180 people were in attendance for the evening's gala.

Neerja Chaudhry, wife of buyCASTINGS' COO Neil Chaudhry, is an active participant of the planning committee for this event.

buyCASTINGS is located in Miamisburg, OH. The American Cancer Society

estimates over 56,000 new cases of cancer just in the state of Ohio this year. buyCASTINGS knows the importance to support the community and be engaged. Along with The American Cancer Society buyCASTINGS has supported the American Foundry Society and the Be The Match Foundation which helps patients find bone marrow donors.

For more information on these organizations, visit www.cancer.org, www.marow.org, and www.afsinc.org. ❄



buyCASTINGS sponsored the Cattle Baron's Ball's mechanical bull ride for charity. All proceeds went to the American Cancer Society.



Customer Testimonials

"We just wanted you to know that you guys really know what you are doing. The aluminum castings you supplied for this project were excellent and great castings in every way. You know what you are talking about, stay on top of the projects and know how to get the job done right. You guys really know your casting."

engineer, manufacturing company in Washington

"You're a pleasure to work with. Castings have always been a point of frustration and you've been a solid performer. Great job."

president, machining company in Ohio

"We've got the castings, they look good. Thanks again for the urgency you put into this order for us! Also if you don't mind I will give those guys in the tool room your contact info, this may give them a good resource for future as well as them contacting you to get some specifics before I see an order (this should eliminate me asking questions and delaying things, you are the ones who know this stuff).

Again there is nothing like buying something that your not totally sure what you are buying and have the guidance and help you have provided." ❄

purchasing agent, industrial company in Ohio

"We were really impressed by how quickly you responded to the order and were able to get us finished castings".

midwest supplier



YOU'RE HIRED

Brett Henderson – Joins Our Solar Team

Brett Henderson joined the buyCASTINGS.com team in April 2011, working as Project Manager for SOLAR POWER & LIGHT (SP&L). He holds a B.S. in Business Administration, Summa Cum Laude, from Ohio State University. Brett also completed Los Angeles Trade Technical College's intensive solar curriculum and gained invaluable hands-on experience with solar PV installations throughout California. In addition to Brett's achievements he has the Entry Level NABCEP certification and in September 2011, Brett will take the famously tough NABCEP Installer exam to earn the NABCEP certified PV Installer credentials.

His qualifications of working in corporate finance, project management, construction, and renewable energy will help make him an effective Project Manager. He



SP&L Project Manager Brett Henderson brings his California solar expertise to Ohio.

is excited to bring this wealth of knowledge back to his home state, and help Ohio to continue advancing its renewable energy goals. ✱

Art Davis – Sales Manager for Fopat Production, Inc

Art Davis joined the buyCASTINGS.com sales team back in April 2010, and recently accepted the position of Sales Manager for FOPAT Production Inc. a Division of buyCASTINGS.com.

Art brings 28 years of sales experience in the Investment Casting Industry spanning aerospace, industrial gas turbine (IGT), and the industrial markets. His experience also includes commercial and military markets. Art has a myriad of experience in providing investment castings in Equiaxed, Directionally Solidified (DS), Single Crystal (SX), and fine grain structure applications.

Recently, Art worked with a customer to supply a group of castings in 15 different alloys which included castings with Equiaxed, Directionally Solidified (DS), and Single Crystal (SX) grain orientations. These castings were produced utilizing foam patterns (FOPAT) produced by FOPAT Production Inc.. buyCASTINGS will now work with the end customer to perform an Electro Discharge Machine (EDM) operation in order to bring the castings in to the desired final dimensions. The



New FOPAT Sales Manager Art Davis has 28 years of experience in investment casting.

customer was extremely pleased with the casting quality, customer service, and the rapid response with deliveries.

Art's knowledge and expertise allows him to interact with major players in the Aerospace and IGT markets. He has worked at large corporations such as PCC and Chromalloy Castings. We are very pleased to have Art on our team and wish him success in his new position. ✱

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incent companies to bring jobs back to the USA. We could be the 'low cost producing country' now. Once we grow again, the dollar will strengthen. We have the largest consumer market, despite the recessions and slow downs and the high debt loads. We have to take advantage of that by doing everything possible to attract investment back in the USA, for large corporations to set up plants and offices in this country...not just sales, marketing, and advertising offices in this country.

My final thought on creating jobs: Invest in the new energy infrastructure...our coal plants and the electric grid is old and extremely inefficient... that is a huge cost burden to all businesses and consumers. Let's upgrade to a new digital smart grid with solar plants feeding electrons to the grid from all types of distributed generation sources. This will create high tech, green jobs in a heartbeat and save money for everyone who buys electricity. The investment will pay for itself and some. If highways were worth investing in...and if the internet was worth investing in...then it's time to invest in the energy grid!! Lets bring it from the 19th century to the 21st century now.

Please let me know your thoughts at nchaudhry@buyCASTINGS.com. ✱

Neil

Visit buyCASTINGS at these TradeShows

**Investment Casting Institute
58th Annual Tech Expo**

Covington, KY
Marriott Cincinnati at RiverCenter,

Oct 9-12 2011

FOPAT Production Inc
Booth 417

Power-Gen International
Las Vegas, NV

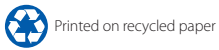
Las Vegas Convention Center

Dec 13-15 2011

buyCASTINGS/FOPAT
Booth 7122

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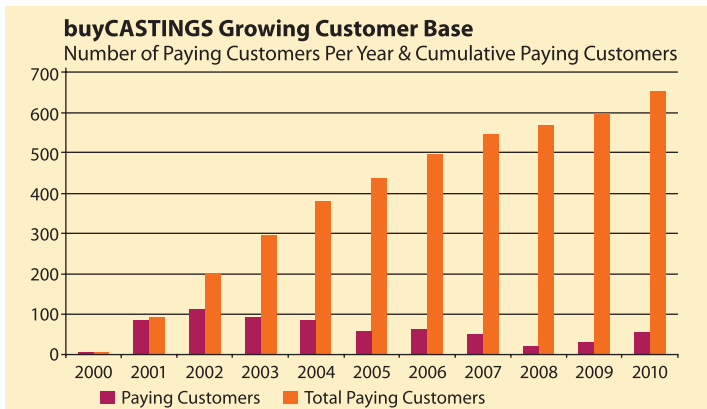
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FOPAT
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