



# RANGERS Results

## Quarterly News

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## From Straight Line to Circle – The New Paradigm in Global Manufacturing



Make it, use it and dump it. That's the way people have always done things, and it's the way manufacturing has been accomplished since the dawn of the industrial revolution. But the world we have known is about to change forever. Welcome to the Circular Economy.

The circular economy goes beyond recycling to look at every step in a product's life cycle from idea to junk heap. Even the words "idea to junk heap" no longer apply because they belong to the linear economy. In the circular economy,

we need to think in terms of the circle of life where very little is ever lost to the landfill. Here are some practical changes to look for in the coming years:

- **Reuse Replaces Recycling** – Obviously not every single component of an end product can be reused, but a lot of it can. Look for metal casting products to be among those components that you can rely on Rangers to reuse for the OEM market. This reuse not only will save money for increased OEM profitability, but also deliver much greener results.
- **Higher Purity Recyclables** – Some material will always end up on the recycle pile. For example, what about the pieces that can't be reused? Rangers can re-alloy aluminum and repurpose it for new components used in the marketplace. Look for Rangers to develop new and better ways to purify recyclable commodities.
- **Design for Reuse** – Design engineers will be tasked in coming years with re-designing products for component reuse. The idea is to increase the number of parts that can be reused while reducing the amount that goes into landfills.
- **Sourcing Closer to Home** – Today, it's not unusual to source components from a wide range of countries to take advantage of cost savings. With the Third World about to add three billion middle class consumers in the coming decades, pressure will mount to keep jobs and parts sourcing close to home. Pressure also will mount for keeping raw materials close at hand as global demand drives up the real cost of commodities. In such a world, commodities like iron and steel will be too valuable to allow them to rust away in landfills. Instead, Rangers will be among those who reuse and repurpose casting metals.
- **Design for Permanence** – If you plan to reuse components in new manufacturing, then you should design the new products to accept old componentry. For example, expect fewer design changes in your automobile, particularly the non-showing internal componentry like engine housings and frame structure so an engine housing from a 10-year-old auto can be reused by Rangers in a new car engine.
- **Drivers for the Circular Economy** – Why change the manufacturing model now? Mounting pressure by the global economy will significantly increase demand for commodities, including many already in short or dwindling supply. Global warming will increase pressure to reduce fossil fuel use while demand for energy will increase exponentially. Expect restoration from die casters like Rangers rather than disposability to become the basic worldview of OEMs. We will continue to keep you apprised of our activities and progress.

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## How to Achieve Die Casting Success

Rangers draws on seven decades of experience to assure you end up with a die cast component that meets your production requirements. For us, die casting should address three important concepts:

1. *Quality Design Upfront*
2. *Collaborative Working Relationship Between Our Team and Yours*
3. *Advanced Tools & Technology*

### • Quality Design – Is Your Project Ready for Die Casting?

Our engineering staff will review your component design and the way it fits into your end product. We'll identify any modifications that will improve the design for the casting process to enhance quality and assure a cost-efficient result that meets all of your specifications and requirements including on-time delivery.



### • Collaborating for Success

At Rangers, we focus on improving the function and performance of your product design. In the end, the difference is how we perform in the production of complex castings that meet your most exacting specifications. This spirit of collaboration with your team can be seen in our ability to adapt to your project requirements.

### • Taking Advantage of the Latest Die Casting Technology

We deploy the latest proven technologies such as 3D modeling and mold flow simulation software to confirm

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## We're Proud to Introduce: Josue Alvarez

**Josue Alvarez** recently joined Rangers Die Casting as an intern from California Polytechnic State University at Pomona. Josue (pronounced "Ho-sway") is excited about the opportunity to extend his classroom work in engineering to the company's plant environment. "It's great to see everything in action," he added.

Learning how the Rangers Die Casting systems come together has been a big part of Josue's work to date, as he performs audits for us and learns about the planning involved to move active jobs through the plant. These audits are being performed in advance of Rangers' upcoming recertification of ISO-9001-2008, and as we work to gain certification for ISO 14000 environmental compliance. Additionally, Josue recognizes how important it is that we produce high quality, cost-effective die cast components for a diversified customer base. He especially appreciates the opportunity to acquire meaningful casting industry experience, while receiving a lot of mentoring from management and colleagues.

Josue has made an immediate business impact at Rangers by using his bilingual skills to enhance overall in-plant communications.



*"I like participating in the production of (die cast) parts used in our global marketplace."*

*Josue adds, "Working at Rangers, provides me with a terrific learning experience."*

## From Straight Line to Circle... continued...

- **What Can You Do Today?** – The circular economy represents a paradigm shift. It requires all of us to think about manufacturing in an entirely new way. Rangers has the engineering expertise to guide you in designing die cast components for reuse. The more you can remanufacture or reuse, the more you will save in producing new products and the fewer demands you will make on a dwindling supply of global resources.

Consider the trends listed above. How will you cope with these changes? Change management requires shifting attitudes and assumptions. It requires educating your people from the top down. It means no longer accepting the status quo. It means looking at your operations with new eyes so you can identify opportunities to reduce costs through reuse materials.

- **Why Are We Having This Conversation?** – You may be wondering why a die caster is urging you to order fewer components in the future by reusing components. The reality is we know that you'll need our support in the re-manufacturing process to repair and refurbish die cast products. We also know that billions of additional middle class consumers added to the global economy translates into growth opportunities for all of us in the circular economy. At Rangers, we recognize the circular economy is coming fast. We plan to change with it to better meet your production needs.



## No "Conflict" Minerals

The Dodd-Frank Wall Street Reform & Consumer Protection Act of 2010 forbids the use of so-called "conflict" minerals and metals.

**We conform 100 percent to the law on this matter.**

## How to Achieve Die Casting Success *continued...*

and optimize your component's design. Based on your design, we prepare the gating and runner design as well as process parameters and tool design requirements. As new technology comes online, we train our team in the use of advanced methods, practices and technology.



**America's Largest  
Design & Contract  
Manufacturing Show**

**October 15 & 16, 2014**

**Wednesday: 9:30 am - 4 pm  
Thursday: 9:30 am - 3 pm**

**Long Beach Convention Center  
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**Come Visit Us  
at Our Booth #110**



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