

Vince Kostelnik

From: weldaloy@aweber.com on behalf of Weldaloy [customerservice@weldaloy.com]
Sent: Thursday, June 12, 2008 11:53 AM
To: Vince Kostelnik
Subject: How to get Defect-Free Forgings | Weldaloy



DEFECT-FREE QUALITY

Poor Quality Material Cuts into Your Profits!

A recent survey with Weldaloy customers revealed that material quality is the most important attribute when it comes to buying forgings. Customers often talk about competitive price and on-time delivery, but if quality is not delivered, price and delivery do not mean a thing.

99.9% Defect-Free Quality

Weldaloy delivers flawless material to our customers 99.9% of the time. [Check out our delivery record \[PDF\]](#). In fact, in 2006, we shipped 21,532 parts and only had 19 of them returned.

4 Keys Areas That Affect the Quality of Your Forging

- **Raw Material Defects** | the initial quality of the cast material used in forging plays a significant role in the final quality of your product. Generally, cast material may include raw material defects, such as porosity, folds, laps, voids and inclusions.

Because of this, Weldaloy uses top quality continuous cast material to ensure the highest quality of the final product. Our primary raw material supplier, who provides 95.8% of our raw material, has given Weldaloy 100% defect-free material for 10 straight years.

- **Dimensional & Tolerance Specifications** | dimension or tolerance specifications are another key component to ensuring the quality of your product. Mistakes in this area could result in a tremendous amount of time to correct, additional costs or even machine down-time as you wait for a replacement part.

Weldaloy's thorough quote and [order review process \[PDF\]](#) ensures that during the manufacturing of all parts that dimensions and tolerances are maintained to the customer specifications.

- **Traceability** | the more stops between raw material and delivery to your door, the more mistakes that could be made.

Weldaloy is [vertically integrated](#) from the receipt of incoming material to shipment of final

product, allowing Weldaloy's stringent quality standards to be maintained throughout the manufacturing process of your product. Each part is individually serialized so it can be traced through every process at Weldaloy and even back to the raw material lot from which it started.

- **Expertise and Experience** | Decades of experience and relevant background can allow any engineering, forging, heat treating, and machining team to foresee problems before they occur. Expertise and experience can make a huge difference when choosing the right material for your application or troubleshooting a problem.

Weldaloy has over 520 years of cumulative experience, from backgrounds in metallurgy, manufacturing, and customer applications, all affecting the end result, including after-sales service. Our management team has 153 years of experience with expertise in quality (continuous improvement), manufacturing, engineering and design. Our forging team has over 119 years of cumulative experience. Our machining team has over 104 years of experience.

Other Key Factors That Affect Our Quality Rating

- Our Quality System is registered to [ISO 9001:2000 \[PDF\]](#)
- Our forging and machining operations both share one location. This results in a closed-loop system between the two operations with the quality of the previous operation affecting the next one. Because our forging specialists work with our heat treat and machinist teams, their level of accountability to each other is much higher than it would be if they worked in separate locations. As a result, Quality is built right in to the company culture.

Continuous Improvement

In addition to the stringent quality checks and balances that occur in plain sight, there are many improvements going on behind the scenes. In the past 2.25 years (9 quarters), continuous improvements have led to a constant decrease in the quarterly cumulative defects* by over 46.5%.

**(Quarterly Cumulative Defects - This is the rolling average of defects that occur in every quarter.)*

Continuous Process Monitoring & Statistical Process Control (SPC)

When changes are suggested and implemented at Weldaloy, we don't simply make the change and hope it works. Weldaloy uses statistical process control (SPC) and continuously monitors process changes to ensure proper results.

Continuous feedback between our Quality and Engineering departments and the resultant testing of processes that occurs results in increased quality, as well.

Since December of 2004, our emphasis has been on process optimization in the forge and heat treat processes which has improved mechanical properties of product and reduced failure rates in product testing for these properties.

Process optimization began with popular alloys such as C18200 and C18150, resulting a reduction of failure rates by over 86.2% when tested..

15-Point Order Review Process

Discrepancies in the ordering process can result in delays, frustrations, and extra costs. Weldaloy alleviates any miscommunications by implementing a [15-point check system \[PDF\]](#) to ensure order accuracy.

Our Quality System accounts for existing part numbers as well as new part numbers through the following actions:

- For all part numbers, we verify that our quote matches your order exactly.
- For new part numbers, we have a complete engineering review process to ensure that process selection and dimensional requirements are met.
- For repeat part numbers, we compare drawings on file with those submitted for new orders and check revision levels.

These are just a few of the steps in the process. [See the whole process.](#)

We have set up this detailed system of strategic checks and verifications at every point in the manufacturing process to ensure that every part conforms to the custom order. This minimizes errors and contributes to our excellent [99.9% Quality record \[PDF\]](#).

When it's all said and done we also provide you with a written Order Acknowledgment that completes the entire process. This allows you to be confident and certain that you are getting what you want.

Material ID

Every part that is manufactured by Weldaloy is serialized to maintain a high level of traceability throughout the manufacturing process. Each of your parts can be traced back, not only to every operation that has occurred at Weldaloy, but also to the raw material lot from which it was taken.

We also keep the material suppliers' chemical analysis of the raw material on file for any future inquiries.

Price and Delivery?

So the next time you ask someone about Price and Delivery, don't forget to take heed of the Quality of the product you are getting. "You get what you pay for" not only applies in every day circumstances, but also in buying copper forgings.

5 Easy Ways to Order from Weldaloy

- **Phone** - 1 (888) 452-8096
- **Fax** - (586) 758-5049
- **Internet** - weldaloy.com
- **Email** - sales@weldaloy.com
- **Mail** - send requests to

Weldaloy Sales Dept | 11551 Stephens Road | Warren, MI 48089

Not ready for a quote yet?

Visit our [Resource Center](#), get valuable [FREE reports](#) or review material property lists for your next project.

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