



Updated CWM Design & Specification Guide Now Available

The Chicago White Metal team worked diligently to update two of its renowned guides, the CWM Capabilities Brochure and the CWM Design & Specification Guide. After months of meetings, revisions and design iterations, the guides were released in 2017 in both electronic and hard copy formats. Here are the details on both of the guides.

The new "Leaner, Faster, Better" General Brochure was released in early Spring 2017 with an expanded list of capabilities and a comprehensive visual introduction of CWM. This guide is a 16-page, full-color comprehensive brochure on Chicago White Metal Casting capabilities in the most widely specified die casting alloys – Aluminum, Magnesium, and Zinc. The brochure describes the die casting process from design assistance through production, post-casting machining, surface finishing, and final product assembly. This detailed overview covers the experience, advanced technologies, and the ISO 9001 and 14001 registered management systems that make CWM the most cost-effective choice for net-shape die cast parts.

The new CWM Design & Specification Guide has an updated look, updated information and images and was released in the beginning of November 2017. This guide is a 16-page reference to the major design and specification steps that drive the cost and performance of components die cast in aluminum, magnesium, and zinc. Several key design and production factors are covered such as material properties, die design & construction, minimizing part porosity, optimizing part heat transfer, dimensioning and tolerancing, flash considerations, and more.





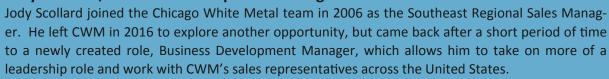
"We used our mission statement and our Cultural Pillars as a foundation and went from there," Marketing Coordinator Roseann Rimocal states, who manages the marketing activities at Chicago White Metal. "There are many die casters in the world, but Chicago White Metal sets the bar on what can be accomplished when bringing our best individual strengths forward to effectively collaborate with business partners to create successful and profitable die casting programs. It makes my job easier to come to work every day and experience an environment that embodies what our cultural pillars and mission statements have to offer."

"New" CWM Team Members

Chicago White Metal is excited to announce "new" team members. We recognize a returning team member as well as a long-tenured team member that is hired directly by the company. Welcome [back]!



Jody Scollard, Business Development Manager





"I am thrilled to be back with Chicago White Metal. For the 10+ years I have been working here, I have developed a passion for combining die cast engineering with sales efforts, and have found CWM promotes a working environment in which effective communication and cohesiveness are top priority. I came back to CWM because the team is like a family, something that is rare and uncommon in the workplace today. There have been great, new developments happening and still yet to come with CWM. I am excited about where the company is headed and look forward to being a part of a bright and promising future for the company. It is great to be back!" Welcome back, Jody!



Giselida Alvarez, Debur Team Leader

Giselida has been a part of the team as a contract employee for 12 years and recently was hired directly by CWM in October as Hand Deburring Team Leader. She loves working at CWM because her co-workers and the company culture creates a working environment that she thrives in. Giselida is an Amway salesperson in her free time, but also enjoys spending time with her parents and her white poodle, Coco. Welcome to the team, Giselida!



It is with great sadness that we announce the recent passing of a long-tenured team member, Jesus Villanueva Santos.

Jesus worked in the CNC department for just over 12 years in maintenance and janitorial services.

"He was a dedicated and reliable member of the team, always willing and able to help others," Vice President of CNC Operations Brian Andrews stated. "Jesus was instrumental to many departmental improvements, contributing greatly to the CNC department and the CWM team as a whole. He cared about people and was respected by everyone, and will be greatly missed by many at the company."

Our deepest condolences go out to his family during this time.



Czeslawa Czachor

Packer A, Packing Department

Czeslawa Czachor was a packer with Chicago White Metal for 23 years. With great knowledge and impeccable accuracy, she took care of the tasks at hand and was known for preparing materials for the next shift and helping wherever needed.

Edwin Lopez, her supervisor, had much to say about her. "Her expertise, positive attitude, and outstanding performance were valuable contributions that Czeslawa brought to CWM. She always provided the best service and was an example of the CWM Cultural Pillars. Everyone has only positive comments to describe her as a co-worker, as an employee, and as a person. She will be greatly missed, but we are happy for her as she embarks on a new chapter in her life in retirement."



We wish Czeslawa all the best!

CNN Quality Starts Training Starts in 2017

In September 2017, Chicago White Metal started a series of training courses for the Quality Assurance (QA) Team to help enhance the quality program that exists at Chicago White Metal. This series spans over the course of six months. The purpose of the courses is to educate the QA team on new measurement practices and cosmetic approval techniques to enhance quality activities as a company.







CWM Gets "Klever" and takes Home a 2017 NADCA Die Casting Award!

Chicago White Metal collaborated with Klever Innovations to "cut" out the competition and take home a win for the Klever Xchange Plus Handle! Both teams were honored with a 2017 North American Die Casting Association (NADCA) Excellence in Design Award, winning the "Magnesium under 0.5 lbs." category.

Klever Innovations is a company that makes safety their top priority and is committed to developing the most innovative safety equipment and utility cutting knives in the industry. Klever manufactures and designs all of their products within the United States, and the safety knives are built to the highest quality and efficiency, helping to reduce costs associated with on-the-job injury claims and employee downtime. They have developed a full line of cutters and safety knives that satisfy different needs in the workplace, utilizing an innovative replacement blade system which protects employees when they are changing out the blades.

Chicago White Metal spent a great deal of time and care ensuring the engineering of this part maintained the Klever reputation. Both engineering teams discussed the challenge, which was how to make as many of the features castable and eliminate additional processes. The previous end product (Klever Xchange) was a multi-part assembly, which was primarily plastic with steel and rubber features. CWM worked closely with the Klever team to create a design that involved consolidating this part into a single magnesium casting for a more cost-effective die cast solution.

NADCA is the die casting industry's association that sets quality standards and checkpoints for die casters throughout North America. The prestigious Award of Excellence is an annual award that is given to the companies involved in the design of a die cast part which shows the highest level of die casting innovation and overall efficiency.

Congratulations to the CWM Engineering Team and Klever for a 2017 Win!









PERSPECTIVES Maria "Cathy" Wajs Sub-Assembly Team Leader

Maria Wajs, better known as "Cathy" by the team, has been with Chicago White Metal for almost 39 years. Cathy's hard work, patience and willingness to learn new skills as well as incorporating new initiatives have provided her the opportunity to not only continue doing what she loves, but also to grow with her position during this long tenure at CWM.



Cathy at 25.

"Back in 1978, I was a 25-year old woman that could not speak a word of English. I had no skills and just flew in from Poland. Chicago White Metal took a chance on me many years ago when I did not think I had a chance in this country. CWM just moved to its Bensenville location around that time, and the sub-assembly was a newly created department. The team trained me as a machinist for a couple years and moved me into assembly shortly thereafter.

The people here at CWM helped me learn the English language so that I could better communicate with my team. I also had no concept of what machining was, or even a die casting. But my co-workers and my managers took the time to show me the ropes.

They were very patient with me, and it helped me in the long run that I was very eager to learn and grow in my position.

My first manager was named Stig, and he was a very intelligent man. He was also kind and patient as I continued to learn more about my position. We were good friends outside of work as well as in the workplace, and he made sure to send an invitation to my family to attend any functions he was having since he lived close to me. CWM became my home away from home because I felt like it was a second family.

Today, I am a Team Leader for the Assembly area. I lead the team on major assembly projects, keep inventory, monitor performance and output, and bring my ideas to meetings. I love what I am doing and I have a lot of gratitude for those who have taught me and those who continue to make CWM a great company. I take great pride in my work and I have a passion for assembling parts. I have personal friends who talk about their jobs constantly, and it reminds me of how lucky I am to be here.

I recommended CWM to several of my family members for work. My daughter, Beata, worked here for about 15 years. My son, Greg, worked in machining and assembly while he was in college for a few years. My brother, Ziggy Martinow, (now retired) previously worked here along with his wife, Halina Martinow. Everyone from my family loved working for CWM. This company supported me through a number of challenges and encourages me every day.



Cathy's daughter, Beata, worked at CWM for 15 years.

I look back and see how far I have come with CWM and I cannot believe I have been here so long. It did not feel like my daughter was working here for 15

years and grew up with this company, as I had when I first came from Poland. I knew nothing about this industry and now my experience has gained the respect and recognition by management. They ask for my ideas and my thoughts. I offer my suggestions, and they listen.

I also see young people starting off in the shipping department who are smart, hard-working, and willing to keep learning and improving. I watch them move up in the company when they work hard and stay committed, just as I did. Bill Baraglia is a great example, he was always so sharp and hard-working. He started in shipping – now he is the Chief Operating Officer.

For any companies looking to work with CWM on die cast projects, we pay close attention to quality and work with their engineering teams to find success in projects. We have several knowledgeable team members working hard towards excellence and striving towards meeting and exceeding your expectations. We take great pride in our ability to innovate and create high quality parts. We are always finding ways to do what we do in better ways.

One thing the world should know about Chicago White Metal is that if you work hard and find the right opportunities, you can go the distance with this company. They help you grow professionally and encourage you to achieve greater things in life. They listen to you and support anything you do, as long as you are dedicated to quality work and commit to this company. Just be a good, honest, hard-working person and you will be rewarded and recognized. I love working at CWM and I hope to work here for many years to come."

Maria Cathy Ways

Sub-Assembly Team Leader

"Cathy is extremely hard-working and knowledgeable about assembly. She is extremely dependable and articulate and handles the more intricate and difficult assemblies. Her input and suggestions on process improvements and effective project development is valuable to this department. She has a creative vision for projects that many cannot see because she is a naturally artistic individual. She creates a number of layouts, keeps track of our assembly component inventory, monitors incoming orders and purchasing activities, and inspects the quality of all components and end assemblies before shipping out. She is an exceptional worker and it is a pleasure working with her. "



Ted Bystryk Manager of Machining & Assembly Operations



CWM Continues to Invest in Advanced Technology and Die Casting Innovations

Chago White Metal is extremely proactive in the research of advanced technology and innovation and their implementation into the die casting process. These efforts are put forth by the company in order to improve and enhance quality, efficiency, measurability, and overall cost swings for existing and future projects. CWM leadership encourages an environment of cultivating innovative ideas where process improvement is concerned, granting members of the team an opportunity to take an active role in examining and suggesting alternatives to either modify or drastically change current techniques. The team is excited to implement these innovations into the workflow in both traditional and more non-traditional ways. Here are some of the planned innovations.



CNC Horizontal Machining Center (October and November 2017)

A new horizontal machining center was added to the CNC Department at the end of October 2017. This machine will be used exclusively for a military transportation project. These machines are equipped with the latest technology in order to increase throughput by optimizing the CNC process, minimizing scrap, and reducing downtime.



Process Automation Robot (November 2017)

An Automation Robot (FANUC) is planned for implementation in November 2017. This work cell is dedicated to an automotive project and will facilitate secondary machining checks, leak test several parts at a time, and tend to CNC machinery. The automation is projected to allow team members to tend other machines and perform critical tasks.



CNC Vertical Machining Center (End of November 2017)

Another vertical machining center has been added to increase capacity for the growing demands. The area is being prepared for the setup at the end of November 2017.



Chillers (anticipated throughout 2018)

Chillers are used to lower the temperature of water in order to increase flow rate and ultimately produce a higher quality casting while enhancing tooling life. CWM tested the effect of chillers on several aluminum die cast machines and documented significant improvements to cycle time. There are plans to purchase more chillers in 2018.



Spray Manifolds (anticipated throughout 2018)

Spray manifolds are custom-designed for various die cast projects to help target/regulate spray patterns to specific areas of a die cast die. CWM has experienced significant quality improvement where spray manifolds have been implemented along with extending tool life. Chicago White Metal currently has 6-7 manifolds in place and plans to potentially install 12 more in 2018.



Collaborative Robots (February 2018)

Collaborative robots work safely alongside humans. The robots themselves have sensors that detect when someone is near or approaching the robot while gradually triggering the "slow down" and "stoppage" of the machine. A robot is set to be implemented in the CNC Department starting the end of January 2018. This new robot is currently planned for machining medical housing components, but has the flexibility to be used in other operations, such as hand cleaning, packing, and other tasks.



New Idra Die Casting Machine (2019)

A new Idra Die Casting machine is set to be installed and implemented into the aluminum department. Extensive planning is currently taking place that will entail the design of a die cast cell. "Full" implementation is planned for 2019. This new die casting machine will have an 1,100-ton capacity, and have the flexibility to accommodate substantially larger applications and potentially other die cast alloys.

HEALTH FAIR 2017

Chicago White Metal holds its Annual Health Fair in the Main Lunchroom! CWM Team members were given the opportunity to enjoy the "Open Bar" option from Maui Wowi Smoothies while taking advantage of flu shots, massages, blood pressure checks, health advice, and the ability to ask several suppliers questions on a number of benefits Chicago White Metal offers – all at no cost to the team.

CWM emphasizes the importance of selfhealth and encourages each individual to take the initiative to start leading a healthy lifestyle.













Hurricane Harvey Relief: Team Collects, CWM Charitable Foundation Doubles

In recent news, several areas in the South were hit hard by hurricanes. Houston, Texas, the fourth most populous city in the United States, was in a national state of emergency when Hurricane Harvey hit and knocked out power, flooded miles of property, and displaced countless families from their homes.

A collection started amongst the Chicago White Metal team members to donate to the Houston Food Bank, which is an organization dedicating all of its resources to those affected by Hurricane Harvey. In the matter of 7 days, the



CWM team collected a total of \$1,472. Once upper management caught wind of the collection, there was swift action without hesitation by the CWM Charitable Foundation to match <u>and double</u> the amount that was collected, which came out to a total of \$2,944. The combined total donated was \$4,416.

The CWM Charitable Foundation is a non-profit donative fund that was established in the 1960's as a way for Chicago White Metal to contribute to the betterment of the community, both within the company and the outside world.



In honor of National Sandwich Day on November 3rd, 2017, Production Manager Jim Reitenbach and NPI Manager Tom Mrock designed, handmade, and treated some of the Chicago White Metal team members with the now-famous "Jim & Tom Sandwich Special." This marks the first Jim & Tom Annual Sandwich Day Celebration.



NPI Manager Tom Mrock (right) pictured with the founder of A-dec, Ken Austin (left), at the A-dec annual picnic in Newberg, Oregon.

Chicago White Metal Team Members Support Morton-Arboretum in 5K

Lisle, IL: It was a surprisingly warm Sunday morning on October 8th, 2017, as thousands of people eagerly lined up at the starting line for the Fall Color 5K at the Morton Arboretum. This race is an annual run that raises funds towards fulfilling the Arboretum's mission to proactively conserve and plant trees (and many other plants) throughout the world. Two enthusiastic team members, CNC Engineer Mike Vrtis and Marketing Coordina-



Mike Vrtis and his wife are all smiles at the Arboretum's Pumpkin Patch display after the race.

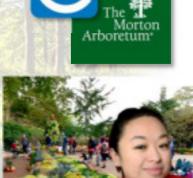
tor Roseann Rimocal, volunteered to join over 2,000 people in this spectacular event.

Mike Vrtis participated in the run, commenting on the difficulty of the course. "There were a number of hills and my pace went a bit slower than usual, but it was overall a great race for my wife and me."

Roseann Rimocal took part in the walk, a deviation from her normal activities.

"It was a challenging course that had many turns and elevations," Roseann stated. "With a back injury that knocked me out of the rest of the kayaking season, I had to find other ways to stay active. Running and walking are typically not my thing, but I could not pass up the opportunity to stroll through the scenic grounds and support an amazing cause."

Chicago White Metal is a corporate partner to the Morton Arboretum, which boasts a 1,700-acre public garden and outdoor museum that is available to the general public. Also on the grounds is a library, herbarium, and a robust program in tree research and development programs, offering college courses and other educational programs to raise awareness for tree and plant cultivation and environmental care.

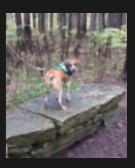


Roseann Rimocal captures the gorgeous foliage of the Arboretum while on a leisurely walk after the Fall Color 5K.









Customer Care & Fulfillment Manager Bill Erbacci took his dog Christy (pictured) for a scenic stroll at the Arboretum's "Tails on Trails" Day.

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