



“Once we get adhesion to the base material, it’s there to stay unless you need us to remove it.”

What’s a typical day like for you at Iosso?

I oversee the production of different departments. We have two departments: One is a production department for larger volume orders, and the other is a hands-on mold and precision department where intricate parts require special handling or where custom work is performed. They can be larger parts like cavities and cores, or smaller intricate components that require special handling, such as plating inside diameters or masking of certain areas where tolerances will not allow any additional dimension change. Throughout the day, I am usually quoting new jobs, answering calls from customers, and scheduling and overseeing the jobs that are in-house being processed. I also oversee the quality control department and chemistry operations.

What does Iosso bring to gear manufacturing?

The unique thing about the Iosso-FE process is that it gives longer wear to the part. We can achieve a Rockwell hardness depending on the base material — anywhere from 72 up to 76 on the C Scale for hardness range. We get one-10th of a millionth of penetration into the base material, which creates a new strong hard surface. For gears, in particular, we extend the life of the part by giving them increased hardness for longer part life, reducing friction, and providing corrosion protection. We have 50 years’ experience in this field and can help consult and design our process into various customers unique applications. We are ISO 9001:2015 certified. Our plating process is RoHS compliant and conforms to the requirements of TPCP (Toxics in Packaging Clearinghouse) — all tests provided by an independent laboratory.

What makes Iosso’s coating treatment unique to the gear industry?

We have very sophisticated controls as far as density control, not building up on leading edges. We have such tight controls that we will not build up on these sharp edges. That’s where we differ from other types of platers: very tight controls, no peeling, no flaking, no galling. Once we adhere to the base material, it’s there to stay, unless you need us to remove it. No further operations are needed because we control the tolerance within 0.00005” to meet our customer’s specification. The process is also heat resistant, non-magnetic, static free, and crack free.

What other areas of the industry would Iosso be uniquely suited for?

Other than the gear industry, we do all types of packaging equipment components, mold components, everything from mold-base plates, cores, cavities, core pins, ejector pins, ejector sleeves. There is a wide range of industries we service such as fluid-metering components, medical parts, pipe-cutting equipment, and lock components.

How do you approach a customer when they come to you with a

coating challenge?

Our process normally begins with a development order where we would record all process-control information. We would keep all the information on that particular part. It could include pictures, prints, tolerance requirements, and any other information that we get from the customer. Confidentiality agreements, if they’re needed, are signed and submitted back to the customer. We record all the details. Of course, time is money, and in some instances, we may do two or three runs for thickness variations. And we’ll assign a control number to these. The customer can come back and say, “We prefer this particular control number over the other two. So, could you give us a cost on that and what would be involved?” Then we would go from there.

Development order processing is done with our own tooling, and they are usually done in what I referred to earlier as the mold-and-precision department. These would be component parts, maybe five, 10, or 15 pieces, not much larger than that. We process enough parts for the customer to test. Once we establish what is working for the customer, we would quote tooling cost in order to process the largest quantity of parts efficiently for cost effectiveness.

Where do you see the gear industry in the next 10 to 20 years and Iosso’s place in that future?

We process a lot of gears through our facility and are always looking for more business from gear manufacturers that may need us but are not familiar with our unique plating process, which, as I said earlier, is RoHS compliant.

Gear manufacturing will continue to grow. There are so many components that require some type of gear for functionality. We process many gears in our facility, whether it is for hardness or reduced friction and always for the added corrosion protection we deliver to our customers.

What I also see growing is our position on processing zinc die-cast gears. Iosso Metal Processes has a patented plating process engineered and developed by the founder and owner (Richard Iosso) of our great company. We can take a zinc die-cast gear or any component cast from zinc and make it file-hard for wear. This is a highly sought-after process for manufacturers who need the die-cast gear to pass long-term cycle testing for component longevity (part life). We can and do prevail in the hardening of all zinc components. When the volumes are high, zinc die casting of gears can make a huge impact in one’s budget. There are huge cost savings with high-volume die-casting compared to many machining operations that might be needed to produce a gear. 🧰