



CHARTER STEEL

GETTING THE LEAD OUT

Delivering a More Environmentally Safe Product for an Outdoor Recreation Business Partner

CHALLENGE

An outdoor recreation business partner was looking to make their product safer while improving their supply chain and delivery time. Using leaded steel requires specific PPE, segregation of the scrap, and specialized handling of the scrap to dispose of it.

RESULT

By creating a custom, non-leaded, domestic steel, we streamlined the supply chain to reduce delivery and production times. Working with Charter comes with the added benefits of on-site troubleshooting and direct communication between our technical and operations team members. The customer also saw lower internal costs and a reduction in the total cost of the product.

SOLUTION

Our Charter team crafted and trialed a unique, custom chemistry and leveraged a specific electromagnetic stirring process to optimize segregation of alloying elements (which results in a more machinable coil). Additionally, we performed several product trials featuring different annealing, coating and processing paths. We then worked with the customer on the plant floor, taking multiple trips to their facility, to better understand their machining and performance of the trial materials. This helped optimize the steel chemistry for peak performance.

After months of close partnership and collaboration with the customer, our team created a custom steel



that offered the strength and flexibility needed for both machining and forming, all while replacing a leaded steel.

Our customer was able to shorten their supply chain and lower production costs, while we furthered a long-term commitment to utilizing safer and more sustainable materials and processes.

Ultimately, we went above and beyond our customer's expectations to create a unique solution that met their needs. This development led to a supplier of the year award as well as technical achievement of the year, in recognition of our partnership and hard work.