



Carbide extends life of Ever Extruder Screws



Screws used within an extruder at a pet food manufacturing facility can experience extremely harsh conditions. Wear is inevitable, and raw ingredients, processing steps, and preconditioning, as well as the aspects of acidic/corrosive ingredients being used, can all have a factor in how fast the screws deteriorate. The most extreme areas of wear are typically located towards the discharge of the extruder, where the mechanical and steam energy within the extruder contributes to the “cook” of the product. Heat, abrasive conditions, and pressure are all apparent inside the extruder barrels and around the

working screws. Generally, when the flight diameter of the screws starts to wear and the working edge of the screw push face is lost, the efficiency of the extrusion process is affected. It becomes more difficult to achieve the required product “cook”, as well as the desired rate from the system. Well-trained operators have to start making changes in the system to compensate, which can result in more energy consumption and costly production downtime, to the point of having to rebuild the equipment.



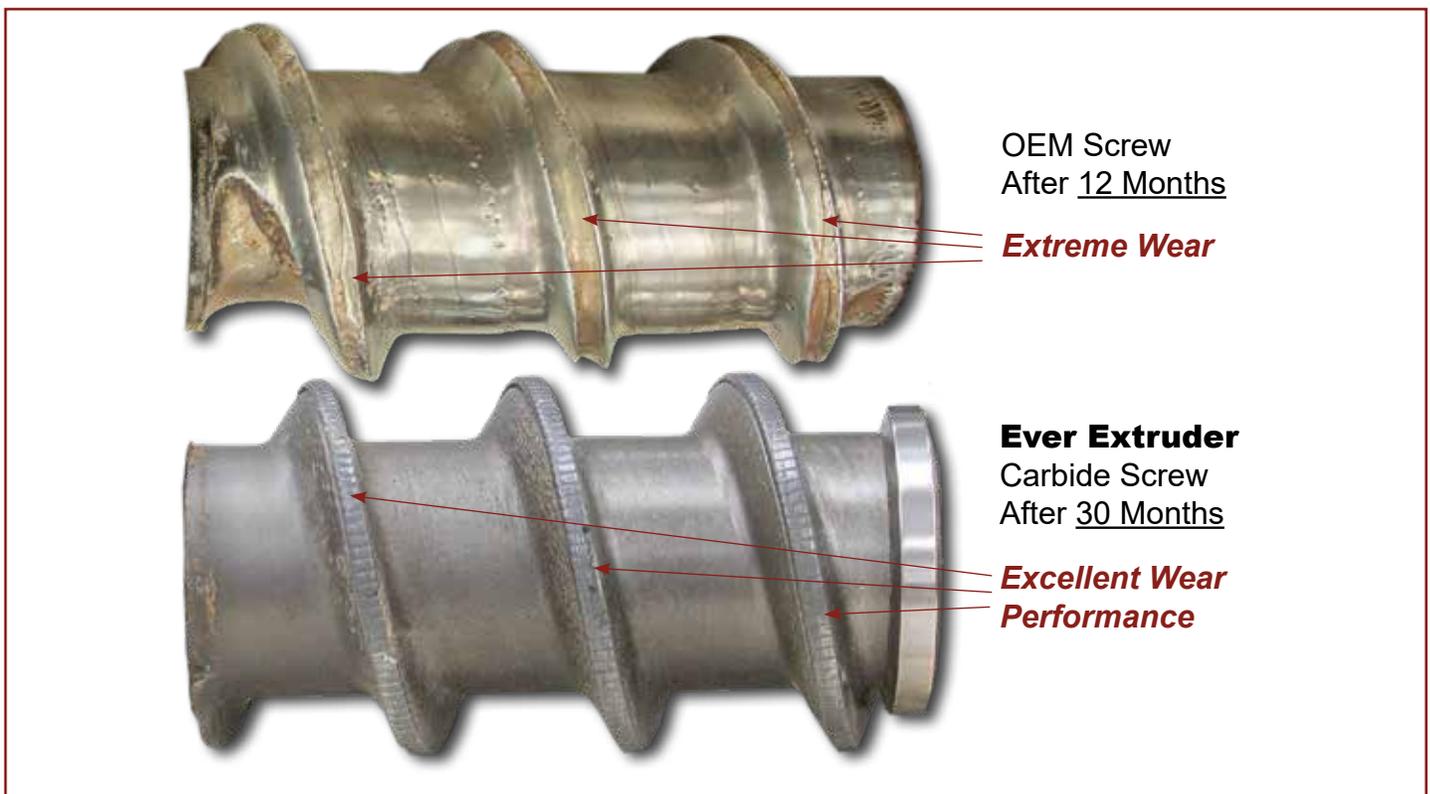
Ever Extruder has been applying Tungsten Carbide in many industrial applications for more than 50 years, and has been exponentially extending the life of extruder screws for more than 20 years. Our customers are able to run their systems for a much longer period of time, and depend on a system that will provide consistent performance and reliability to their products.



Ever Extruder engineers and manufactures extruder equipment, specializing in high-performance aftermarket upgrades and complete single screw extruder systems. With more than 20 years of experience, our engineers utilize state-of-the-art technology to improve extruder room operations, production, profitability, and sanitation in the pet food and aqua feed industries.

Ever Extruder Carbide Screw Case Study

A major pet food manufacturer was consistently rebuilding its equipment with a mini rebuild cycle (first three screws) at approximately 6 months, and a full rebuild at one year of service. Ever Extruder installed our Carbide-protected screws. For the first rebuild cycle after the installation, a mini rebuild was done after 2.5 years of service. After another 24 months of service, a sizeable piece of metal passed through the extruder, and broke the screw behind the Cone Screw. The plant had another screw on-hand from an Ever Extruder competitor – one without Carbide protection – so it was installed in place of the screw behind the Cone Screw. The system ran for another 12 months, until it was time to replace the shaft and rebuild the bearing housing, putting the full rebuild cycle at 66 months. Upon inspection, ***the Carbide screws that had ran for 36 months were obviously performing and wearing better than the one without Carbide that had ran for one-third of the time.***



Features and Benefits:

- F:** Tungsten Carbide is one of the most abrasion-resistant materials available.
- B:** Less downtime, lower operating costs, fewer operator adjustments
- B:** Longer part life, more consistent product, increased production, improved efficiency
- F:** CNC machining and silver solder induction brazing at Ever Extruder facility
- B:** Higher quality standard of the body of the screw
- B:** Provides an accurate and repeatable manufacturing process

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