Less stress with 17-4 SELECT™

A **breakthrough solution** to a 60-year problem

17-4 Select is a new controlled residual stress feedstock product for high-volume precision machining. Engineered through a proprietary process that controls residual stress without compromising mechanical performance, 17-4 Select sets a new standard for dimensional stability and machining confidence.

PREDICTABLE MACHINING

Less movement during CNC enables better size control, fewer rejects, safer handling, and consistent quality.

EXTENDED TOOL LIFE

Controlled stress reduces the load on tools for lower consumable costs, less downtime, and higher throughput.

BETTER YIELDS, LOWER COST

More stable machining means less scrap, fewer surprises, operational efficiencies, lower cost per part, and end-to-end supply chain reliability.

MEDICAL

IMPROVE YIELDS. LOWER PATIENT RISK. REDUCE NON-CONFORMANCE.

Precision under pressure

Controlled Residual Stress means predictable machining
Robotic surgical systems and minimally invasive surgeries require high-quality, intricate medical device parts. The ability to work within limited spaces, provide clear visualization, maneuver effectively, and minimize trauma to the patient's body all depend on the precision of these components.

Conventionally produced stainless steel bar products contain large levels of randomly distributed residual stresses that lead to bending and warping of the work piece during machining, resulting in dimensional instability concerns. Machining of conventionally produced feedstock into today's designs of intricate, small-cross sectional products also results in a significant amount of material waste—up to 40% scrap. Dimensional stability and component reliability are paramount in ensuring component quality and ultimately, minimizing risk to the patient.

> Controlling stress enhances the reliability throughput in the supply chain—**ensuring parts are less likely to distort, fail during manufacturing or even fall out of compliance later.** Contract manufacturers and OEMs get improved precision, better performance and consistent machinability.
>
> **—Ray DeFrain**
> Global Manager of Regional Metallurgy & Medical SME at Carpenter Technology

Stress less with the industry's best

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