



Super**Systems**  
incorporated



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# Press Release

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## Callies Engine Components Now Nitriding with Super Systems Inc.



Callies Precision Engine Components of Fostoria, OH has installed an automated nitriding process control system from Super Systems Inc (SSi). Callies, a leading supplier to the high performance engine market for 28 years, is always looking at opportunities to invest in technologies that improve quality, reduce cost and collapse delivery time to the customer - and the SSI Nitriding system was a perfect fit. "Our goal has been to outfit all equipment with the latest technological controls to assure complete accountability with our in-house operations. This was the main reason we teamed up with Super Systems."

The engineered control system from SSI provides Callies with the ability to perform tight nitriding process control using an easy-to-use recipe system that maintains tight tolerances on temperature(s), gas flows and nitriding potential. The relatively shallow nitride case delivers a tremendous improvement to fatigue life of every Callies crankshaft. The extremely hard nitrided surface also gives the crankshaft excellent wear resistance. The SSI control system provides the latest in sensor and flow technology for measuring the nitriding atmosphere and an operator-friendly interface to provide complete traceability to the process and load data.

The SSI control panel was retrofitted on an existing a Lindberg pit furnace previously used for nitriding. Delivering proper surface and case properties requires in-situ control of the nitriding potential (Kn) and control of the ammonia, dissociated ammonia and nitrogen gases. The system delivered by SSI also included the control of the Dissociated Ammonia (DA) generator. The controls for the DA generator provided gas flow monitoring and temperature control to ensure the ammonia is fully cracked prior to being used as process gas in the furnace.

Callies takes their heat treating seriously as illustrated by their investment in SSI which is just part of the million dollar plus investment in the department. Carefully controlled heat treating can be found throughout their manufacturing process which includes induction, neutral hardening, and carburizing.

For more information on SSI's capabilities, visit SSI's website at <http://www.supersystems.com>.

For more information on Callies Performance Products, visit <http://www.callies.com>

**for immediate release**