

News Release



For Immediate Release

March 31, 2009

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Solar Manufacturing Awarded Order For R&D Vacuum Carburizing Furnace

Solar Manufacturing has received an order for a top loading Model VTC-714 R&D furnace for the process development of low pressure vacuum carburizing (LPVC) of new alloys for aircraft gearing. The customer is a large manufacturer located in the mid-Atlantic US in the aircraft industry. The furnace will be shipped in the second quarter of 2009.

Pete Reh, Vice President of Sales for Solar Manufacturing stated, "The customer and the Solar Development Team have been collaborating for nearly 3 years to develop the process for LPVC. The furnace will help prove out LPVC to optimize the vacuum carburizing process with positive pressure gas quenching as opposed to atmospheric carburizing with oil quenching."

The development team was headed by Don Jordan, Vice President and Corporate Metallurgist, with the assistance of Trevor Jones, Research Engineer, both of Solar Atmospheres, Inc., the parent company of Solar Manufacturing, Inc. The carburizing process will be designed around US Patent Application no. 11/235,739, filed September 26, 2005 using a mixture of hydrogen and acetylene as the carburizing gas.

To achieve consistent results, Solar Manufacturing's state-of-the-art, interactive control system, the SolarVac 3000, will perform monitoring and controlling during the LPVC process. The controls will consist of a Honeywell UDC2500; an Allen-

Bradley Micrologix 1500 PLC for all aspects of temperature and process control; multiple Porter Instrument absolute gas flow controllers; a MKS absolute vacuum gauge; and a Eurotherm Graphic Display video recorder for data acquisition.

The new, top loading furnace will feature a high efficiency, graphite insulated hot zone for operation up to 2650°F. Ultimate vacuum capability will be 10⁻⁵ Torr, and a high pressure radial fan will re-circulate nitrogen gas at two atmospheres (2 bar). The 10 HP quench motor will be controlled by an Allen-Bradley variable speed drive for optimum gas quenching.

Solar Manufacturing is part of Solar Atmospheres, Inc., one of the largest and most progressive, independent commercial heat treaters in the USA. To learn more about Solar Manufacturing's diverse product line of vacuum heat treating, brazing, and carburizing furnaces, contact Peter Reh, Vice President of Sales, at 267-384-5040 x 509 or pkp@solarmfg.com.

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