Synchronous Thermal Instability Evaluation of Medium Speed Turbocharger Rotor-Bearing Systems

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Thesis submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree

> Master of Science in Mechanical Engineering

R. Gordon Kirk, Chair Mary E. Kasarda Alan A. Kornhauser

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Keywords: Turbocharger, Rotordynamics, Morton Effect

From: "W. J. Chen" <dyrobes@apex.net>

Subject: Re: Request for permission to publish DyRoBeS output files

Date: May 31, 2012 10:37:08 AM EDT

To: Brian Carroll <carrobr@vt.edu>, support@dyrobes.com

Reply-To: "W. J. Chen" < dyrobes@apex.net>

feel free to use that. no problem at all.

----Original Message-----

From: Brian Carroll <carrobr@vt.edu> Sent: May 27, 2012 7:57 AM

To: support@dyrobes.com, dyrobes@apex.net

Subject: Request for permission to publish DyRoBeS output files

Dr. Chen,

I am writing to request permission to include a Lateral Vibration Model Summary and various plots produced by DyRoBeS in my Master's Thesis.

I have been working with Dr. Gordon Kirk at Virginia Tech to examine the influence of bearing geometry and bearing loads on the Morton Effect. I used DyRoBeS to model a turbocharger rotor-bearing system and would like to include 2D bearing pressure profiles, lateral stability maps, and a lateral model summary in my Thesis to support the thermal stability analysis I completed.

Thank you, Brian Carroll 540-552-1054 (h) 860-857-4250 (m) carrobr@vt.edu