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Use of Laser Tracker System for Machine Metrology Application at Boeing Wichita

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Title: Use of Laser Tracker System for Machine Metrology Application at Boeing Wichita

This presentation will cover past and current use of laser tracker systems at the Wichita division of the Boeing Company to perform NC machine diagnostics, build and repair. Laser tracker systems have been used for a variety of applications throughout the Wichita facility including tool build and routining, product assembly; reverse engineering, hardware variability control and general inspection. Three laser tracker systems have been used for machine metrology in Wichita including the Leica laser tracker, SMX (Faro) laser tracker and most currently the new API laser tracker.

This presentation will describe the benefits of using a laser tracker system and describe some of the error mapping and machine build applications on which laser tracker systems have been used. These include measurements on NC milling machines, robots, universal holding fixtures and rotary tables. A description of the equipment and system accuracies will be provided. It is expected that the use of laser tracker systems in Wichita will continue to increase as features such as improved portability; absolute distance measurement and integrated probing are provided for the systems.