

LabView Mlink-II Test Machine

July 22, 2008

Issues / Problems / Challenges

- 1) Motion System in previous test rig is crude, uses pulse/direction output to servos.
- 2) Needs improved integration motion/LabVIEW
- 3) Simple point to point positioning by LabVIEW
- 4) Three Axis of Motion controlled by PC
- 5) Existing design uses Parker/Compumotor Servos

Solution

Controller: Customer's Industrial PC
Controller Software: Vista and LabVIEW 8.5
Interface: MECHATROLINK II
Servo: Sigma-5 SGD V (3 axis)
Power Level: 200 W up to 1.5 kW
Voltage Level: 200 VAC 3 Ph.

Performance Achieved:

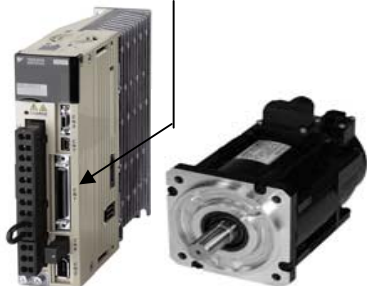
Throughput: System speed was tripled
Accuracy: Increased due to 20 bit encoder
Auxiliary Functions: ABS encoder less limits switches & faster startup & recover from power loss.
 Fast setup due to TuneLess Auto Tuning

Customer Information

Industry: Test and Measurement
Application: Flow Measurement



MECHATROLINK II
 BY NT110 PCI
 (3 Axis)



Application Description:

A Global Manufacturer of Air Flow Meters needed to update its testing procedures to for quality assurance of its products. Their standard software in Test Lab is LabVIEW. In fact it is the gobal standard for all of their factories around the world. Their goal is to use LabVIEW on a PC to control both the test and measuremnt needs but also any motion control required. Yaskawa's local distributor worked with the Mfr. to replace the existing pusle input servos from Parker and replace them with Yaskawa servos that were used in a new light aluminum frame design for the new test setup. The whole system was operational in a short time. Simply adding NT110 card to PC, downloading NI Driver from Yaskawa's website and connecting servos over MECHATRONLINK II network.

Differentiating Solution Features

- 20bit encoder, 1600Hz bandwidth, advanced and intelligent filter and load modeling.
- LabVIEW driver made it easy
- Globally supported products
- Global support for N.A., Europe. and Asian facilities

Resulting Solution Benefits

- Easy to Use integrated solution
- Digital interface for control and data collection
- EZ to meet Motion Control requirements
- Stock components that are available multi region
- Future plans to build same test rig in 3 overseas plants, so they can benefit from higher performance and data diagnostics.