

# Training for Active Magnetic Bearing Systems

Waukesha Magnetic Bearings® provides classroom and hands-on training to support OEM and end user ownership of active magnetic bearing (AMB) commissioning and maintenance. Training courses are customized to meet specific application needs and are conducted by magnetic bearing experts.

- Comprehensive training binders for each delegate, including software tools where appropriate
- · Supporting examinations
- Option for training material and exams in a language other than English
- Option for simultaneous training translation from English
- · Certificates of competence
- Recertification courses available
- Machine conversion courses available
- Minimum qualification and experience requirements apply for course attendees (details on application)

# TRAINING FOR OEMS TO TAKE ON COMMISSIONING RESPONSIBILITIES

- Typically 15 to 20 days formal classroom training at Waukesha or OEM site
- Followed by hands-on training at OEM site
- Allows OEM commissioning staff to:
  - Perform OEM commissioning with remote support from Waukesha
  - Perform end-user commissioning with remote support from Waukesha
  - Perform end-user commissioning independently (long term)

# TRAINING FOR FAULT FINDING / TARGETED MAINTENANCE ACTIVITIES

- Typically five to 10 days at Waukesha, OEM or end-user site
- Allows frontline maintenance staff to:
  - Perform sophisticated fault finding with remote support from Waukesha
  - Perform specified advanced maintenance with remote support from Waukesha
- Courses customized to meet application-specific needs

#### TRAINING FOR OPERATORS

- Typically one day at end-user site
- Conducted by commissioning engineer
- Often integrated into OEM training package
- Covers:
  - AMB basic principles
  - Basic operation, including safety
  - Routine maintenance requirements

# TRAINING FOR FRONTLINE END USER MAINTENANCE STAFF

- Typically one day, including examination, at end-user site
- Conducted by commissioning engineer
- Covers basic use of controller display (read-only login)
- Allows access to:
  - Event log
  - Alarm status





#### **AVAILABLE TRAINING MODULES**

M001 Chinook Single Bay Cabinet

M002 Chinook Dual Bay Cabinet

M004 Advanced Bearing Control Unit 3 (BCU3)

M005 Zephyr Controller

M006 Advanced Zephyr

M007 Inductive Sensors

M008 Magnetic Displacement Sensors

M009 BCU3 Measurements

M010 AMB Hardware Overview

M011 AMB Hardware - Machine Specific

M012 Advanced Elephanta

M013 Elephanta Cabinet

M014 Basic BCU3 Displays with Login

M015 Zephyr Sensors

M016 Zephyr Measurements, Part 1

M017 Zephyr Measurements, Part 2

M018 AMB Hardware - Machine Specific Overview

M019 Magnetic Displacement Sensor Diagnostic Procedure

M020 Magnet Diagnostic Procedure



## **SAMPLE OEM COURSES**



### Zephyr® Controller

- (M005) Zephyr Controller
- (M006) Advanced Zephyr
- (M015) Zephyr Sensors
- (M016) Zephyr Measurements
- (M010) AMB Hardware Overview
- (M011-xxx) AMB Hardware Machine Specific



### Chinook® Controller

- (M002) Chinook Dual Bay Cabinet
- (M004) Advanced BCU3
- (M007) Inductive Sensors
- (M009) BCU3 Measurements
- (M010) AMB Hardware Overview
- (M011-xxx) AMB Hardware Machine Specific



### Elephanta® Controller

- (M013) Elephanta Cabinet
- (M004) Advanced BCU3
- (M012) Advanced Elephanta
- (M008) Magnetic Displacement Sensors
- (M009) BCU3 Measurements
- (M010) AMB Hardware Overview
- (M011-xxx) AMB Hardware Machine Specific