

Turbine Electric Hub eLearning| Operation & Troubleshooting Training

Pitch Control System - WX20013-BA02AEN-E1

Objective 1: Describe the Functions of the Components of a Wind Turbine Electric Servo Pitch System

Wind Turbine Electric Servo Pitch System Components

Servomotors

Temperature Sensor and Brake Are Internal Components

The typical comp pitch system inc

✓ Pitch Control
Servomotor
Emergency
Limit Switches

Pinion Gear

Gearbox

Connection to/from PCU

Blower Motor

Absolute Encoder

Each servomotor adjusts the pitch of one turbine blade by rotating a large ring gear through a gearbox and a pinion gear.

The servomotors typically feature a multi-turn absolute encoder that provides motor position feedback, a brake to hold the turbine blade in place, a dedicated blower for motor cooling, and a motor temperature sensor.

Limit Switches

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eLearning Course: M20013

Turbine Electric Hub eLearning teaches the unique operation and maintenance challenges of a utility scale electric hub. Learners acquire knowledge of adaptive skills for wind turbine operation, adjustment of electric hubs, and troubleshooting in a wide variety of situations. Provides overview of component, sub-system, and system level skills needed for hub operation in a wide variety of situations where the hub is key, especially in changing load conditions. Covers hub power and safety, pitch control, servo pitch operation, emergency feather, battery types, banks, operation and capacity, power voltage verification, blade troubleshooting.

Teach Wind Turbine Operation

Troubleshooting

With this course, users can learn wind turbine hub and system troubleshooting. Topics covered include how to respond to warning messages and fault messages and various tests that can be performed to diagnose the problem. With the addition of the Turbine Electric Hub Troubleshooting Learning System (950-TEH1), students can practice these skills on real industry components.

Interactive eLearning

Turbine Electric Hub eLearning Features Engaging Multimedia

Amatrol's extensive, thorough [multimedia](#) covers green energy basics such as turbine electric hub troubleshooting. Interactive screens paired with instructive graphics teach turbine electric hub topics from hub operation to battery power. With the optional hardware, learners can then apply this theoretical knowledge to immediate hands-on skills. For example, learners study the functions of a servo pitch operation and then manually test a wind turbine electric servo pitch system for applied practice. This combination of theory and practice ingrains concepts in a learner's mind and makes more advanced topics easier to comprehend. (References [950-TEH1](#))

Additional Info

Requires:

- Computer ([see Computer Requirements](#))

Options:

- Turbine Electric Hub Troubleshooting Learning System ([950-TEH1](#))

Address

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