

ATPD-1310: TECHNICAL MEASUREMENTS, HAND & POWER TOOL USE IN PILE DRIVING

Cuyahoga Community College

Viewing: ATPD-1310 : Technical Measurements, Hand & Power Tool Use in Pile Driving

Board of Trustees:

2006-05-25

Academic Term:

Spring 2019

Subject Code

ATPD - Applied Ind Tech-Pile Driving

Course Number:

1310

Title:

Technical Measurements, Hand & Power Tool Use in Pile Driving

Catalog Description:

Introduction of safe use of pile driving tools. Topics include measurements, tool groups and tool applications.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

ATCT-1301 Introduction to Carpentry, and departmental approval: admission to Carpenter apprentice program.

Outcomes

Course Outcome(s):

Demonstrate correct and safe use of measuring tools, hand and power tools, and apply math concepts as necessary.

Methods of Evaluation:

1. Quizzes
2. Exams
3. Classroom participation
4. Demonstration of assigned projects.

Course Content Outline:

1. Concepts
 - a. Causes of accidents.
 - b. Unsafe conditions and acts.
 - c. Tool requirements for specific jobs.
 - d. Correct tool usage
 - i. Layout-measuring marking tools
 - ii. Cutting-shaping-shaving tools
 - iii. Driving-staking-chopping tools
 - iv. Fastening-joining tools
 - v. Boring-auguring tools

- vi. Claspings-prying-separating tools
- vii. Contractor supplied tools.
- e. Types of electrical and air tools
 - i. Basic power tools
 - ii. Pneumatic tools
 - iii. Power-actuated tools
- f. Types of engine-driven tools
 - i. 2-cycle gasoline chain saw
 - ii. 2-cycle gasoline multi-purpose saw
 - iii. Road-portable diesel air compressor.
- g. Types of pneumatic tools
 - i. In-line air accessories
 - ii. Rivet buster
 - iii. Chipping gun
 - iv. Pneumatic rotary sinker drill
 - v. Pneumatic impact wrench
 - vi. Pneumatic high
 - vii. RPM multi-vane drill motor
- h. Applied Math Concepts
 - i. Measurements
 - ii. Conversions
 - iii. Formulas
 - iv. Calculations
- 2. Skills
 - a. Computed and direct measurements.
 - b. Compute percents and percentages for interest and discounts.
 - c. Compute fractions and decimals.
 - d. Group hand tools using care in selection.
 - e. Oxyacetylene group.
- 3. Issues
 - a. Pre-job planning

Resources

United Brotherhood of Carpenters. *Mathematics and Workbooks*. Second ed. California: United Brotherhood of Carpenters, 2001.

Northern California Pile Drivers. *Pile Driving Technologies*. Second ed. Northern CA: Northern California Pile Drivers, 1990.

Northern California Pile Drivers. *Construction Mathematics for Pile Drivers Bridge Builders*. Fifth ed. California: Northern California Pile Drivers, 1992.

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