

ATMW-2120: SHAFT ALIGNMENT

Cuyahoga Community College

Viewing: ATMW-2120 : Shaft Alignment

Board of Trustees:

2007-05-24

Academic Term:

Spring 2019

Subject Code

ATMW - Appld Ind Tech - Millwrighting

Course Number:

2120

Title:

Shaft Alignment

Catalog Description:

In-depth study of concepts related to shaft alignment. Topics include rim and face alignment procedures, indicator set up and use, soft foot identification and elimination, correction methods, mathematical alignment concepts, and coupling installation and application.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

Acceptance to any Applied Industrial Technology program, and ATCT-1301 Introduction to Carpentry; or departmental approval.

Outcomes

Course Outcome(s):

Work effectively and efficiently on a job site where shaft alignment occurs:

Objective(s):

1. Use appropriate terminology to explain the rim and face alignment process.
2. Apply various procedures involving indicator set up and use.
3. Identify soft foot conditions and make corrections in accordance with accepted tolerances.
4. Calculate required alignment specifications by applying mathematical concepts.
5. Identify coupling types, explain their respective uses, and apply knowledge by successfully aligning adjacent shafts.

Methods of Evaluation:

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

Course Content Outline:

A. Concepts

1. Indicator setup
2. Identification and elimination
3. Soft foot conditions
4. Accepted tolerances

5.Alignment specifications and concepts

6.Adjacent shafts

7.Mounting devices

8.Readings

9.Coupling

10.Magnetics

11.Chain mounts

12.Starrett mounting kit

13.Validity rule

14.Correction methods

15.Ratio and proportion

16.Algebraic application

B.Skills

1.Setting up indicator via various procedures

2.Identifying and correcting soft foot conditions in accordance with accepted tolerances

3.Calculating required alignment specifications

4.Aligning adjacent shafts

5.Using mounting devices

6.Interpreting readings

7.Following proper coupling procedures

8.Using magnetics

9.Using chain mounts

10.Using starrett mounting kit

11.Using mathematical alignment concepts

C.Issues

1.Safety

2.Inability to identify problem

3.Applying concepts

4.Troubleshooting

5.Professional demeanor to promote credibility of the trade

6.Communication skills to promote effective interpersonal skills

Resources

Basaraba, Bruce. *Industrial Trades Training Manual*. Alberta: IPT Publishing, 1986.

Piotrowski, John. *Shaft Alignment Handbook*. New York: Marcel Dekker Publishing, 1995.

United Brotherhood of Carpenters. *Instructional Materials for the Millwright*. Washington: United Brotherhood of Carpenters, 1976.

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