



Work Execution

WE204

Root Cause Bearing Damage Analysis

Recommended for

Service, maintenance, machine repair, or plant/facility engineering staff of an industrial plant, OEM facility, institution, public utility or commercial building which uses rolling bearings and related equipment. Managers and technicians at industrial plants and OEM facilities responsible for rolling bearing performance and reliability. Rotating equipment engineers, reliability engineers, millwrights, mechanics, and maintenance supervisors. Those interested in rolling bearing and rotating equipment performance.

Course objective

To provide background and methodology for analyzing failed and damaged bearings (due to noise, heat, vibration, etc.) and their components. Students will learn to uncover the true root causes of bearing damage and failures, and reduced service life.

Course description

The Root Cause Bearing Damage Analysis course is taught to the new ISO Standard 15243. We use audio-visuals, lectures, hands-on training, and discussion opportunities during this course.

Discussions include initial damage and failure causes, failure streams and visible conditions at the time of bearing removal. You will analyze actual bearings from a variety of distress, damage and failure conditions using our methodology to determine the root cause of the failure mechanism. Specific topics include:

Bearing function

- Learn how bearings support loads

Mounting damage

- Examples of improper installation procedures

Operating environment

- Bearing reaction to moisture, contamination, and other environmental effects on the bearing components

Maintenance

- Results of poor maintenance practices

Lubrication

- Effects of marginal and excessive lubrication
- Contamination and its effect

Vibration/impact damages

- How to find and correct

Bearing failures

- See examples, identify, and interpret actual bearing failures

Prerequisite

RMI On-line course*

WE100 Lubrication

WE140 Lubrication analysis basics

Reading material*

NC_0702 Basic elements of a comprehensive root cause analysis program

P1410_E Bearing failures and their causes

JM02016 Lubricant monitoring and analysis

* On-line learning material at aptitudeexchange.com

Integrated courses: LP200 & WE204

Public classes \$1,595

(Includes a 15% discount for attending both classes together)

On-site

per class \$19,995

people 16

17+ people \$595 per person

2009 integrated course schedule

Feb. 23–27	Atlanta, GA
April 20–24	Denver, CO
April 27–May 1	Toronto, ON
May 4–8	Vancouver, BC
June 8–12	Philadelphia, PA
Oct. 19–23	Chicago, IL
Nov. 2–6	Montreal (French), PQ
Nov. 30–Dec. 4	Toronto, ON
Nov. 30–Dec. 4	San Diego, CA

5 days

A written examination is included with this course and is conducted on the afternoon of the final day of class.

2009 course schedule

Feb. 25–27	Atlanta, GA
April 22–24	Denver, CO
April 29–May 1	Toronto, ON
May 6–8	Vancouver, BC
June 10–12	Philadelphia, PA
Oct. 21–23	Chicago, IL
Nov. 4–6	Montreal (French), PQ
Dec. 2–4	Toronto, ON
Dec. 2–4	San Diego, CA

2009 tuition

Public classes	\$1,095
On-site	
per class	\$12,995
# people	16
17+ people	\$395 per person

3 days

A written examination is included with this course and is conducted on the afternoon of the final day of class.