

Industrial Maintenance Technology: Maintaining Industrial Equipment

Practice and perform safe shop procedures at all times. **MIE1**

1 Practice and perform safe shop procedures at all times. **MIE1**

Apply the technical math required for employment opportunities in maintenance. **MIE2**

2 Apply the technical math required for employment opportunities in maintenance. **MIE2**

Perform all duties with emphasis on **MIE3**

a integrity **MIE3A**

b responsibility **MIE3B**

c quality **MIE3C**

d discipline **MIE3D**

e teamwork **MIE3E**

Describe the care and safe use of maintenance tools, equipment and components, such as lock-out/tag-out, rigging, electrical safety. **MIE4**

4 Describe the care and safe use of maintenance tools, equipment and components, such as lock-out/tag-out, rigging, electrical safety. **MIE4**

Describe lubrication techniques used on machines and components. **MIE5**

5 Describe lubrication techniques used on machines and components. **MIE5**

Identify various types of bearings and seals. **MIE6**

6 Identify various types of bearings and seals. **MIE6**

Explain the replacement procedure for bearings and seals. MIE7

7 Explain the replacement procedure for bearings and seals. MIE7

Explain alignment of couplings using straight edge and feeler gauge, dial indicator methods, and laser. MIE8

8 Explain alignment of couplings using straight edge and feeler gauge, dial indicator methods, and laser. MIE8

Explain the mounting and operation of centrifugal pumps and motors. MIE9

9 Explain the mounting and operation of centrifugal pumps and motors. MIE9

Explain the mounting and operation of speed reduction/speed increase assemblies. MIE10

10 Explain the mounting and operation of speed reduction/speed increase assemblies. MIE10

Explain the mounting and operation of clutch and brake assemblies. MIE11

11 Explain the mounting and operation of clutch and brake assemblies. MIE11

Identify common belts, such as V-Belt and timing. MIE12

12 Identify common belts, such as V-Belt and timing. MIE12

Explain the tensioning and alignment of various belts. MIE13

13 Explain the tensioning and alignment of various belts. MIE13

Identify common types of chains, such as roller and silent. MIE14

14 Identify common types of chains, such as roller and silent. MIE14

Explain the tensioning and alignment of various chains. MIE15

15 Explain the tensioning and alignment of various chains. MIE15

Explain the alignment of sprockets and sheaves. MIE16

16 Explain the alignment of sprockets and sheaves. MIE16

Explain the installation and adjustment variable of pitch sheaves. MIE17

17 Explain the installation and adjustment variable of pitch sheaves. MIE17

Explain the common types of gears, such as spur and helical. MIE18

18 Explain the common types of gears, such as spur and helical. MIE18

Describe the maintenance of open and closed gearing. MIE19

19 Describe the maintenance of open and closed gearing. MIE19

Explain the diametral pitch and gear meshing. MIE20

20 Explain the diametral pitch and gear meshing. MIE20

Explain vibration analysis in troubleshooting. MIE21

21 Explain vibration analysis in troubleshooting. MIE21

Identify various fasteners, key and keyways, and bolts. MIE22

22 Identify various fasteners, key and keyways, and bolts. MIE22

Explain set-up, lighting and using oxyfuel cutting equipment. MIE23

23 Explain set-up, lighting and using oxyfuel cutting equipment. MIE23

Perform lubrication techniques on machines and components. MIE24

24 Perform lubrication techniques on machines and components. MIE24

Replace bearings and seals. MIE25

25 Replace bearings and seals. MIE25

Align couplings using straight edge and feeler gauge, dial indicator methods, and laser. MIE26

26 Align couplings using straight edge and feeler gauge, dial indicator methods, and laser. MIE26

Mount and operate centrifugal pumps and motors. MIE27

27 Mount and operate centrifugal pumps and motors. MIE27

Mount and operate speed reduction/speed increase assemblies. MIE28

28 Mount and operate speed reduction/speed increase assemblies. MIE28

Mount and operate clutch and brake assemblies. MIE29

29 Mount and operate clutch and brake assemblies. MIE29

Adjust tension and alignment of various belts MIE30

30 Adjust tension and alignment of various belts MIE30

Adjust tension and alignment of various chains. MIE31

31 Adjust tension and alignment of various chains. MIE31

Align sprockets and sheaves. MIE32

32 Align sprockets and sheaves. MIE32

Install and adjust pitch sheaves. MIE33

33 Install and adjust pitch sheaves. MIE33

Maintain open and closed gearing. MIE34

34 Maintain open and closed gearing. MIE34

Use vibration analysis in troubleshooting. MIE35

35 Use vibration analysis in troubleshooting. MIE35

Perform straight line, piercing, beveling with oxyfuel cutting equipment. MIE36

36 Perform straight line, piercing, beveling with oxyfuel cutting equipment. MIE36