

## Mechanical Integrity Maintenance Procedure Index

### Annual Certification of Maintenance Procedures

I hereby certify these active maintenance procedures were developed utilizing input and review of the employees and are current and accurate as of their individual effective date.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Administration

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-ADM-001	Development of Maintenance Procedures	Administration	4/18/2013	0
MNT-ADM-002	QA/QC Plan	Administration	4/18/2013	0

### Electrical Equipment

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-ELCT-001	Service/Maintenance for 600V Electrical Cable	Electrical	4/18/2013	0
MNT-ELCT-002	Field Testing/Troubleshooting of an Electric Motor	Electrical	4/18/2013	0
MNT-ELCT-003	Replacing Explosion Proof Receptacle	Electrical	4/18/2013	0
MNT-ELCT-004	Electrical Substation Periodic Inspection	Electrical	4/18/2013	0
MNT-ELCT-005	Cutler Hammer 600V Motor Starters	Electrical	4/18/2013	0
MNT-ELCT-006	Procedure for Substation Service Transformers	Electrical	4/18/2013	0
MNT-ELCT-007	Maintenance Procedure for Equipment Grounding	Electrical	4/18/2013	0
MNT-ELCT-008	Troubleshoot/Removal of a 480V Motor Starter	Electrical	4/18/2013	0
MNT-ELCT-009	Procedure for Replacing Lamps	Electrical	4/18/2013	0
MNT-ELCT-010	Megger Test for Insulation Breakdown	Electrical	4/18/2013	0
MNT-ELCT-011	UPS / Uninterruptable Power System Checkout	Electrical	4/18/2013	0

### Fixed Equipment

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-FIXED-001	Remove, Clean and Re-Install Bundle from an Exchanger	Fixed Equip	4/18/2013	0
MNT-FIXED-002	Test and Repair of an Exchanger (in place)	Fixed Equip	4/18/2013	0
MNT-FIXED-003	Clean, Inspect and Repair of a Heater	Fixed Equip	4/18/2013	0
MNT-FIXED-004	Clean, Inspect and Repair of a Tower	Fixed Equip	4/18/2013	0
MNT-FIXED-005	Clean, Inspect and Repair of a Drum	Fixed Equip	4/18/2013	0
MNT-FIXED-006	Clean, Inspect and Repair of a Vessel	Fixed Equip	4/18/2013	0
MNT-FIXED-007	Clean, Inspect and Repair of a Tank	Fixed Equip	4/18/2013	0
MNT-FIXED-008	Installing Isolation Blind and/or Blind Flange to Processing Piping or Equipment	Fixed Equip	4/18/2013	0
MNT-FIXED-009	Installation/Removal of Screwed Piping Sections	Fixed Equip	4/18/2013	0
MNT-FIXED-010	Replacement of Flanged Piping Sections	Fixed Equip	4/18/2013	0

MNT-FIXED-011	Remove/Replace a Plug	Fixed Equip	4/18/2013	0
MNT-FIXED-012	Replacement of a Screwed Valve	Fixed Equip	4/18/2013	0
MNT-FIXED-013	Replacement of a Flanged Valve	Fixed Equip	4/18/2013	0
MNT-FIXED-014	Repack a Valve	Fixed Equip	4/18/2013	0
MNT-FIXED-015	Repair or Replace Steam Traps	Fixed Equip	4/18/2013	0
MNT-FIXED-016	"Hot Bolting" of a Flange	Fixed Equip	4/18/2013	0
MNT-FIXED-017	Hydrostatic Pressure Test for Shop Fabricated Pipe	Fixed Equip	4/18/2013	0
MNT-FIXED-018	Replacement of Butt or Socket Weld Piping Sections and Associated Components	Fixed Equip	4/18/2013	0
MNT-FIXED-019	Welding on Towers/Vessels or Exchangers	Fixed Equip	4/18/2013	0
MNT-FIXED-020	Install, Remove, or Modify Structure and Platforms	Fixed Equip	4/18/2013	0

## Inspection

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-INSP-001	Inspection Procedure for Shell and Tube Heat Exchangers	Inspection	4/18/2013	0
MNT-INSP-002	Inspection Procedure for Active Non-Trayed Pressure Vessels	Inspection	4/18/2013	0
MNT-INSP-003	Inspection Procedure for Active Trayed Pressure Vessels	Inspection	4/18/2013	0
MNT-INSP-004	Inspection Procedure for Air Cooled Heat Exchangers	Inspection	4/18/2013	0
MNT-INSP-005	Inspection Procedure for Leak Testing	Inspection	4/18/2013	0
MNT-INSP-006	Inspection Procedure for Fired Heaters	Inspection	4/18/2013	0
MNT-INSP-007	Inspection Procedure for Liquid Penetrant Examination	Inspection	4/18/2013	0
MNT-INSP-008	Inspection Procedures for Pressure Relieving Devices	Inspection	4/18/2013	0

## Instrumentation

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-INST-001	High Risk Equipment Calibration	Instruments	4/18/2013	0
MNT-INST-002	Analytical Equipment	Instruments	4/18/2013	0
MNT-INST-003	Testing Alarm Devices & Shutdowns	Instruments	4/18/2013	0
MNT-INST-004	Function Check/Removal/Installation of a Honeywell Smart Pressure Transmitter	Instruments	4/18/2013	0
MNT-INST-005	Shop Checkout Procedure for the Rosemount Model 1151 Pressure Transmitter	Instruments	4/18/2013	0
MNT-INST-006	Shop Checkout Procedure for the Rosemount Model 1151 Differential Pressure (D/P) Transmitter	Instruments	4/18/2013	0
MNT-INST-007	Shop Checkout Procedure Moore Industries MVX Millivolt Transmitter	Instruments	4/18/2013	0
MNT-INST-008	Shop Checkout Procedure Ashcroft (Duragauge) Standard Pressure Gauge	Instruments	4/18/2013	0
MNT-INST-009	Functional Check of a Teledyne Analytical Portable Flue Gas Analyzer (Model 980)	Instruments	4/18/2013	0
MNT-INST-010	Shop Checkout Procedure for the Fisher Pneumatic Level Controller/Indicator Transmitters with Cage (External Float) or Cageless (Internal Float) Displacer Sensors	Instruments	4/18/2013	0
MNT-INST-011	Shop Checkout Procedure for the Fisher Type 546 Electro-Pneumatic Transducer (I/P)	Instruments	4/18/2013	0
MNT-INST-012	Shop Transmitter Checkout Procedure for the Honeywell Smart Transmitter	Instruments	4/18/2013	0
MNT-INST-013	Shop Testing/Repair of Single and Double Ported, Plug Type, & Diaphragm Actuated Control Valves	Instruments	4/18/2013	0

MNT-INST-014	Function Check/Removal/Installation of a Flow Transmitter (Honeywell Smart)	Instruments	4/18/2013	0
MNT-INST-015	Function Check/Removal/Installation of a Pressure Transmitter (Honeywell Smart)	Instruments	4/18/2013	0
MNT-INST-016	Function Check/Removal of a Cage Type Displacer Level Transmitter	Instruments	4/18/2013	0
MNT-INST-017	Function Check/Removal of a Control Valve	Instruments	4/18/2013	0
MNT-INST-018	Function Check of a Precision Continuous Viscometer	Instruments	4/18/2013	0
MNT-INST-019	Replacement of a Butterfly Valve	Instruments	4/18/2013	0
MNT-INST-020	Installation/Removal/Function Check of a Pressure Switch	Instruments	4/18/2013	0

## Rotating Equipment

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-MACH-001	Shop Repairs to a Horizontal Barrel Centrifugal Pump	Machinists	4/18/2013	0
MNT-MACH-002	Rebuild & Certify Relief Valves Per State Code	Machinists	4/18/2013	0
MNT-MACH-003	Shop Repairs to a Horizontal Split Case Pump	Machinists	4/18/2013	0
MNT-MACH-004	Shop Repairs to a Vertical In-Line Pump	Machinists	4/18/2013	0
MNT-MACH-005	Shop Repairs to a Vertical Sump Pump	Machinists	4/18/2013	0
MNT-MACH-006	Shop Repairs to a Turbine	Machinists	4/18/2013	0
MNT-MACH-007	Shop Repairs to a Reciprocating Chemical Injection Pump	Machinists	4/18/2013	0
MNT-MACH-008	Shop Repairs to a Gearbox	Machinists	4/18/2013	0
MNT-MACH-009	Shop Repairs to a Centrifugal Compressor	Machinists	4/18/2013	0
MNT-MACH-010	Shop Repairs to a Mixer	Machinists	4/18/2013	0
MNT-MACH-011	Shop Repairs to a Fan or Blower	Machinists	4/18/2013	0
MNT-MACH-012	Shop Repairs to a Gear Pump	Machinists	4/18/2013	0
MNT-MACH-013	Remove, Repair, and Reinstall a Horizontal Pump	Machinists	4/18/2013	0
MNT-MACH-014	Remove, Repair, and Reinstall a Reciprocating Pump	Machinists	4/18/2013	0
MNT-MACH-015	Remove, Repair, and Reinstall a Turbine	Machinists	4/18/2013	0
MNT-MACH-016	Remove and Reinstall an Electric Motor	Machinists	4/18/2013	0
MNT-MACH-017	Remove, Repair, and Reinstall a Fan	Machinists	4/18/2013	0
MNT-MACH-018	Remove, Repair, Reinstallation of a Gearbox	Machinists	4/18/2013	0
MNT-MACH-019	Replacement of Valves on a Reciprocating Compressor	Machinists	4/18/2013	0
MNT-MACH-020	Remove, Repair and Reinstall a Horizontal Split Case Pump Motor Driven	Machinists	4/18/2013	0
MNT-MACH-021	Remove, Repair and Reinstall a Horizontal Gear Pump Motor Driven	Machinists	4/18/2013	0
MNT-MACH-022	Remove, Repair and Reinstall a Vertical Sump Pump Motor Driven	Machinists	4/18/2013	0
MNT-MACH-023	Remove, Repair and Reinstall a Vertical In-Line Pump Motor Driven	Machinists	4/18/2013	0
MNT-MACH-024	Remove, Repair and Reinstall a Reciprocating Pump Motor Driven	Machinists	4/18/2013	0
MNT-MACH-025	Remove, Repair and Reinstall a Horizontal Split Case Pump Turbine Driven	Machinists	4/18/2013	0
MNT-MACH-026	Remove, Repair and Reinstall a Mixer on a Tank	Machinists	4/18/2013	0
MNT-MACH-027	Removal, Repair, Reinstallation of a Gear Box	Machinists	4/18/2013	0
MNT-MACH-028	Repack a Centrifugal Pump	Machinists	4/18/2013	0
MNT-MACH-029	Repairs to API Separator (Skimmer)	Machinists	4/18/2013	0
MNT-MACH-030	Remove, Repair and Reinstall a Vertical Water Well Motor Driven	Machinists	4/18/2013	0
MNT-MACH-031	Removal, Repair, Install a Cooling Tower Fan and Gear Box	Machinists	4/18/2013	0
MNT-MACH-032	Turbine Overspeed Test Procedure	Machinists	4/18/2013	0

## Rigging

Procedure No.	Description	Directory	Date Issued	Rev #
MNT-RIG-001	Choker, Wire Rope Sling, Metal Mesh Sling, Synthetic Webbing Slings, & Natural/ Synthetic Fiber Rope Inspection	Rigging	4/18/2013	0
MNT-RIG-002	Hand Operated, Electrical or Air-Powered Chain Hoists & Hook Inspection	Rigging	4/18/2013	0
MNT-RIG-003	Mobile Crane & Standing Wire Rope Inspection	Rigging	4/18/2013	0
MNT-RIG-004	Mobile Crane Lifting Procedures	Rigging	4/18/2013	0
MNT-RIG-005	Tackle Blocks, Eye Bolts, & Shackles Inspection	Rigging	4/18/2013	0