

OPERATE INDUSTRIAL HYDRAULIC SYSTEM

UNIT CODE: ENG/CU/IPOM/CR/03/4/A

Relationship to Occupational Standards

This unit addresses the unit of competency: Operate Industrial Hydraulic System

DURATION OF UNIT: 60 hours

UNIT DESCRIPTION

This unit describes competencies required to operate industrial hydraulics systems. It involves applying industrial hydraulic system safety procedures, identifying industrial hydraulic components, running and monitoring industrial hydraulic system, performing industrial hydraulic system basic maintenance and generating industrial hydraulic operation report

Summary of Learning Outcomes

1. Apply Industrial Hydraulic System Safety Procedures
2. Identify and Describe Industrial Hydraulic Components
3. Run and Monitor Industrial Hydraulic System
4. Perform Industrial Hydraulic System Basic Maintenance
5. Generate Industrial Hydraulic Operation Report

Learning Outcomes, Specific Learning Outcomes and Content

Learning Outcomes	Content	Suggested Assessment Methods
1. Apply Industrial Hydraulic System Safety Procedures	<ul style="list-style-type: none">• Identify personal safety gear<ul style="list-style-type: none">○ Helmet○ Eye protection○ Ear protection (muffs or plugs)○ Working protective gloves○ Safety boots○ Working protective clothing• Observe Occupational Health and Safety Act• Personal safety equipment• Responsibility of the employee• Responsibility of the employer• Work area safety• Work area hazards	<ul style="list-style-type: none">• Written• Oral• Observation

Learning Outcomes	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> • Accident reporting procedure 	
<p>2. Identify and Describe Industrial Hydraulic Components</p>	<ul style="list-style-type: none"> ○ Identify hydraulic Components ○ Hydraulic Reservoirs ○ Vented Reservoir ○ Pressurized Reservoir ○ Reservoir Components ○ Filters ○ Heaters ○ Baffles/Fins ○ Hydraulic Line Filters ○ Line filter Construction ○ Filter elements • Hydraulic Pumps <ul style="list-style-type: none"> ○ Pump construction ○ Types of pump: - Reciprocating, Gear, Screw, Rotary • Hydraulic Accumulators <ul style="list-style-type: none"> ○ Diaphragm ○ Bladder ○ Piston • Hydraulic motors • Actuators <ul style="list-style-type: none"> ○ Single-action actuating Cylinder ○ Double-action actuating cylinder • Directional Control/ Spool Valves • Hydraulic fittings • Describe Hydraulic System <ul style="list-style-type: none"> ○ Application of Hydraulic systems ○ Hydraulic circuit ○ Hydraulic symbols 	<ul style="list-style-type: none"> • Written • Oral • Observation
<p>3. Run and Monitor Industrial Hydraulic System</p>	<ul style="list-style-type: none"> • Determine start-up procedures <ul style="list-style-type: none"> ○ Manufacturers' manuals ○ Check for operation of gauges, direction of rotation of motors and warning systems 	<ul style="list-style-type: none"> • Written • Oral • Observation

Learning Outcomes	Content	Suggested Assessment Methods
	<ul style="list-style-type: none"> ○ Warm up hydraulics and transmission before full load ○ Walk around inspection Monitor performance of equipment during operation <ul style="list-style-type: none"> ○ Gauges and warning systems ○ Visual and audio inspection 	
4. Perform Industrial Hydraulic System Basic Maintenance	<ul style="list-style-type: none"> ● Identify basic maintenance requirement ● Service and or replace; Ruptured seals, fittings and pipes ● Service and or replace directional valves and non-return valves 	<ul style="list-style-type: none"> ● Written ● Oral ● Observation
5. Generate Industrial Hydraulic Operation Report.	<ul style="list-style-type: none"> ● Fill daily check charts and log books ● Update the inventory 	<ul style="list-style-type: none"> ● Written ● Oral ● Observation