

Title	Maintenance – Coiled Tubing Equipment
Target Population	Field Engineers, Field Specialists & Equipment Operators

This requirement is applicable to:	✓	JFE	✓	FST	✓	EOT
	✓	FE1	✓	FS1	✓	EO1
		FE2		FS2	✓	EO2
				FS3	✓	EO3
					✓	GEO

Objective:

The objective of this task is to evaluate and verify the employee's competency in performing basic maintenance on Coil Tubing Unit under supervision including:

	Description	JFE	FE1	FST	FS1	EOT	EO1	EO2	EO3	GEO
1	Batch Mixer	✓		✓		✓	✓			✓
2	Fluid Pumping Unit	✓		✓			✓	✓		✓
3	Nitrogen Converter	✓	✓		✓			✓	✓	✓
4	Coiled Tubing Unit including:	✓	✓		✓				✓	✓
	Power Pack									
	Control Cabin									
	CT Reel									
	Injector Head									
	Pressure Control Equipment			✓						
5	Basic BHA Components	✓	✓	✓				✓	✓	✓

The employee should be able to identify the components of CT equipment including those found in hydraulic circuits, explain their functions, ratings and maintenance procedures. This include filling out the EMC 1 form.

He should have basic knowledge of hydraulics including the various components and principles of operations.

Tasks:

The employee will be assigned under an experienced mechanic / electrician or a mentor in the base to guide him in performing the maintenance tasks. This include tracing of the hydraulic lines by referring to Operation and Maintenance Manual.

1. Identify the main components and functions of CTU (i.e. injector head, CT reel, stripper, BOP etc.)
2. Identify main components and functions of basic BHA
3. Physically check the CTU components and fill out the EMC 1 form.
4. Assist in assembly and disassembly of the following components (whenever possible):
 - Injector head conversion. Identify each parts.

- Reel swivel maintenance. Identify each parts.
 - Stripper (replace inserts/brass bushing). Identify each parts.
 - BOP conversion/replacing inserts including function and pressure testing. Identify each parts.
 - Downhole tools (connectors, check valves, nozzles)
5. Show and explain the hydraulics system of the CT unit.
 6. Prepare a report for the activities and explain it to the assigned mentor


IMPORTANT NOTE: The assigned Assessor must conduct the required evaluation to evaluate employee's competency and provide feedback through the respective Task Evaluation Forms PRIOR TO completing this Task Sheet.

This task is deemed INCOMPLETE without the Task Evaluation Forms

Brief summary of employee's learning outcome (to be completed by Assessor):


See Improvement on general troubleshoot and knowledge doing maintenance on equipment and still need assistant from Senior Operator.

Assessor's Comments & Recommendation:

Signature		Assessment Date	26 / 06 / 2024
Name	Azmat Abd Razak	Position	C/Mechanic

FSM / OM Comments & Recommendation:

- Good improvement on general troubleshooting.

Signature		Assessment Date	26/1/25
Name	FIRDAUS AZMAN	Position	FSM

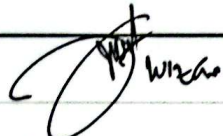
DIMENSION BID

TASK EVALUATION FOR BASIC MAINTENANCE

(ref. CTS-FORM-93 BASIC MAINTENANCE)


NAME	MOHD AIDIL SAFWAN BIN KASHFY
EMPLOYMENT DATE	20/3/2022
PERFORMANCE CRITERIA	<ol style="list-style-type: none">1. Equipment design, technical specification, components and functions: Know and understand equipment design, technical specifications, components and functions2. Equipment operation: Able to operate the equipment3. Equipment maintenance / care: Able to perform equipment recommended care / maintenance4. Equipment maintenance report: Able to track on all required equipment data prior to plan for next maintenance5. Maintenance analysis: Able to analyse equipment problem based on problem report and EMC. Hence, to identify root cause and best practice to avoid the same problem from happen

ASSESSMENT RESULT SUMMARY

Element of Competency	Score	Assessed By	Assessment Date
1. Batch Mixer	8		26/1/2025
2. Fluid Pumping Unit			
3. Nitrogen Converter			
4. Coiled Tubing Unit			
4.1 Power Pack			
4.2 Control Cabin			
4.3 CT Reel			
4.4 Injector Head			
4.5.1 Pressure Control Equipment (Stripper)			
4.5.2 Pressure Control Equipment (SBOP)			
4.5.3 Pressure Control Equipment (Combi BOP)			
5. Maintenance Reporting			

Important Note: The minimum passing score is 80%. If the score falls below the minimum passing score, the employee must repeat the assessment

DIMENSION BID

Assessor's Comments & Recommendation (COMPULSORY): - Completed assessment			
Signature		Assessment Date	26/1/2025
Name	muhammad wizan Bin SIOEK	Position	FIELD SPECIALIST II

DIMENSION BID

1. BATCH MIXER

THEORY	COMMENT
1. Identify the Batch Mixer and explain its functions	9
2. Show where the following components of Batch Mixer Power Pack and explain the function	
i. Engine component	9
ii. Hydraulic line	9
iii. Parameter on control panel	9
iv. Zone 2 system	8
3. Show where the following components of Batch Mixer Tank and explain the function	
i. C-Pump	9
ii. Agitator	9
iii. Actuator Valve	9
iv. Butterfly Valve	9
v. Volute	9
vi. Jetting	9
4. How did you rig up hydraulic hose from BMX Power Pack to Tank?	9
5. How did you rig up 4" line?	9
6. What should you check BEFORE start the Batch Mixer Power Pack?	9
7. What should you check and monitor during operating the Batch Mixer Power Pack?	9
8. What is the safety precaution during operating the Batch Mixer Power Pack?	9
9. What should you check BEFORE stop the Batch Mixer Power Pack?	9
10. What should you check BEFORE start the Batch Mixer Tank?	9
11. What should you check and monitor during operating the Batch Mixer Tank?	9
12. What is the safety precaution during operating the Batch Mixer Power Pack?	
13. What should you check BEFORE stop the Batch Mixer Tank?	9
PRACTICAL	
1. Show how to carry out following basic maintenance	
i. Check coolant level - 9	
ii. Replace fan and alternator belt - 9	
iii. Replace engine oil filter - 9	
iv. Check battery voltage - 9	
v. Clean crankcase vent breather - 9	
vi. Clean exhaust cooler (pyroban) - 9	
vii. Change transmission oil - 9	
viii. Change fuel filter - 9	
ix. Replace air filter - 9	
x. Clean flame trap - 9	
xi. Grease bearing - 9	
xii. Redress c-pump - 9	

OVERALL SCORE	STRONG			ADEQUATE			IMPROVEMENT NEEDED		
	10	9	8	7	6	5	4	3	2