

AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

Tel: +9647810009138 / +9647834964657

Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com



CERTIFICATE OF THOROUGH EXAMINATION & NDT



This Certificate complies with the requirements of the ASTM & Lifting Equipment Operations and Lifting Equipment Regulations

Client Name:	HALLIBURTON	Location:	HPS YARD	Job Number:	QC/24/HALL-0206A-01
Date of Examination:	02/06/2024	Due Date:	01/12/2024	Certificate No:	020624
Serial No:	Item Description				Final Remarks
ISA01	ADJUSTABLE ADOPTER				Satisfactory
Type of Inspection	Visual & Magnetic Particle Inspection				
Reference Standard	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)				



VISUAL, THOROUGH EXAMINATION	The above-mentioned equipment is visually Inspected and Found Free from Deformations, Corrosion, And Other Defects.
MAGNETIC PARTICLE INSPECTION	M.P.I Has Been Done on Available Critical Areas and Found Free from Cracks and Other Defects.
FINAL RESULTS	As Per the Client Specification, the Inspected Areas Was Accepted at The Time of Inspection Useable.

NDT Equipment Details					
Yoke	Permanent	Serial No:	PY-02	Due Date	14-10-2024
White Contrast	WCP-2	Batch No:	220602	Due Date	06-2025
Black Ink	7HF	Batch No:	220605	Due Date	7-1-2025

ASNT Level II / LEAA Inspector Name:	Reviewed By: NDT LEVEL II	Signature & Stamp	Client Signature & Stamp
Aizaz Farhat	Naveed Hussein	 	

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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Client Name:	HALLIBURTON	Location:	HPS YARD	Job Number:	QC/24/HALL-0206A-02
Date of Examination:	02/06/2024	Due Date:	01/12/2024	Certificate No:	020624
Serial No:	Item Description				Final Remarks
ISA02	ADJUSTABLE ADOPTER				Satisfactory
Type of Inspection	Visual & Magnetic Particle Inspection				
Reference Standard	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)				



VISUAL, THOROUGH EXAMINATION	The above-mentioned equipment is visually Inspected and Found Free from Deformations, Corrosion, And Other Defects.
MAGNETIC PARTICLE INSPECTION	M.P.I Has Been Done on Available Critical Areas and Found Free from Cracks and Other Defects.
FINAL RESULTS	As Per the Client Specification, the Inspected Areas Was Accepted at The Time of Inspection Useable.

NDT Equipment Details					
Yoke	Permanent	Serial No:	PY-02	Due Date	14-10-2024
White Contrast	WCP-2	Batch No:	220602	Due Date	06-2025
Black Ink	7HF	Batch No:	220605	Due Date	7-1-2025

ASNT Level II / LEAA Inspector Name:	Reviewed By: NDT LEVEL II	Signature & Stamp	Client Signature & Stamp
Aizaz Farhat	Naveed Hussein	 	

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-03
Item Description	TRAILAR	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-5 Trailar Structure	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-06-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **Trailar Structure**
- 1.2) Functional Test of vehicle.
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **TRAILAR STRUCTURE**, SAP No- **12534581** was carried out and found satisfactory.
- 2.2) Functional Test of Vehicle.
- 2.3) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) TRAILAR STRUCTURE

SAP No:	12534581
Location:	Coiled Tubing Unit - CTU 05

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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3.1) Visual Inspection:

- The visual Inspection of the **TRAILAR STRUCTURE** was carried out as follows:
- The **Structure welds** of the **TRAILAR** were inspected and NO visible damages observed
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Functional Test:

The Function test of the **TRUCK HEAD** was carried out as follow:

- Movement.
- Breaks.
- Electricals
- Hydraulics
- Indicators

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above **TRAILAR** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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Photographs Of Activity



	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-04
Item Description	TRUCK HEAD	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-7 Truck Head Structure	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-06-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **Truck Head Structure**
- 1.2) Functional Test of vehicle.
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **TRUCK HEAD STRUCTURE**, SAP No- **11404830** was carried out and found satisfactory.
- 2.2) Functional Test of Vehicle.
- 2.3) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) TRUCK HEAD STRUCTURE

SAP No:	11404830
REG No:	1895- BASRA
Location:	Coiled Tubing Unit - CTU 05

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





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3.1) Visual Inspection:

- The visual Inspection of the **TRUCK HEAD STRUCTURE** was carried out as follows:
- The **Structure welds** of the **TRUCK HEAD** were inspected and NO visible damages observed
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Functional Test:

The Function test of the **TRUCK HEAD** was carried out as follow:

- Movement.
- Breaks.
- Electricals
- Hydraulics
- Indicators
- Head Lights

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above **TRUCK HEAD** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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Photographs Of Activity



	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-05
Item Description	CABIN	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-7 Cabin Structure	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-06-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **CABIN Structure**
- 1.2) Functional Test of Hydraulic Jacks.
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **CABIN STRUCTURE**, SAP No- **12534583** was carried out and found satisfactory.
- 2.2) Functional Test of Hydraulic Jacks.
- 2.3) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) CABIN STRUCTURE

SAP No:	12534583
Location:	Coiled Tubing Unit - CTU 07

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **CABIN STRUCTURE** was carried out as follows:
- The **Structure welds** of the **CABIN** were inspected and NO visible damages observed
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Functional Test:

- The Function test of the Coil Tubing Unit- **CABIN STRUCTURE** Hydraulic jacks was done and found satisfactory

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **CABIN STRUCTURE** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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Photographs Of Activity



	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

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Client Name:	HALLIBURTON	Location:	HPS YARD	Job Number:	QC/24/HALL-0206A-06
Date of Examination:	02/06/2024	Due Date:	01/12/2024	Certificate No:	020624
Serial No:	Item Description				Final Remarks
ST-CTU-05	INJECTOR HEAD STAND				Satisfactory
Type of Inspection	Visual & Magnetic Particle Inspection				
Reference Standard	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)				



VISUAL, THOROUGH EXAMINATION	The above-mentioned equipment is visually Inspected and Found Free from Deformations, Corrosion, And Other Defects.
MAGNETIC PARTICLE INSPECTION	M.P.I Has Been Done on Available Critical Areas and Found Free from Cracks and Other Defects.
FINAL RESULTS	As Per the Client Specification, the Inspected Areas Was Accepted at The Time of Inspection Useable.

NDT Equipment Details					
Yoke	Permanent	Serial No:	PY-02	Due Date	14-10-2024
White Contrast	WCP-2	Batch No:	220602	Due Date	06-2025
Black Ink	7HF	Batch No:	220605	Due Date	7-1-2025

ASNT Level II / LEEA Inspector Name:	Reviewed By: LEEAA, NDT LEVEL II	Signature & Stamp	Client Signature & Stamp
Aizaz Farhat	Ashraf Elsaid	 	

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-07
Item Description	REEL	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-5 Reel Structure	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024
Reference Standards:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-06-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **Reel Structure**
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **REEL STRUCTURE, ID No- 12534586** and accessories including structure was carried out and found satisfactory.
- 2.2) MPI was performed on accessible **Structure welds, Pad eyes and its associated welds**. The result was found satisfactory.
- 2.3) Dimensions of pad eyes were taken. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) REEL STRUCTURE

ID No	12534586
Location:	Coiled Tubing Unit – CTU-05

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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **REEL STRUCTURE** was carried out as follows:
- The **Structure welds** of the Unit were inspected and NO visible damages observed
- The visual Inspection of **Pad Eyes** was done and found satisfactory.
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- Accessible **Structure Welds**
- **Pad Eyes** and its Associated welds

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **REEL STRUCTURE** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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Photographs Of Activity



PAD EYE DIMENSION				
Serial No:	PE-01,PE-02			SWL
THICK.	HOLE	HEIGHT	WIDTH	
14 mm	17 mm	58 mm	114 mm	2 TON



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PAD EYE DIMENSION				
Serial No:	PE-03, PE-04			SWL
THICK.	HOLE	HEIGHT	WIDTH	
51 mm	78 mm	162 mm	255mm	55 TON

PAD EYE DIMENSION				
Serial No:	RPE-01, RPE-02			SWL
THICK.	HOLE	HEIGHT	WIDTH	
51 mm	78 mm	162 mm	255mm	55 TON

Equipment Details							Technical Details		
Equipment:	AC/DC Yoke Test Block		Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC		Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml
Serial No:	1657		Serial No:	2722003	Serial No:	PY - 019 PY - 02		Method	Wet Magnetic Particle Testing (WMPT)
Cal. Date:	14-10-2024		Cal. Date:	16-10-2024	Cal. Date:	14-10-2024			
Black Magnetic Ink Manufacture: 7 HF		Magnaflux		Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity	3160 Lux
White Contrast Paint Manufacture: WCP 2		Magnaflux		Batch No:	220602	Expiry Date:	June-2025		

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-08
Item Description	REEL	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-5 Reel Structure	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024
Reference Standards:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02/06/2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – Hose Reels & Associated Pad Eyes
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- Hose Reels, Identification No- 331144, 331143 and accessories including structure was carried out and found satisfactory.
- 2.2) MPI was performed on accessible Pad eyes and its associated welds. The result was found satisfactory.
- 2.3) Dimensions of pad eyes were taken. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) Hose Reels

Iden No	331144, 331143
Location:	Coiled Tubing Unit – CTU-05

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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **Hose Reels** were carried out as follows:
- The **Lifting Accessories associated with Hose Reels** were inspected for any visual damages, dents, cracks to the extent of accessibility. The results were satisfactory.
- The visual Inspection of **Pad Eyes** was done and found satisfactory.
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- **Pad Eyes** and its Associated welds

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **Hose Reels** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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Photographs Of Activity



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**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**

Basra, North Rumaila, Quality Control Yard - Iraq

Tel: +9647810009138 / +9647834964657



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CERTIFICATE OF THOROUGH EXAMINATION & NDT

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PAD EYE DIMENSION					PAD EYE DIMENSION				
Serial No:	PE-01			SWL	Serial No:	PE-01, PE02, PE03, PE04			SWL
THICK.	HOLE	HEIGHT	WIDTH		THICK.	HOLE	HEIGHT	WIDTH	
40 mm	32 mm	94 mm	168mm	8.5 TON	21 mm	20mm	120 mm	90 mm	3.25 TON

Equipment Details							Technical Details		
Equipment:	AC/DC Yoke Test Block		Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC		Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml
Serial No:	1657		Serial No:	2722003	Serial No:	PY - 019 PY - 02		Method	Wet Magnetic Particle Testing (WMPT)
Cal. Date:	14-10-2024		Cal. Date:	16-10-2024	Cal. Date:	14-10-2024			
Black Magnetic Ink Manufacture: 7 HF		Magnaflux		Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity	3160 Lux
White Contrast Paint Manufacture: WCP 2		Magnaflux		Batch No:	220602	Expiry Date:	June-2025		

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-09
Item Description	Injector Head	Job No:	020624
General Scope of Activity	Coil Tubing Unit-5 Injector Head	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024
Reference Standards:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02/06/2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **Injector head and Accessories**
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit-**Injector head, SAP No- 12534584** and accessories including structure was carried out and found satisfactory.
- 2.2) MPI was performed on accessible structure welds, pad eyes and its associated welds. The result was found satisfactory.
- 2.3) Dimensions of pad eyes were taken. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) Injector Head

SAP NO:	12534584
MANUFACTURER	HYDRA RIG
YEAR OF MFG.	12-2014
UNIT:	CTU-05

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **Injector Head and accessories** were carried out as follows:
- The **Accessories** were inspected for any visual damages, dents, cracks to the extent of accessibility. The results were satisfactory.
- The **Structure welds** of the Unit were inspected and NO visible damages observed
- The visual Inspection of **Stripper** was done and found satisfactory.
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- Accessible **Structure Welds**
- **Pad Eyes** and its Associated welds
- **Stripper** face
- **Fall Arrestor Pole**

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **Injector Head** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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Photographs Of Activity



PAD EYE DIMENSION				
Serial N	PE-01, PE-02			SWL
THICK.	HOLE	HEIGHT	WIDTH	
14 mm	17 mm	58 mm	114 mm	2 TON



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PAD EYE DIMENSION					PAD EYE DIMENSION				
Serial N	42133A, 42133B, 42133C, 42133D				Serial N	36013A, 36013B			
THICK.	HOLE	HEIGHT	WIDTH	SWL	THICK.	HOLE	HEIGHT	WIDTH	SWL
24 mm	26 mm	65 mm	75 mm	17 TON	24 mm	26 mm	65 mm	75 mm	17 TON

Equipment Details							Technical Details		
Equipment:	AC/DC Yoke Test Block		Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC		Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml
Serial No:	1657		Serial No:	2722003	Serial No:	PY - 019 PY - 02		Method	Wet Magnetic Particle Testing (WMPT)
Cal. Date:	14-10-2024		Cal. Date:	16-10-2024	Cal. Date:	14-10-2024			
Black Magnetic Ink Manufacture: 7 HF		Magnaflux		Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity	3160 Lux
White Contrast Paint Manufacture: WCP 2		Magnaflux		Batch No:	220602	Expiry Date:	June-2025		

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

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REV:01 DATED: 20 JUNE 2022

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Client	HALLIBURTON	Report No:	QC/24/HALL-0206A-10
Item Description	GOOSE NECK	Job No:	020624
General Scope of Activity	Coiled Tubing Unit-5 Goose Neck	Date of Inspection	02/06/2024
Place of Inspection	HPS Yard	Valid Until:	01/12/2024
Reference Standards:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02/06/2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **Goose Neck, Associated Pad Eyes & Lifting Accessories**
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Review of maintenance records and Previous reports
- 1.4) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **Goose Neck, SAP No- 12534582** and accessories including structure was carried out and found satisfactory.
- 2.2) MPI was performed on accessible structure welds, pad eyes and its associated welds. The result was found satisfactory.
- 2.3) Dimensions of pad eyes were taken. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) Goose Neck

SAP No	12534582
Location:	Coiled Tubing Unit – CTU-05

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





CERTIFICATE OF THOROUGH EXAMINATION & NDT

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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **Goose Neck** were carried out as follows:
- The **Lifting Accessories associated with Goose Neck** were inspected for any visual damages, dents, cracks to the extent of accessibility. The results were satisfactory.
- The **Structure welds** of the Unit were inspected and NO visible damages observed
- The visual Inspection of **Pad Eyes** was done and found satisfactory.
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- Accessible **Structure Welds**
- **Pad Eyes** and its Associated welds

FINAL RESULT: PASS

3.3) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **Goose Neck** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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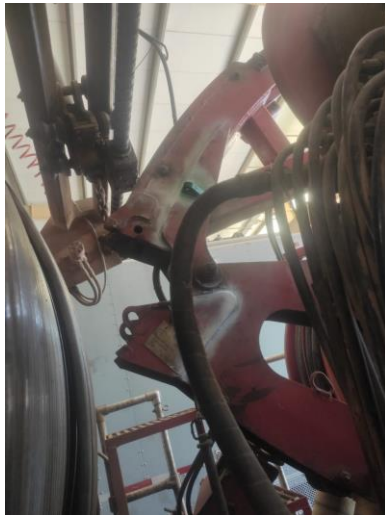
Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com



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Photographs Of Activity



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PAD EYE DIMENSION					PAD EYE DIMENSION				
Serial N	PE-01, PE-02				Serial N	332937A, 332937B, 332937C, 332937D			
THICK.	HOLE	HEIGHT	WIDTH	SWL	THICK.	HOLE	HEIGHT	WIDTH	SWL
25mm	27mm	118mm	126mm	4.75 TON	19mm	22mm	43 mm	77 mm	4.75 TON
 					   				

Equipment Details							Technical Details		
Equipment:	AC/DC Yoke Test Block		Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC		Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml
Serial No:	1657		Serial No:	2722003	Serial No:	PY - 019 PY - 02		Method	Wet Magnetic Particle Testing (WMPT)
Cal. Date:	14-10-2024		Cal. Date:	16-10-2024	Cal. Date:	14-10-2024			
Black Magnetic Ink Manufacture: 7 HF		Magnaflux		Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity	3160 Lux
White Contrast Paint Manufacture: WCP 2		Magnaflux		Batch No:	220602	Expiry Date:	June-2025		

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Aizaz Farhat LEEA NDT LEVEL II	Ashraf Elsaid LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV:01 DATED: 20 JUNE 2022

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CERTIFICATE OF THOROUGH EXAMINATION & NDT

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Client	HALLIBURTON	Report No:	QC-24-06/HALL-HPS-CTU-05-001
Item Description	WET KIT	Job No:	QC-24-06/HALL-HPS-01
General Scope of Activity	Coiled Tubing Unit-CTU-05 WET KIT STRUCTURE, ACCUMULATOR UTT	Date of Inspection	02-JUNE-2024
Place of Inspection	HPS Yard	Valid Until:	1-DECEMBER-2024
Reference Standards:	ASTM E797 & ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-June-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – **WET KIT STRUCTURE**
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Ultrasonic Thickness Testing (UTT)
- 1.4) Review of maintenance records and Previous reports
- 1.5) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- **WET KIT STRUCTURE**, SAP No- **12534586** was carried out and found satisfactory.
- 2.2) MPI was performed on accessible **Structure welds, Pad eyes and its associated welds**. The result was found satisfactory.
- 2.3) Ultrasonic Thickness Testing was carried out on **Accumulator**. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) WET KIT STRUCTURE

SAP No	12534629
ACCUMULATOR MFG	HYDRAGIC
Location:	Coiled Tubing Unit - 05

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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **WET KIT STRUCTURE** was carried out as follows:
- The **Structure welds** of the Unit were inspected and NO visible damages observed
- The visual Inspection of **Pad Eyes** was done and found satisfactory.
- The visual Inspection of **Accumulator & Hoses** was done and found satisfactory.
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- Accessible **Structure Welds**
- **Pad Eyes** and its Associated welds

FINAL RESULT: PASS

3.3) ULTRASONIC THICKNESS TESTING (UTT):

Ultrasonic Thickness Testing was performed on the following components.:

- 15 GALLON ACCUMULATOR BOTTLES (BDY BP MAWP 3000 PSI A 200°F APP 22V15G)

FINAL RESULT: PASS

3.4) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **WET KIT STRUCTURE & UTT of ACCUMULATORS** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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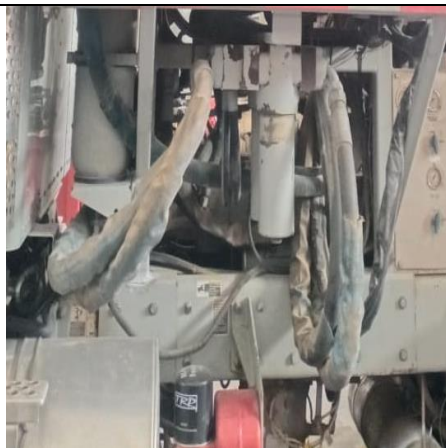
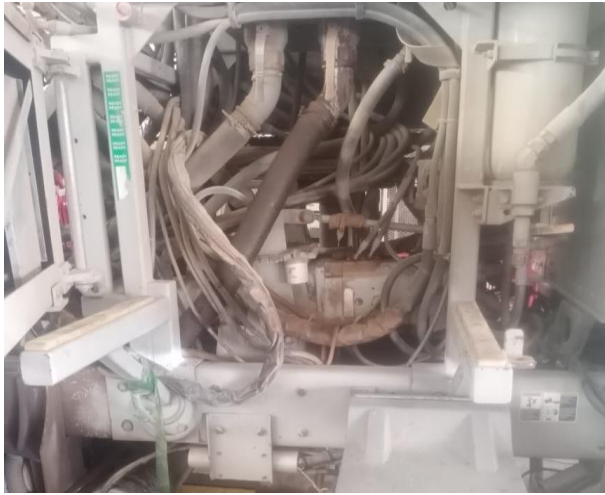




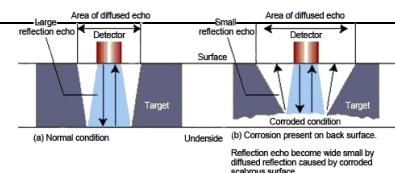
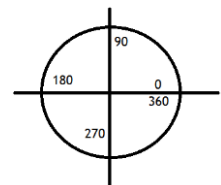
CERTIFICATE OF THOROUGH EXAMINATION & NDT

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Photographs Of Activity



Ultrasonic Thickness Test of Accumulator Bottle					Serial No:	3901060
SECTION	0°	90°	180°	270°	OEM Min	Result
TOP NECK	0.618	0.578	0.597	0.606	0.500	ACCEPTED
MIDDLE	0.458	0.432	0.422	0.449	0.300	ACCEPTED
BOTTOM NECK	0.621	0.607	0.634	0.613	0.500	ACCEPTED



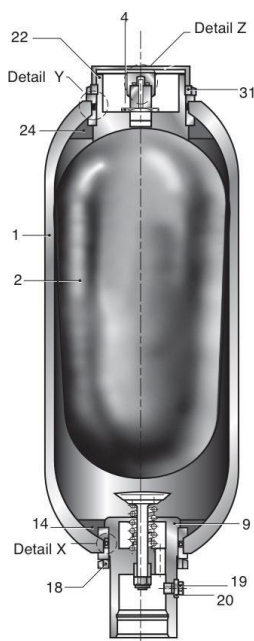
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Ultrasonic Thickness Test of Accumulator Bottle					Serial No:		390106
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	TOP NECK	0.630	0.599	0.651	0.656	0.500	ACCEPTED
2	MIDDLE	0.452	0.464	0.449	0.465	0.300	ACCEPTED
		0.454	0.452	0.427	0.441		ACCEPTED
		0.457	0.456	0.453	0.450		ACCEPTED
3	BOTTOM NECK	0.657	0.617	0.662	0.587	0.500	ACCEPTED

Ultrasonic Thickness Test of Accumulator Bottle					Serial No:		390088
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	TOP NECK	0.586	0.616	0.615	0.602	0.500	ACCEPTED
2	MIDDLE	0.441	0.453	0.446	0.443	0.300	ACCEPTED
		0.449	0.439	0.438	0.448		ACCEPTED
		0.442	0.448	0.453	0.433		ACCEPTED
3	BOTTOM NECK	0.619	0.612	0.597	0.579	0.500	ACCEPTED

Ultrasonic Thickness Test of Accumulator Bottle					Serial No:		39007
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	TOP NECK	0.640	0.602	0.615	0.596	0.500	ACCEPTED
2	MIDDLE	0.459	0.426	0.434	0.451	0.300	ACCEPTED
		0.438	0.435	0.448	0.443		ACCEPTED
		0.443	0.458	0.462	0.437		ACCEPTED
3	BOTTOM NECK	0.629	0.589	0.604	0.596	0.500	ACCEPTED

Ultrasonic Thickness Test of Accumulator Bottle					Serial No:		390060
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	TOP NECK	0.591	0.601	0.607	0.617	0.500	ACCEPTED
2	MIDDLE	0.428	0.417	0.448	0.432	0.300	ACCEPTED
		0.453	0.419	0.457	0.426		ACCEPTED
		0.415	0.442	0.447	0.431		ACCEPTED
3	BOTTOM NECK	0.622	0.612	0.582	0.588	0.500	ACCEPTED

All Measurement in Inches

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



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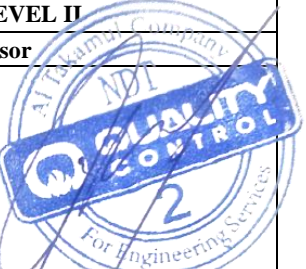
Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com



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Equipment Details						Technical Details	
Equipment:	AC/DC Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC	Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml
Serial No:	1657	Serial No:	2722003	Serial No:	PY - 02	Method	Wet Magnetic Particle Testing (WMPT)
Cal. Date:	14-OCT-2024	Cal. Date:	16-OCT-2024	Cal. Date:	14-OCT-2024		
Equipment:	Thickness Gauge	Serial No:	5500391	Cal. Date:	14-OCT-2024		
Equipment:	TEST BLOCK	Serial No:	NoBo5087	Cal. Date:	15-OCT-2024		
Black Magnetic Ink Manufacture: 7 HF		Magnaflux	Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity
White Contrast Paint Manufacture: WCP 2		Magnaflux	Batch No:	220602	Expiry Date:	June-2025	

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Ashraf Elsaid LEEA NDT LEVEL II	M.ABDULLAH LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

REV: 01 Dated: 20 June 2022

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





CERTIFICATE OF THOROUGH EXAMINATION & NDT

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Client	HALLIBURTON	Report No:	QC-24-06/HALL-HPS-CTU-05-002
Item Description	AIR TANKS	Job No:	QC-24-06/HALL-HPS-01
General Scope of Activity	Coiled Tubing Unit-5 AIR TANKS STRUCTURE, TANKS UTT	Date of Inspection	02-JUNE-2024
Place of Inspection	HPS Yard	Valid Until:	01-DECEMBER-2024
Reference Standards:	ASTM E797 & ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		

This is to certify that the undersigned did at the request of Halliburton, Al Burjesia Base attend their facilities at HPS Department on 02-June-2024 in order to carry out the scope of services as described below.

1.0 Scope of Activity:

- 1.1) Visual Inspection of Coil Tubing Unit – AIR TANKS STRUCTURE
- 1.2) Magnetic Particle Inspection (MPI).
- 1.3) Ultrasonic Thickness Testing (UTT)
- 1.4) Review of maintenance records and Previous reports
- 1.5) Issue of Report.

2.0 Summary of Inspection:

- 2.1) Thorough visual inspection of Coil Tubing Unit- AIR TANKS, was carried out and found satisfactory.
- 2.2) MPI was performed on accessible Structure welds. The result was found satisfactory.
- 2.3) Ultrasonic Thickness Testing was carried out on LEFT SIDE, BOADY & RIGHT SIDE. The result was found satisfactory.
- 2.4) The maintenance record of the vehicle was reviewed.

3.0 Identification of item(s) verified & Details of Inspection:

A) AIR TANKS

ID No	26241, 26242,26243, 26244, 26245, 348280
Location:	Coiled Tubing Unit – CTU-05

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner’s work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of ASTM & Lifting Operations Lifting Equipment Regulation “LOLER”. The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.





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3.1) Visual Inspection:

- The visual Inspection of the Coil Tubing Unit- **AIR TANKS STRUCTURE** was carried out as follows:
- The **Structure welds** of the Unit were inspected and NO visible damages observed
- No visual damages on **Painting** were observed on the external surfaces.

FINAL RESULT: PASS

3.2) Magnetic Particle Inspection (MPI):

Magnetic particle Inspection was performed on the following components.:

- Accessible **Structure Welds**

FINAL RESULT: PASS

3.3) ULTRASONIC THICKNESS TESTING (UTT):

Ultrasonic Thickness Testing was performed on the following components.:

- Left Side plate
- Middle Body
- Right Side plate

FINAL RESULT: PASS

3.4) Review of maintenance Record:

The maintenance records and test reports accessories were reviewed and found satisfactory

FINAL RESULT: PASS

4.0 CONCLUSION:

The above Coil Tubing Unit- **AIR TANKS** was found to be in satisfactory condition after carrying out necessary inspection and tests subjected to proper maintenance according to manufacturer recommendation.

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**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
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Ultrasonic Thickness Test of Air Tank					Serial No:		26241
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	LEFT SIDE NECK	0.129	0.118	0.121	0.132		ACCEPTED
2	MIDDLE	0.125	0.113	0.105	0.114		ACCEPTED
		0.115	0.127	0.113	0.117		ACCEPTED
3	RIGHT SIDE NECK	0.121	0.127	0.115	0.129		ACCEPTED

Ultrasonic Thickness Test of Air Tank					Serial No:		26242
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	LEFT SIDE NECK	0.119	0.133	0.127	0.118		ACCEPTED
2	MIDDLE	0.108	0.112	0.107	0.115		ACCEPTED
		0.113	0.125	0.123	0.117		ACCEPTED
3	RIGHT SIDE NECK	0.132	0.128	0.138	0.126		ACCEPTED

Ultrasonic Thickness Test of Air Tank					Serial No:		26243
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	LEFT SIDE NECK	0.137	0.129	0.124	0.134		ACCEPTED
2	MIDDLE	0.113	0.106	0.115	0.103		ACCEPTED
		0.117	0.109	0.111	0.116		ACCEPTED
3	RIGHT SIDE NECK	0.128	0.122	0.134	0.112		ACCEPTED

Ultrasonic Thickness Test of Air Tank					Serial No:		26244
	SECTION	0*	90*	180*	270*	OEM Min	Result
1	LEFT SIDE NECK	0.132	0.135	0.128	0.131		ACCEPTED
2	MIDDLE	0.109	0.111	0.113	0.105		ACCEPTED
		0.112	0.115	0.107	0.117		ACCEPTED
3	RIGHT SIDE NECK	0.134	0.136	0.128	0.127		ACCEPTED

Ultrasonic Thickness Test of Air Tank					Serial No:		26245
	SECTION	0*	90*	180*	270*	OEM Min	Result
	LEFT SIDE NECK	0.136	0.127	0.132	0.126		ACCEPTED
	MIDDLE	0.112	0.107	0.119	0.110		ACCEPTED
		0.104	0.113	0.117	0.109		ACCEPTED
	RIGHT SIDE NECK	0.137	0.131	0.130	0.129		ACCEPTED

All Measurement in Inches

All Measurement in Inches

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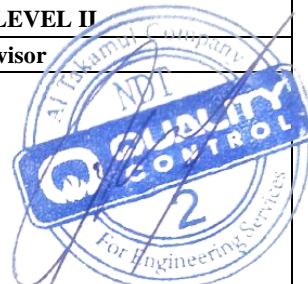
Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com



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	Ultrasonic Thickness Test of Air Tank				Serial No:		348280	
	SECTION		0*	90*	180*	270*	OEM Min	Result
	LEFT SIDE NECK		0.128	0.129	0.133	0.127		ACCEPTED
	MIDDLE		0.117	0.139	0.121	0.112		ACCEPTED
			0.123	0.129	0.117	0.127		ACCEPTED
	RIGHT SIDE NECK		0.138	0.132	0.138	0.136		ACCEPTED
Equipment Details						Technical Details		
Equipme nt:	AC/DC Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke PERMANET HAND MAGNATIC	Magnetic Particle Concentration	1.2 to 2.4 ml/100 ml	
Serial No:	1657	Serial No:	2722003	Serial No:	PY - 02	Method	Wet Magnetic Particle Testing (WMPT)	
Cal. Date:	14-OCT-2024	Cal. Date:	16-OCT-2024	Cal. Date:	14-OCT-2024			
Equipme nt:	Thickness Gauge	Serial No:	5500391	Cal. Date:	14-OCT-2024			
Equipme nt:	TEST BLOCK	Serial No:	NoBo5087	Cal. Date:	15-OCT-2024			
Black Magnetic Ink Manufacture: 7 HF		Magnaflux	Batch No:	220605	Expiry Date:	July-2025	WMPT Light Intensity	3650 Lux
White Contrast Paint Manufacture: WCP 2		Magnaflux	Batch No:	220602	Expiry Date:	June-2025		

	INSPECTED & PREPARED BY	REVIEWED & APPROVED BY	CLIENT SIGNATURE & STAMP
NAME:	Ashraf Elsaid LEEA NDT LEVEL II	M.ABDULLAH LEEA NDT LEVEL II	
DESIGNATION	Inspector	Supervisor	
SIGNATURE & SEAL			

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