

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

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**ULTRASONIC FLAW DETECTION DYE PENETRANT INSPECTION CERTIFICATE 9" HOS #615630-1**

<b>Client Name:</b>	ZHONGMAN PETROLEUM ENGINEERING TECHNOLOGY(HONG KONG) CO LIMITED IRAQ	<b>Report No.:</b>	ZPEC-16-QC-24-08-RS-005
<b>Acceptance criteria:</b>	DS-1 Fifth Edition, Volume 3 CAT 3-5	<b>Date of Inspection:</b>	06.AUG.2024
<b>Work Location:</b>	PO-64	<b>Rig Name:</b>	ZPEC-16(DD)
<b>TEST EQUIPMENT &amp; CONSUMABLE DETAILS</b>			
<b>EQ. Manufacturer/ Model:</b>	Sonatest/ D-50	<b>EQ. Serial No:</b>	I017374
<b>Calibration Due Date:</b>	15.OCT.2024	<b>Couplant:</b>	UT Gel
<b>Calibration Block Type:</b>	V1 (SR # 506233)	<b>Calibration Due Date:</b>	15.OCT.2024
<b>Transducer Angle:</b>	90 DEG, 60 DEG, 45 DEG	<b>Transducer Frequency:</b>	4 MHz/ SR. 13737
<b>Range:</b>	100 mm	<b>Reference dB:</b>	42 dB
<b>Area Scanned:</b>	Connections	<b>Material Velocity:</b>	3250 m/s, 5900 m/s
<b>PENETRANT SKL-WP2</b>	Batch #:220511 Exp: May,2025 Manufacture: Magnaflux	<b>TECHNIQUE 2</b>	TYPE II VISIBLE, METHOD 'A' WATER - WASHABLE
<b>DEVELOPER SKD-S2</b>	Batch #:220302 Exp. March,2025 Manufacture: Magnaflux	<b>DEVELOPER DWELL TIME:</b>	15 Minutes
<b>PENETRANT DWELL TIME:</b>	30 Minutes	<b>Test Part Temperature:</b>	115 °F
<b>INFRARED THERMOMETER</b>	SR#201704125 Cal Due 13.AUG.2024	<b>COMPARATOR BLOCK</b>	SR#11223 CAL.Date. 17. APRIL.2024 CAL.Due Date. 16. OCT .2024
<b>LEAD GAGE</b>	SR#AH07KF0027 GAEMAKER LG-5003 Cal. 13.FEB.2024 Cal Due 12.AUG.2024	<b>THREAD PROFILE GAGE</b>	SR#21336 Cal. 13.FEB.2024 Cal Due 12.AUG.2024 SR#21335 Cal. 15.FEB.2024 Cal Due 14.AUG.2024
<b>Digital Lux Meter</b>	SR#2722003 Cal Due 16.OCT.2024	<b>WMPT Light Intensity:</b>	3500 Lux
<b>Methodology:</b>	<ul style="list-style-type: none"> <li>• Through Visual inspection</li> <li>• Dimensional 3</li> <li>• UltraSonic Flaw Detection</li> <li>• Dye Penetrant Inspection</li> </ul>		
<b>CONNECTION</b>	7 5/8" Reg	<b>SIZE</b>	9"

Serial No.	Description	Connection		Result Inspection			Dimensional 3 Inspection												
		Pin	Box	Pin	Box	Body	Pin						Box					Body	
							OD(In)	ID(In)	SRG φ(In)	SRG λ(In)	Pin λ(In)	Bevel φ(In)	OD(In)	CB φ(In)	CB δ(In)	BB φ(In)	BB δ(In)		Bevel φ(In)
615630-1	9" HOS	7 5/8 REG	7 5/8 REG	Acc.	S&T.D	Acc.	9"	4"	6 3/8"	15/16"	5 1/2"	8 11/16"	9"	7 2/32	5/8	-	-	8 11/16"	38"
<b>Conclusion:</b>		9" HOS above were found "UnAcceptable" From Box Connection Seal&Thread Damage Rejected.																	

**Abbreviations :**

<b>OD</b> Outside Diameter	<b>ID</b> Inside Diameter	<b>SRG</b> Stress Relief Groove	<b>CB</b> Counter Bore	<b>BB</b> Bore Back	<b>FB</b> Float Bore	
<b>φ</b> Diameter	<b>λ</b> Length	<b>w</b> Width	<b>δ</b> Depth	<b>NP.</b> Not Present	<b>NA.</b> Not Applicable	
<b>EGR</b> Elevator Groove Recess	<b>SGR</b> Slip Groove Recess	<b>CR</b> Crack	<b>B</b> Bent	<b>PC</b> Premium Class	<b>RF</b> Reface	
<b>GT</b> Galled Thread	<b>TP</b> Thread Pitting	<b>SP</b> Seal Pitting	<b>TD</b> Thread Damage	<b>SD</b> Seal Damage	<b>M</b> Mashed	
<b>1</b> 100 % Coating	<b>2</b> 99-71 % Coating	<b>3</b> 70-40 % Coating	<b>4</b> Up to 40 %	<b>5</b> Nil	<b>WT</b> Wall Thickness	
<b>Colors Code:</b>		<b>Red</b> No Defects	<b>Red</b> Crack or Extreme Damage.	<b>Blue</b> Damage	<b>Green</b> Seal Damage	<b>Yellow</b> ACFM

<b>Inspector Name:</b>	<b>Review By</b>					
<b>Qualification:</b>	<b>Senior Inspector:</b>	M.USMAN	<b>Supervisor:</b>	M.SARWAR	<b>Customer Name:</b>	
<b>Signature:</b>					<b>Customer Signature:</b>	

Original - Client Files Copy - Area Office QC/FN/DPI/006 Rev.00 Dated: 07 Nov 2021

