

# 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](mailto:OP@qualitycontrol-iraq.com) / [hany.akafi@qualitycontrol-iraq.com](mailto:hany.akafi@qualitycontrol-iraq.com)



## ULTRASONIC FLAW DETECTION & MAGNETIC PARTICLE INSPECTION CERTIFICATE OF 5 1/2" HWDP

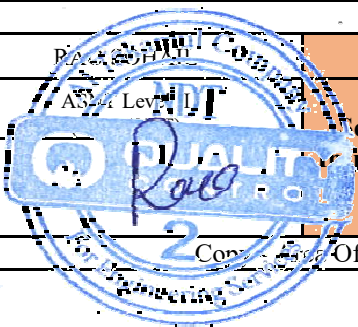
<b>Client Name:</b>	ZHONGMAN PETROLEUM ENGINEERING TECHNOLOGY(HONG KONG) CO LIMITED IRAQ	<b>Report No.:</b>	ZPEC-16-QC-24-08-RS-001
<b>Acceptance criteria:</b>	DS-1 Fifth Edition, Volume 3 CAT 3-5	<b>Date of Inspection:</b>	06.AUG.2024
<b>Work Location:</b>	PO-64	<b>Rig Name:</b>	ZPEC-16
<b>TEST EQUIPMENT &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>White Contrast WCP-2</b>	Batch #: 220602 Manufacture: Magnaflux Exp Date: JUN,2025	<b>Technical Details</b>	Wet Visible Continuous
<b>Black Ink 7HF</b>	Batch#:220605 Manufacture: Magnaflux Exp Date: JULY,2025	<b>Coil 1200 Amp-Turns/in</b>	SC 22713 Cal.15.FEB.2024 Cal Due14.AUG.2024
<b>Fluorescent 14HF</b>	Batch #: 220306 Manufacture: Magnaflux Exp Date: March.2025	<b>A.C Hand Yoke</b>	201504053 Cal.15.FEB.2024 Cal Due14.AUG.2024
<b>Intensity Meter</b>	SR#1608000134 CAL.Date Cal. 15.FEB.2024 Cal Due 14.AUG.2024	<b>UV Black Light</b>	SR#1900084 Cal.15.FEB.2024 Cal Due14.AUG.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>Magnetic Particle Fluorescent 14HF Concentration:</b>	0.1 To 0.4 ML / 100 ML	<b>WMPT Light Intensity:</b>	3450 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>MPI inspection with Ultraviolet Light</li> </ul>		
<b>CONNECTION</b>	5 1/2" FH	<b>SIZE</b>	5 1/2"

Serial No.	Visual Inspection				Black Light		Dimensional 3 Inspection																
							Pin					Box					Body						
	Pin	Box	Body	HB	Pin	Box	OD (in)	ID (in)	SRG ϕ (in)	SRG λ (in)	Bevel ϕ (in)	pinλ (in)	OD (in)	CB ϕ (in)	CB δ (in)	BB ϕ (in)	BB δ (in)	Bevel ϕ (in)	Seal w	Pin Tong λ (in)	Box Tong λ (in)	Center Pad ϕ (in)	
2305956	Acc	Acc	Acc	√	Acc	Acc	7 1/4"	3 1/4"	5 7/32"	1"	6 3/4"	5"	7 1/4"	5 29/32"	5/8"	5 7/64"	8 1/2"	6 3/4"	16/32"	18 1/16"	16 1/2"	6"	
2207509	Acc	Acc	Acc	√	Acc	Acc	7 1/4"	3 1/4"	5 7/32"	1"	6 3/4"	5"	7 1/4"	5 29/32"	5/8"	5 7/64"	8 1/2"	6 3/4"	16/32"	18 1/8"	17"	6"	
2305955	Acc	Acc	Acc	√	Acc	Acc	7 1/4"	3 1/4"	5 7/32"	1"	6 3/4"	5"	7 1/4"	5 29/32"	5/8"	5 8/64"	8 1/2"	6 3/4"	16/32"	18 1/4"	16 7/8"	6"	
2207502	Acc	Acc	Acc	√	Acc	Acc	7 1/4"	3 1/4"	5 7/32"	1"	6 3/4"	5"	7 1/4"	5 29/32"	5/8"	5 7/64"	8 1/2"	6 3/4"	16/32"	18 1/8"	16 7/8"	6"	
2305953	Acc	Acc	Acc	√	Acc	Acc	7 1/4"	3 1/4"	5 7/32"	1"	6 3/4"	5"	7 1/4"	5 29/32"	5/8"	5 8/64"	8 1/2"	6 3/4"	16/32"	18 1/8"	17 1/8"	6"	

**Conclusion:** The Above Mentioned 5 1/2" Heavy Weight Drill Pipe was Found Acceptable from at time of Inspection ready to use.

### 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>					
White	No Defects	Red	Crack or Extreme	Blue	ACFM
Green	Field Repair	Yellow	Damage		



<b>Inspector Name:</b>	Review By					
<b>Qualification:</b>	Senior Inspector:	M.USMAN	Supervisor:	M.SARWAR	<b>Customer Name:</b>	
<b>Signature:</b>					<b>Customer Signature:</b>	
Original - Client Files . . . . . Office QC/FN/AF,REP/026 Rev.00 Dated 01 AUG 2021						

