ULTRASONIC METER
INSPECTION REPORT

RMG
ONE STEP AHEAD

Location & USM Data

USM	New USM 1	**Matrix version**	149	**Reference**	automatic		
Site	翔安二期A	**CPU CRC**	1AB7	**Time**	7/30/2024 2:22:31 PM		
Unit Number	832362	**fiscal par. CRC**	CD79		Found	Ref.	
Log Start	7/30/2024 2:57:11 PM	**piecewise lin. CRC**	0000	**Gas Velocity**	4.38 m/s	4.01 m/s	
Log Finish	7/30/2024 2:59:10 PM	**Config. Status**	Error!				

Counters

		Tot. Volume d.1	**Tot. VolumeErr d.1**	**Tot. Volume d.2**	**Tot. VolumeErr d.2**
Start	7/30/2024 2:57:11 PM	000002113.34 m3	000000000.75 m3	000000000.44 m3	000000000.14 m3
End	7/30/2024 2:59:10 PM	000002122.03 m3	000000000.75 m3	000000000.44 m3	000000000.14 m3
Diff.	00:02:00	8.69 m3	0.00 m3	0.00 m3	0.00 m3

Flow Profile

PASS

Plane	**Path**	**Velocity(m/s)**	**Path**	**In Plane Velocity Ratios Found**	**Ref.**	**Dev. (%)**	**Swirl**	**Profile Factor**	**Symmetry**
1	1	4.126	1/2	1.0061	0.9969	0.9156	0.096	1.124	1.011
	2	4.101							
2	3	4.675	3/4	1.0090	1.0137	-0.4667	0.147		
	4	4.633							
3	5	4.183	5/6	1.0085	1.0012	0.7236	0.141		
	6	4.148							
Marginal Limit						±5.0000	±10.000	1.110 ±0.200	1.000 ±0.200
Fail Limit						±10.0000	±15.000	±0.300	±0.300

Performance & Speed of Sound

PASS

Plane	**Path**	**Performance (%)**	**SoS (m/s)**	**SoS Deviation (Pn/Avg, %) Found**	**Ref.**	**Diff.**	**Speed of Sound (m/s) Meter**	**AGA10**	**Dev. (%)**
1	1	100	423.719	-0.01	0.01	-0.02	423.750	423.47	0.07
	2	100	423.779	0.01	0.02	-0.01			
2	3	100	423.720	-0.01	-0.02	0.02	Source AGA10 SoS: calculated by RMGViewUSM		
	4	100	423.760	0.00	-0.01	0.02			
3	5	100	423.713	-0.01	-0.01	-0.00			
	6	100	423.810	0.01	0.02	-0.00			
Average		100	423.750						
Marginal Limit		85		±2.00		±5.00		±5.00	
Fail Limit		33		±5.00		±10.00		±10.00	

Transducers

PASS

		Transducer Gain (dB) 1					**2**					**Deviation Formula**	**SNR (dB) 1**	**2**
				Deviation					**Deviation**					
Plane	**Path**	**Found**	**Ref.**	**Found**	**Ref.**	**Diff.**	**Found**	**Ref.**	**Found**	**Ref.**	**Diff.**			
1	1	9.7	9.7	0.12	0.12	0.00	9.6	9.6	-0.19	-0.19	0.00	AGC1 - (AGC1+AGC2+AGC5+AGC6)/4	39.11	36.16
	2	9.8	9.8	0.20	0.20	0.00	9.8	9.8	0.01	0.01	0.00	AGC2 - (AGC1+AGC2+AGC5+AGC6)/4	36.15	36.16
2	3	11.4	11.4	-0.26	-0.26	0.00	11.2	11.2	-0.51	-0.51	0.00	AGC3 - (AGC3+AGC4)/2	40.17	41.56
	4	11.9	11.9	0.26	0.26	0.00	12.2	12.2	0.51	0.51	0.00	AGC4 - (AGC3+AGC4)/2	36.33	36.81
3	5	9.3	9.3	-0.24	-0.24	0.00	9.9	9.9	0.09	0.09	0.00	AGC5 - (AGC1+AGC2+AGC5+AGC6)/4	36.20	36.02
	6	9.5	9.5	-0.08	-0.08	0.00	9.9	9.9	0.09	0.09	0.00	AGC6 - (AGC1+AGC2+AGC5+AGC6)/4	36.46	35.57
Marginal Limit				10.00		10.00			10.00		10.00		20.0	20.0
Fail Limit				20.00		20.00			20.00		20.00		15.0	15.0

AGA10 Input

Pressure	54.4 bara
-Source	Input in RMGViewUSM
Temperature	27.9 ° C
-Source	Input in RMGViewUSM

Constituent	**Normalized Mol %**	**Constituent**	**Normalized Mol %**	**Constituent**	**Normalized Mol %**
Methane	95.643	Hexane	0.000	Hydr. Sulphide	0.000
Ethane	2.979	Heptane	0.000	Helium	0.000
Propane	0.804	Octane	0.000	Argon	0.000
Iso Butane	0.167	Nonane	0.000	Oxygen	0.000
Normal Butane	0.212	Decane	0.000	Hydrogen (H2)	0.000
Iso Pentane	0.019	Carbon Dioxide	0.000	Water	0.000
Normal Pentane	0.005	Nitrogen	0.171	**Total**	**100.000**
Neo Pentane	0.000	Carbon Monoxide	0.000		

Instrument Calibration

GC Calibration			**Pressure Transmitter**			**Temperature Transmitter**		
Test Run	**Found**	**Left**	**Test Ref.**	**Found**	**Left**	**Test Ref.**	**Found**	**Left**
Ref.Gas:								

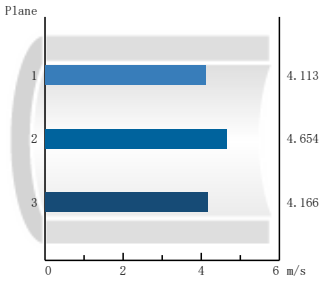
Performed by:

Witnessed by:

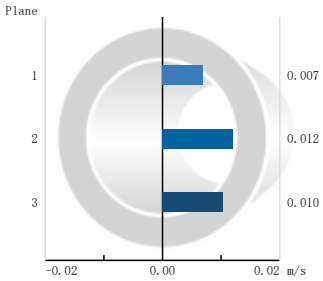
Remarks:

Date:

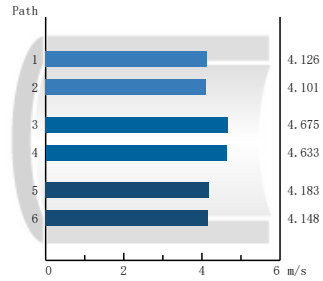
Axial Velocity



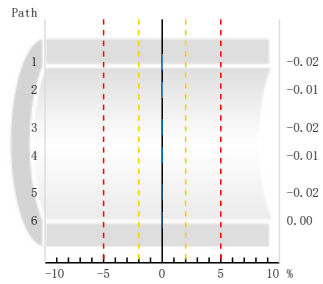
Cross Flow Velocity



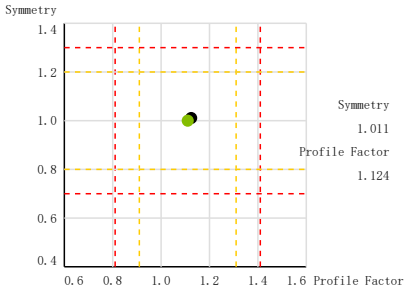
Path Velocity



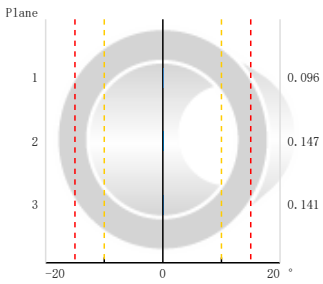
SoS Deviation



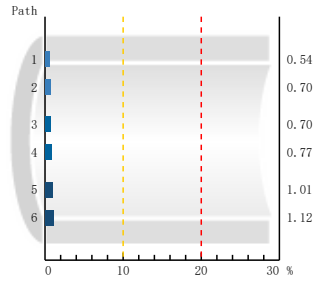
Profile



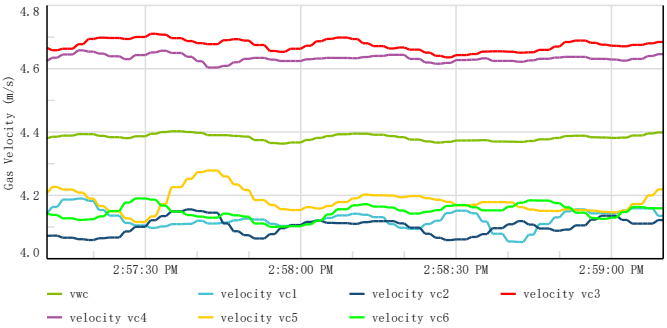
Swirl



Turbulence



Gas Velocity



SoS