

### SCREW AIR END PERFORMANCE TEST REPORT

TEST METHOD: Module  
 MODULE TYPE: CD14D1\_39331582      STAGE1 TYPE: CDA96      STAGE2 TYPE: CDB68  
 MODULE SN: WJ16436CD1423      STAGE1 SN: C23DAC3770      STAGE2 SN: C23DAR8236  
 TEST MEDIUM: Air      SPECIFICATION: CD14D1 | G18 | OP20 | RC | RO  
 TEST OP: Hongtao Yu      TEST STAND: Small Bed TR3      DATE OF TEST: 20231014/23:28

TEST CONDITION AND PERFORMANCE					
ITEMS	UNIT	DESIGN	TEST(Stage1)	TEST(Stage2)	CORRECTED
AMBIENT PRESSURE	[bara]		1.012		
AMBIENT AIR HUMIDITY	[%]		24.4		
MOTOR SPEED	[r/min]	3570	3570	3570	
COMPRESSOR SPEED	[r/min]	10621/16993	10620	16991	
ABS.SUCTION PRESSURE	[bara]	0.985/3.18	0.946	3.08	
SUCTION TEMPERATURE	[°C]	50.0/61.0	49.2	56.9	
DISCHARGE PRESSURE	[bara]	3.27/11.50	3.29	10.98	
DISCHARGE TEMPERATURE	[°C]	205.2/252.20	212.0	248.4	
PRESSURE RATIO	[-]	11.68	11.604		
SUCTION VOLUME	[m <sup>3</sup> /h]	1335.60	1374.15		1373.25(2.8%)
SHAFT POWER	[kW]	160.03	159.01		162.56(1.6%)
SPECIFIC POWER	[kW/(m <sup>3</sup> /min)]	7.19	6.94		7.10(-1.2%)

OIL SYSTEM PARAMETERS						
OIL-TYPE		ISO VG 46				
STAGE		STAGE1			STAGE2	
<b>GEAR OIL</b>						
PRESSURE	[bara]	2.49		2.68		
TEMPERATURE INLET	[°C]	49.54		48.87		
VOLUME	[l/min]	2.46		2.43		
<b>LUBE OIL</b>		SUCTION SIDE	DISCHARGE SIDE	SUCTION SIDE	DISCHARGE SIDE	
PRESSURE	[bara]	2.43	2.49	2.51	2.42	
TEMPERATURE INLET	[°C]	49.75	49.44	49.97	50.05	
VOLUME	[l/min]	3.63	8.43	3.19	5.96	
<b>COOLANT OIL</b>						
PRESSURE	[bara]	2.46				
TEMPERATURE INLET	[°C]	50.37				
VOLUME	[l/min]	7.26				

Released

## SCREW AIR END MECHANICAL TEST REPORT

TEST METHOD:	Module				
MODULE TYPE:	CD14D1_39331582	STAGE1 TYPE:	CDA96	STAGE2 TYPE:	CDB68
MODULE SN:	WJ16436CD1423	STAGE1 SN:	C23DAC3770	STAGE2 SN:	C23DAR8236
TEST MEDIUM:	Air	SPECIFICATION:	CD14D1   G18   OP20   RC   RO		
TEST OP:	Hongtao Yu	TEST STAND:	Small Bed TR3	DATE OF TEST:	20231014/23:27

<b>v=vertical</b>	<b>h=horizontal</b>	<b>a=axial</b>
( )=Filtered Frequency		

StageType	Speed	Vibration								Result
		1v	1h	2v	2h	2a				
Stage1	10620.8	2.68	2.93	4.19	4.50	4.78				
	(177.01)	0.32	0.24	1.02	0.72	0.53				
Stage2	16993.2	3.00	2.88	4.86	2.66	5.64				
	(283.22)	0.57	0.55	0.47	1.11	0.76				

Stage sealing												
Stage	Stage1						Stage2					
	HL	NL	Unit	Result		HL	NL	Unit	Result			
SUCTION SIDE	Tested value	0	0	m <sup>3</sup> /h	Min	H-1.734 N-1.088	Tested value	1.62	1.54	m <sup>3</sup> /h	Min	H0.267 NO.222
		0	0	°C	Max	H-0.153 N-0.096		75	65	°C	Max	H3.026 N2.516
	Corrected value	0.000	0.000	m <sup>3</sup> /h	PASS		Corrected value	0.507	0.496	m <sup>3</sup> /h	PASS	
DISCHARGE SIDE	Tested value	1.52	1.48	m <sup>3</sup> /h	Min	H1.023 NO.633	Tested value	4.11	2.54	m <sup>3</sup> /h	Min	H0.663 NO.618
		68	64	°C	Max	H11.594 N7.174		112	96	°C	Max	H7.514 N7.004
	Corrected value	1.533	1.511	m <sup>3</sup> /h	PASS		Corrected value	1.163	0.750	m <sup>3</sup> /h	PASS	

Released