Recycle Gas Compressor
C-101A/B

REV.	DESCRIPTION	PREP'D	CHK'D	REV'D	DATE
1	**ISSUED FOR REVIEW**	YTT	ZX	YL	Apr-18-2022
0	**ISSUED FOR REVIEW**	YTT	ZX	YL	Mar-18-2022

中国科学院 大连化学物理研究所 Dalian Institute of Chemical Physics, Chinese Academy of Sciences.	Equipment Datasheet **Compressor Datasheet**	Document No.	**EDA01-BE-100-EDS-C-01**
		Design Stage	PDP
		Sheet 2 of 3	

Type	Diaphragm	Equipment Name	Recycle Gas Compressor
Type of Driver	Motor	Equipment Tag Number	C-101A/B
Number of Equipment:	2	Operating 1	Spares 1

	Operation Conditions			
1	○ Operating Case	Case-1		
2	○Type of Operation	Normal		
3	○Compressing Fluid	Composition: See Page 3		
4	○ Flow Rate（1.013kPa&0℃）Nm3/h	360.0		
5	○ Flow Rate wt kg/h	125.0		
6	**Inlet Condition**			
7	○ Pressure MPa(A)	1.80		
8	○ Temperature ℃	10.00		
9	○ Relative Humidity %			
10	○ Molecular Weight	7.747		
11	○ Cp / Cv	1.444		
12	○ Compressible Coefficient Z	0.955		
13	○Inlet Flow Rate Vol m3/h	20.4		
14	**Outlet Condition**			
15	○ Pressure MPa(A)	21*		
16	○ Temperature ℃	120		
17	○ Cp / Cv	1.726		
18	○ Compressible Coefficient Z	0.905		
	○Outlet Flow Rate Vol m3/h	2.42*		
19	**Performance Parameter**			
20	□ Shaft Power(Compressor Crank) kW	50.0		
21	□ Shaft Power(All Loss) kW			
22	□ Volume Efficiency %			
23	□ Adiabatic Efficiency %			
24	□			
25	□			
1	**ISSUED FOR DESIGN**			
27	Range 60 to 110 %			
28				
29				
30				
31				
32				
33				
34	Note: *The Power is calculated and determined by supplier finally.			

中国科学院 大连化学物理研究所 Dalian Institute of Chemical Physics, Chinese Academy of Sciences.			Equipment Datasheet **Reciprocation Datasheet**		Document No.	**EDA01-BE-100-EDS-C-01**
					Design Stage	PDP
					Sheet 3 of 3	
Type	Diaphragm		Equipment Name		Recycle Gas Compressor	
Type of Driver		Motor	Equipment Tag Number		C-101A/B	
Number of Equipment:		2	Operating	1	Spares	1

	Operation Conditions(Cont.)					
1	Vapor Composition		Case-1	Case-2	Case-3	Note
2		Mol.wt	Vol%	Vol%	Vol%	
3	■ MEA	61.080	2.25E-14			
4	■ H2	2.016	0.618	0.999		
5	■ NH3	17.034	0.382			
6	■ EDA	60.100	3.17E-11			
7						
8						
9	■ N2	28.966		0.001	0.999	
10	■ Ar	39.948			0.001	
11	■ Water	18.015				
12						
13						
14	Total		1.000	1.000	1.000	
15	Average Molecular Weight		7.75			
16	Notes:					
17						
18	1. The compressor shall be designed to operate under all operating condtions described above.					
19						
20	2. Material of construction(MOC) and final design conditions to be determined by manufacture					
21						
22						
23						
24						

25	Standard and Specification			
26	Compressor	API	Lubrication and Sealing Oil System	API
27	**ISSUED FOR DESIGN**		Electric	API
28	Press Vessel	ASME	Instrument	See Specification
29	Gas Cooler	ASME		
30	Oil Cooler	ASME		
31				
32				
33				
34				