

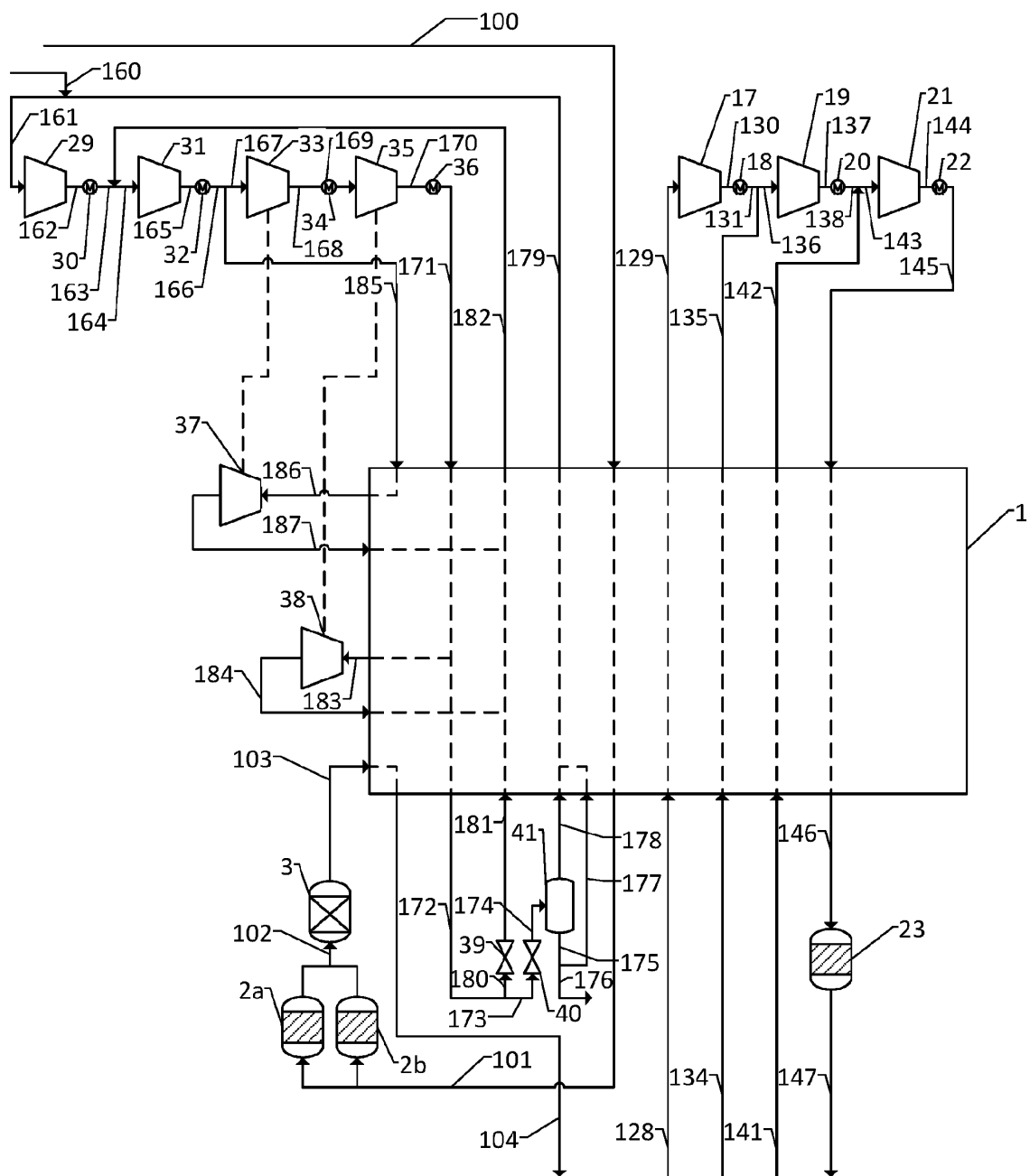


Fig. 1A

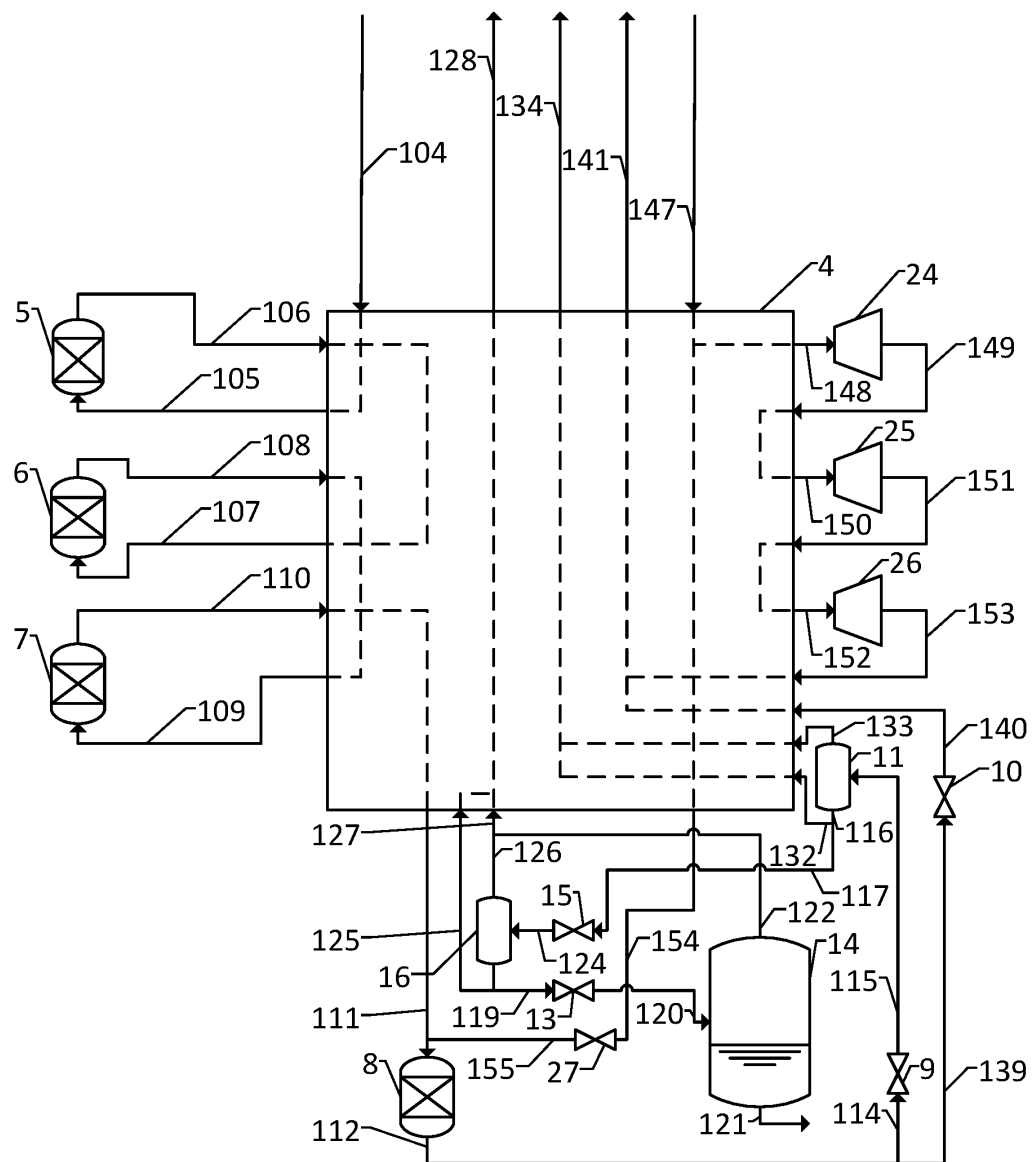


Fig. 1B

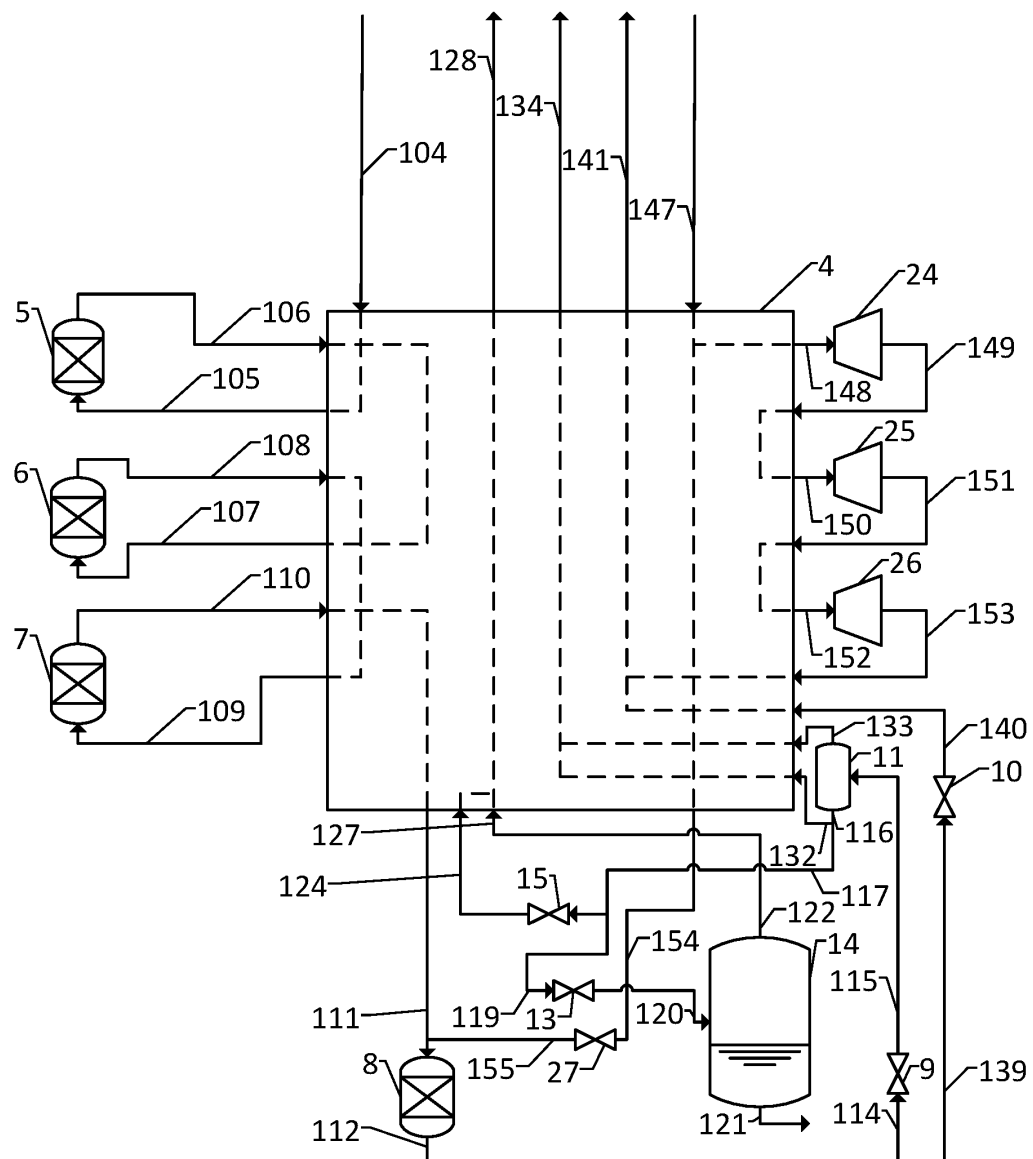


Fig. 1C

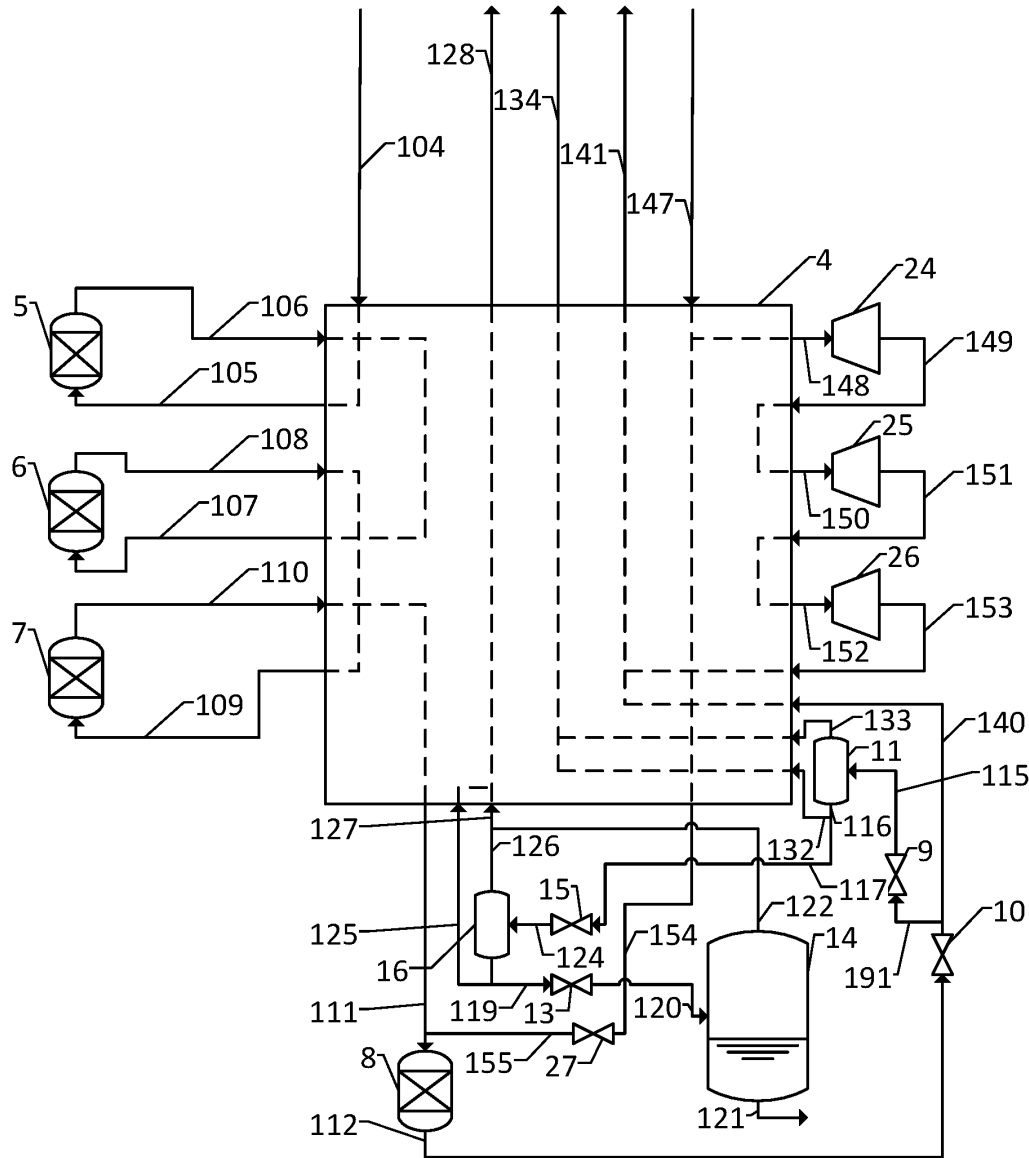


Fig. 1D

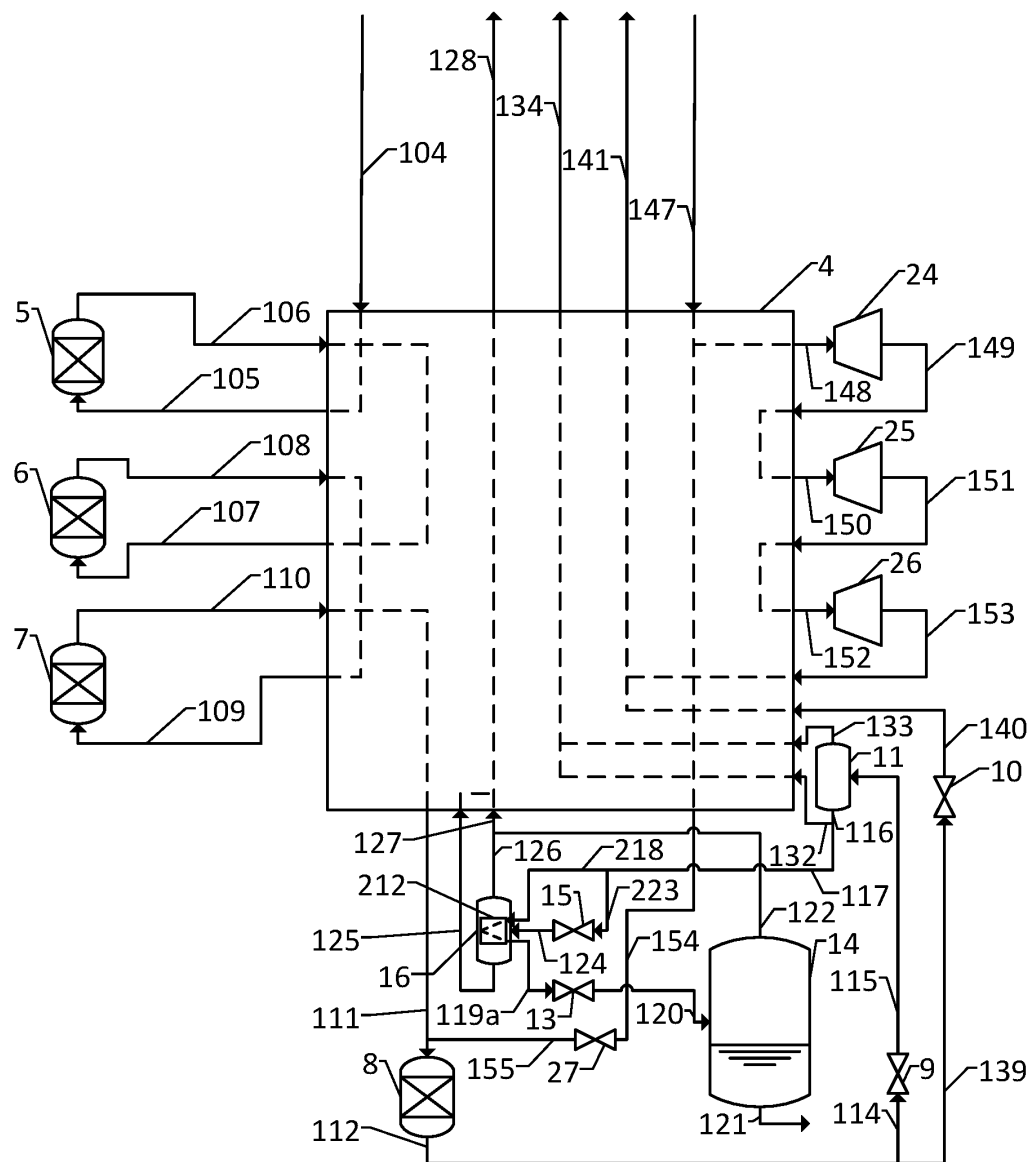


Fig. 1E

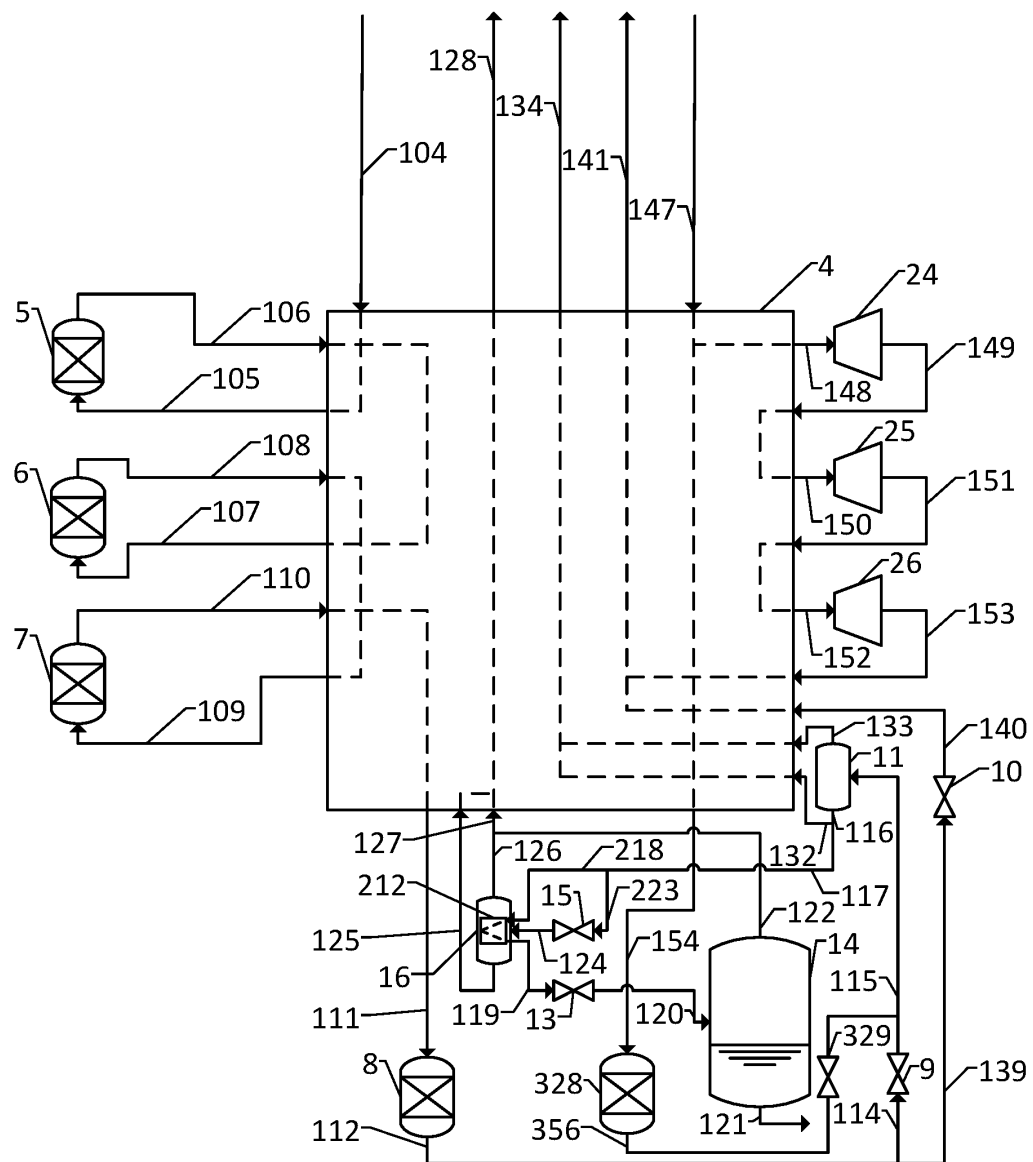


Fig. 1F

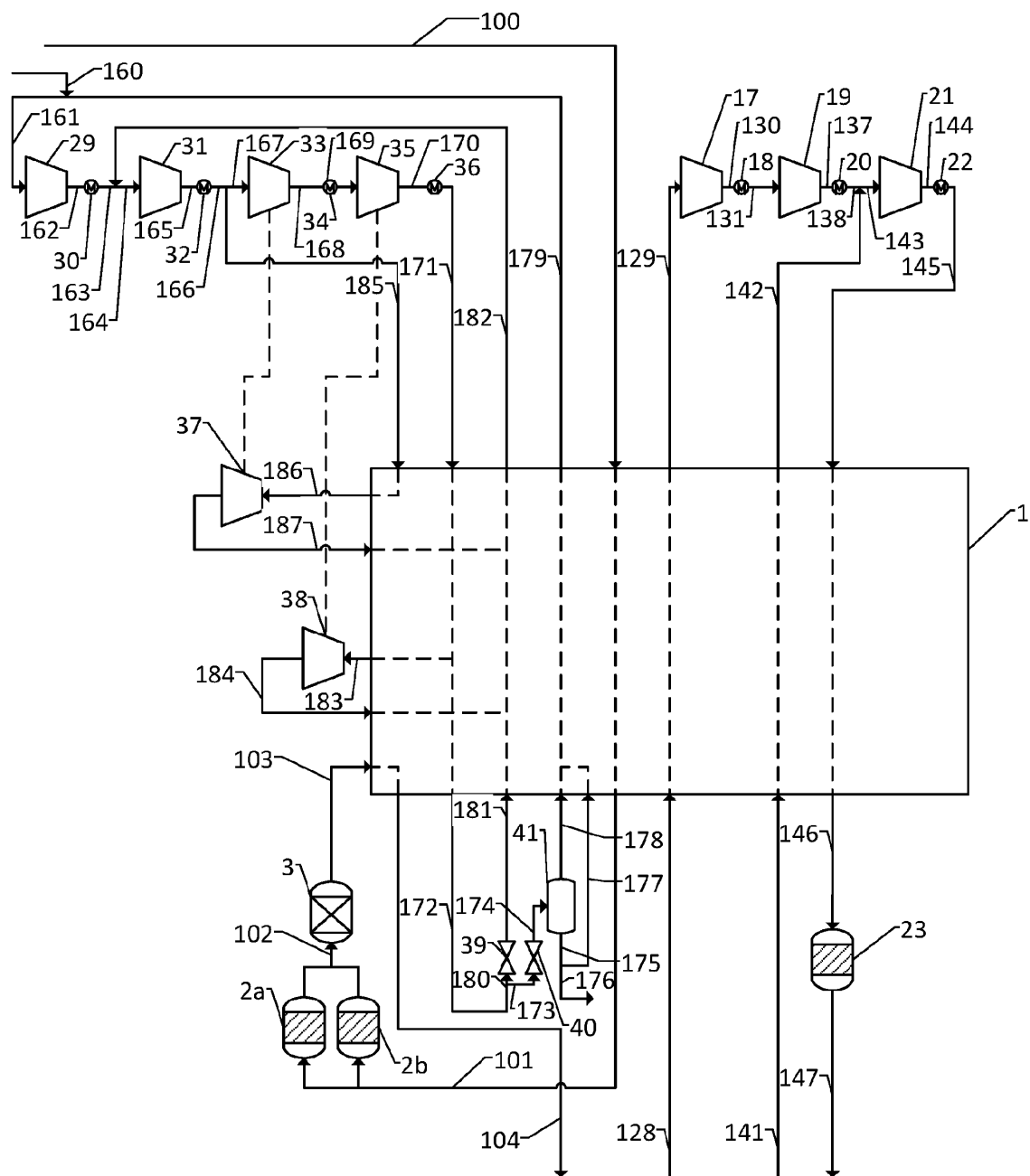


Fig. 2A

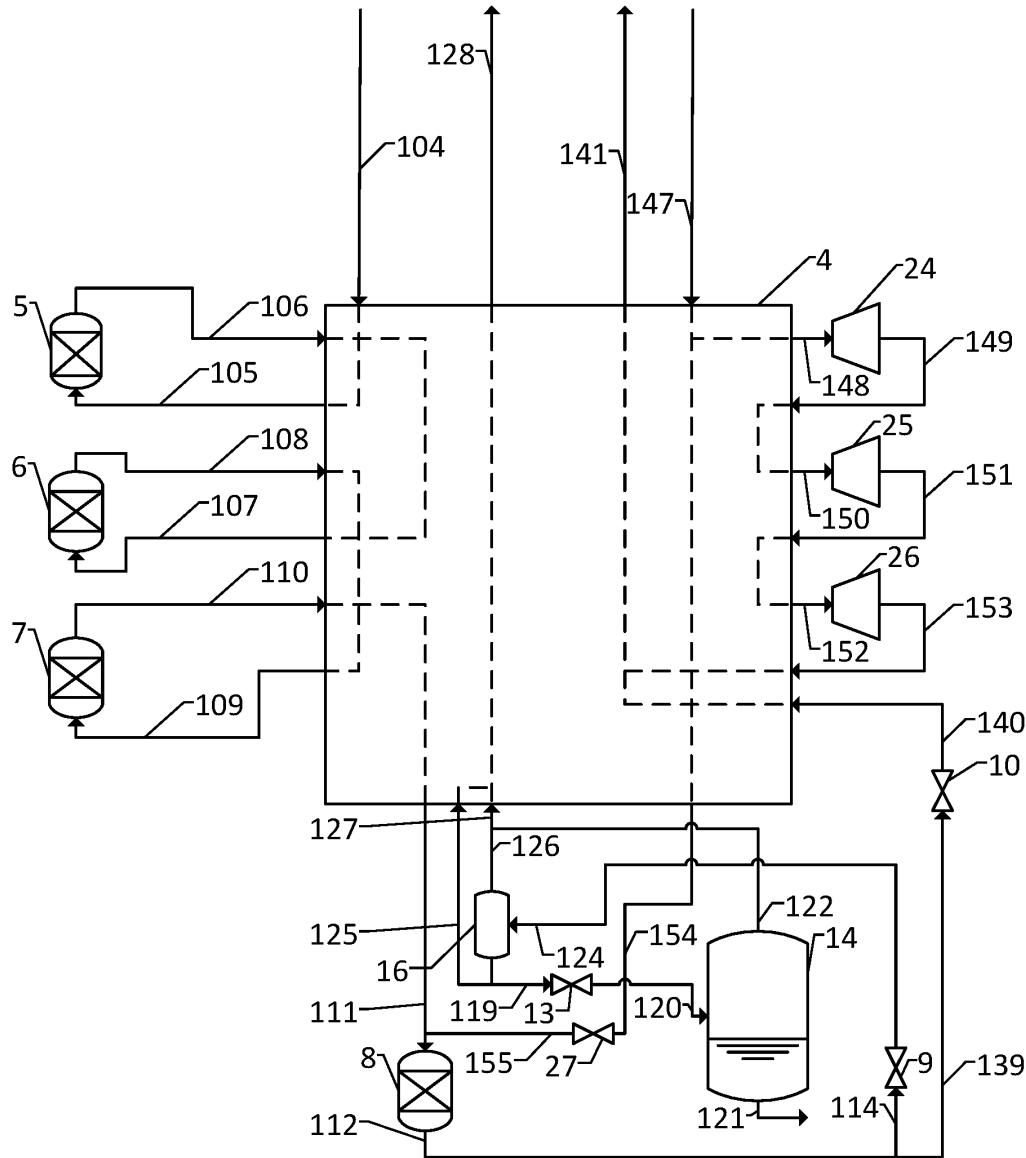


Fig. 2B

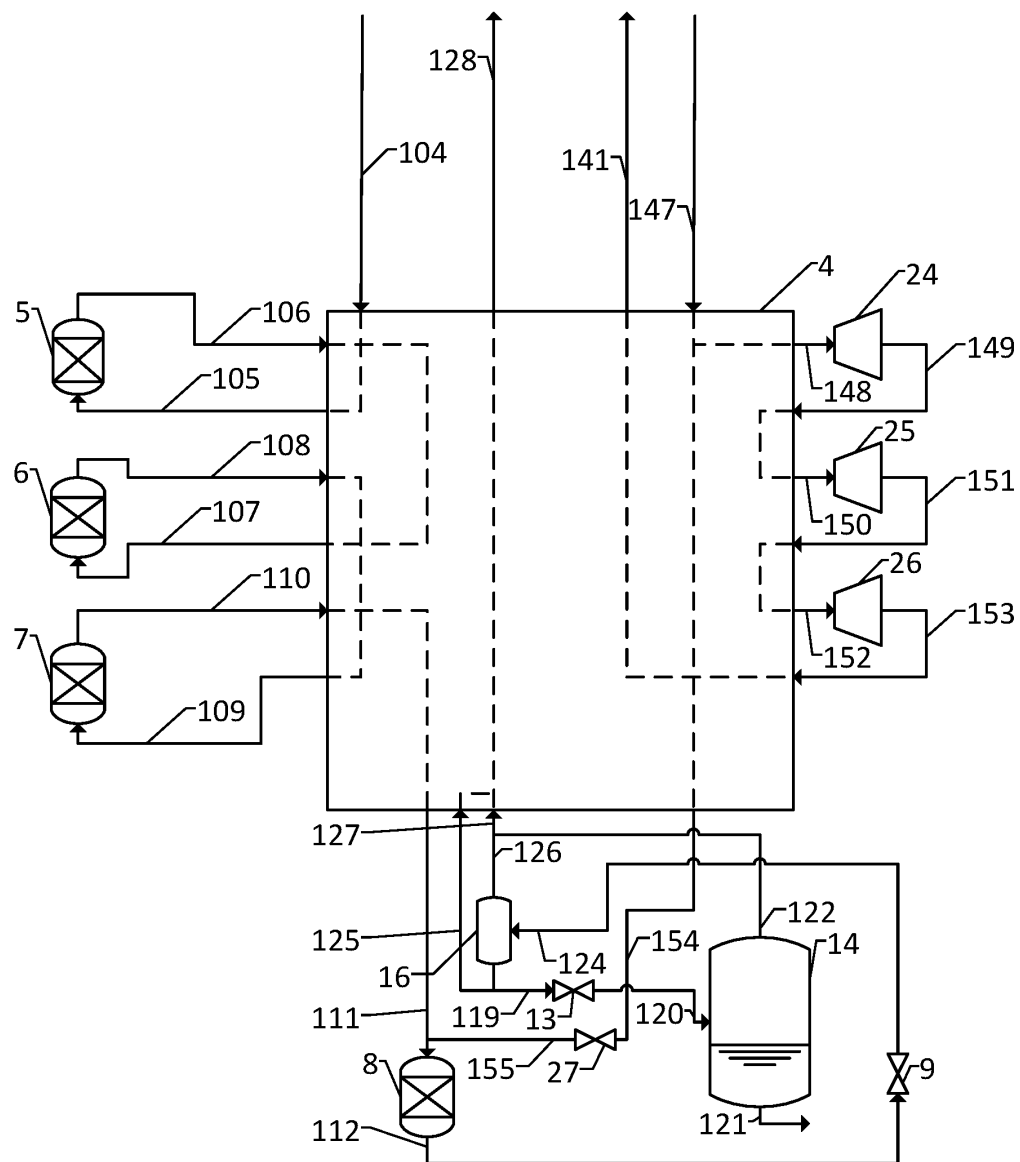


Fig. 2C

Stream number		100	112	116	121	133	140	145	154
Temperature	K	305.0	27.8	25.6	21.4	25.6	28.2	305.0	24.4
Pressure	bar	31.00	28.97	3.69	1.38	3.69	9.17	34.68	34.05
Molar Flow	kmol/hr	496.0	1005.9	720.0	496.0	87.0	198.9	3454.6	509.8
Mass Flow	kg/hr	1000.0	2027.8	1451.4	999.9	175.3	401.1	6964.4	1027.8
Vapour Fraction		1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00
Mole fraction ortho-H ₂		0.750	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Mole fraction para-H ₂		0.250	0.975	0.975	0.975	0.975	0.975	0.975	0.975
Mole fraction nitrogen		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stream number		161	171	172	174	181	183	186	
Temperature	K	302.1	305.0	79.7	78.7	81.5	183.8	254.8	
Pressure	bar	1.06	64.12	63.84	1.20	10.31	63.84	30.53	
Molar Flow	kmol/hr	142.9	1402.3	222.3	142.9	79.4	1180.1	1158.8	
Mass Flow	kg/hr	4002.2	39284.6	6226.3	4002.2	2224.1	33058.3	32461.9	
Vapour Fraction		1.00	1.00	0.00	0.08	0.00	1.00	1.00	
Mole fraction ortho-H ₂		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mole fraction para-H ₂		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mole fraction nitrogen		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Compressors 29, 31, 33, 35									
Compressors 17, 19, 21	3256 kW								
Total power	6184 kW								
	9440 kW								

Fig. 3

Stream number		100	112	121	140	145	154	
Temperature	K	305.0	27.8	21.4	28.2	305.0	24.5	
Pressure	bar	31.00	28.97	1.38	8.54	33.58	32.95	
Molar Flow	kmol/hr	496.0	978.6	496.0	192.5	3376.0	482.6	
Mass Flow	kg/hr	1000.0	1972.8	1000.0	388.2	6806.0	972.8	
Vapour Fraction		1.00	0.00	0.00	0.00	1.00	0.00	
Mole fraction ortho-H2		0.7500	0.0250	0.0250	0.0250	0.0250	0.0250	
Mole fraction para-H2		0.2500	0.9750	0.9750	0.9750	0.9750	0.9750	
Mole fraction nitrogen		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Stream number		161	171	172	174	181	183	186
Temperature	K	302.2	305.0	79.7	78.7	81.6	183.5	256.6
Pressure	bar	1.06	64.64	64.36	1.20	10.14	64.36	30.44
Molar Flow	kmol/hr	139.3	1367.7	216.3	139.3	77.1	1151.4	1140.1
Mass Flow	kg/hr	3901.3	38314.6	6060.1	3901.3	2158.8	32254.5	31938.5
Vapour Fraction		1.00	1.00	0.00	0.08	0.00	1.00	1.00
Mole fraction ortho-H2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mole fraction para-H2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mole fraction nitrogen		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Compressors 29, 31, 33, 35	3222 kW							
Compressors 17, 19, 21	6456 kW							
Total power	9678 kW							

Fig. 4

Stream number		100	112	121	145	154		
Temperature	K	305.0	27.8	21.4	305.0	24.2		
Pressure	bar	31.00	28.97	1.38	32.98	32.35		
Molar Flow	kmol/hr	496.0	856.1	496.1	3244.4	360.1		
Mass Flow	kg/hr	1000.0	1725.9	1000.0	6540.7	725.9		
Vapour Fraction		1.00	0.00	0.00	1.00	0.00		
Mole fraction ortho-H2		0.7500	0.0250	0.0250	0.0250	0.0250		
Mole fraction para-H2		0.2500	0.9750	0.9750	0.9750	0.9750		
Mole fraction nitrogen		0.0000	0.0000	0.0000	0.0000	0.0000		
Stream number		161	171	172	174	181	183	186
Temperature	K	302.3	305.0	79.7	78.8	81.6	183.4	256.5
Pressure	bar	1.06	65.32	65.04	1.20	10.23	65.04	30.57
Molar Flow	kmol/hr	139.5	1340.3	209.2	139.5	69.7	1131.1	1144.3
Mass Flow	kg/hr	3907.0	37546.4	5860.4	3907.0	1953.3	31686.1	32056.8
Vapour Fraction		1.00	1.00	0.00	0.08	0.00	1.00	1.00
Mole fraction ortho-H2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mole fraction para-H2		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mole fraction nitrogen		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Compressors 29, 31, 33, 35	3185 kW							
Compressors 17, 19, 21	6700 kW							
Total power	9885 kW							

Fig. 5