**Measured data of the materials at the imports and exports in 17000 Nm3/h ASU**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stage | Phase | Temperature/K | Pressure/kPa | $$x\_{N\_{2}}$$ | $$x\_{O\_{2}}$$ | Flow rate/mol·*s*-1 |
| N2 product | 1 | V | 79.305 | 126.71 | 0.999922 | 0.00005 | 210.807 |
| LN2 return | 1 | L | 79.305 | 126.72 | 0.999838 | 0.000005 | 275.107 |
| Waste N2 withdrawn | 3 | V | 81 | 130.08 | 0.934 | 0.054 | 583.496 |
| Waste LN2 in | 15 | L | 80.68 | 126.69 | 0.813122 | 0.175 | 215.302 |
| Rich O2 liquid air in | 27 | L | 82.633 | 129.57 | 0.612502 | 0.3732 | 72.156 |
| Expanded air in | 36 | V | 83.886 | 129.5 | 0.78175 | 0.209 | 112.396 |
| Liquid air return | 37 | L | 86.228 | 127.99 | 0.614712 | 0.37098 | 276.791 |
| Ar withdrawn | 55 | V | 92.4 | 129.94 | 0.000159 | 0.936841 | 233.056 |
| Ar return | 77 | L | 92.281 | 129.8 | 0.000046 | 0.937288 | 224.345 |
| LO2 product | 111 | L | 92.796 | 132.18 | 0 | 0.99765 | 148.738 |

Notes: The data is measured by Hangzhou Hangyang Co. Ltd, China. ($x\_{O\_{2}}+x\_{N\_{2}}+x\_{Ar}=1$)



**Parameters of the structured packing upper column**