


```

80     second level: [2. 0.]
81     third level: [2. 8.] ]
82     The No. 5 iteration is finished!
83
84     Beging the No. 6 iteration:
85     obj[gen-1] = 5.53     temp_best_value_gen = 5.53
86     No, maintain solution and obj[gen] = 5.53 , and the tolerance_counter = 6
87     solution chromosome =
88     first level: [ [2. 4.]
89     second level: [2. 0.]
90     third level: [2. 8.] ]
91     The No. 6 iteration is finished!
92
93
94     -----
95     The iteration is terminated and then visulize the solution:
96     solution chromosome =
97     first level: [ [2. 4.]
98     second level: [2. 0.]
99     third level: [2. 8.] ]
100     Objective function values and some other indicators:
101     Obj0 = 5.00           Obj1 = 2.02           Obj0 + Obj1 = 7.02
102     Total movement of crane: 0.02
103     Total waiting time in berth position: 2.00
104     Total index of q during berthing: 19.00
105     Specific arrangement for each vessel:
106     V_id: 0              li: 4.0              xi: 2.0              bow of i: 0.0              tail of i: 4.0              gama_i0: 2.0              gama_i1: 6.0
107     duration_time_i: 4.0              demand_i: 160.0              work load_i: 160.0              work load gap_i: 0
108     V_id: 1              li: 8.0              xi: 4.0              bow of i: 0.0              tail of i: 8.0              gama_i0: 0.0              gama_i1: 1.0
109     duration_time_i: 1.0              demand_i: 120.0              work load_i: 120.0              work load gap_i: 0
110
111     Algorithm finished and the total CPU time: 178 s
112 End
113

```