



```

81 The total pi = 113.0
82 The total duration time in berth stage = 148.0
83 The total duration time in quay crane scheduling stage = 30.0
84 The total departure time in berth stage= 314.0
85 The total departure time in quay crane scheduling stage = 196.0
86 The total wasted crane work hour according QC0= 2.644198237016583
87 The last departure time in quay crane scheduling stage = 53.0
88
89 The specific solution are as follows:
90 Vessel i: 0: li: 7, pi: 14-21, ai-di: 38-58, taoi-deltai: 38-58, periodi: 20, taoPi_SP-
deltaPi_SP: 38-42, periodPi: 4, c_i: 5109254, dowork: 5141058, fa_i: 3
91 Vessel i: 1: li: 4, pi: 20-24, ai-di: 7-31, taoi-deltai: 7-31, periodi: 24, taoPi_SP-deltaPi_SP
: 7-11, periodPi: 4, c_i: 6280473, dowork: 6327456, fa_i: 4
92 Vessel i: 2: li: 4, pi: 22-26, ai-di: 48-69, taoi-deltai: 48-69, periodi: 21, taoPi_SP-
deltaPi_SP: 48-53, periodPi: 5, c_i: 5302051, dowork: 5404702, fa_i: 3
93 Vessel i: 3: li: 7, pi: 27-34, ai-di: 0-23, taoi-deltai: 0-23, periodi: 23, taoPi_SP-deltaPi_SP
: 0-7, periodPi: 7, c_i: 5897603, dowork: 5931990, fa_i: 2
94 Vessel i: 4: li: 5, pi: 9-14, ai-di: 20-38, taoi-deltai: 20-38, periodi: 18, taoPi_SP-deltaPi_SP
: 20-23, periodPi: 3, c_i: 4491204, dowork: 4745592, fa_i: 5
95 Vessel i: 5: li: 7, pi: 7-14, ai-di: 40-61, taoi-deltai: 40-60, periodi: 20, taoPi_SP-deltaPi_SP
: 40-44, periodPi: 4, c_i: 5209900, dowork: 5272880, fa_i: 5
96 Vessel i: 6: li: 6, pi: 14-20, ai-di: 13-42, taoi-deltai: 13-35, periodi: 22, taoPi_SP-
deltaPi_SP: 13-16, periodPi: 3, c_i: 5768056, dowork: 5931990, fa_i: 6
97 TimeSolveModel: 45.000000
98
99 TimeAll: 48.000000
100
101

```