
S	Set of berthed vessels
C_u^s	Set of inbound shipments that belong to vessel $s \in S$
C_l^s	Set of outbound shipments that belong to vessel $s \in S$
C	Set of all shipments
C_u	Set of inbound shipments
C_l	Set of outbound shipments
L_u	Set of available yard locations for inbound shipments
L_l	Set of yard locations for outbound shipments
l_i	Yard location of outbound shipment $i \in C_l$
L	Set of all yard locations
QC	Set of QCs
YC	Set of YCs
B	Set of vessel bays
B_T	Total number of vessel bays
QC_T	Total number of QCs
b_i	Vessel bay position of shipment $i \in C$
$QC(i)$	Set of eligible QCs for shipment $i \in C$
$YC(k)$	The YC responsible for yard location $k \in L$
w_s	Weight (priority) of vessel $s \in S$
Q_i	QC handling time of shipment $i \in C$
Y_i	YT handling time of shipment $i \in C$
tyt_i	YT handling time of outbound shipment $i \in C_l$
tt_k	YT transfer time of inbound shipment to yard location $k \in L_u$
$tyc_{k,l}$	YC travel time between yard locations k and l
$eqc_{i,j}$	QC travel time from shipment $i \in C$ to shipment $j \in C$
$eyc_{i,j}$	YC travel time from yard location $i \in L$ to yard location $j \in L$
s_{QC}	Travel time for unit distance of equipment QC
δ	Safety distance between two QC s
$\delta_{v,w}$	Smallest allowed difference between bay positions of quay cranes v and w
$\Delta_{i,j}^{v,w}$	Minimum time between the starting times of shipments i and j when processed by cranes v and w
Θ	Set of all combinations of shipments and QCs with potential interferences
0	Dummy initial shipment
N	Dummy last shipment
C^0	Set of all shipments including dummy initial shipment $C \cup \{0\}$
C^N	Set of all shipments including dummy last shipment $C \cup \{N\}$
M	A sufficiently large constant integer
