

نظرية صفوف الانتظار  
(الارتال) وتطبيقاتها  
على الموانئ التجارية العراقية

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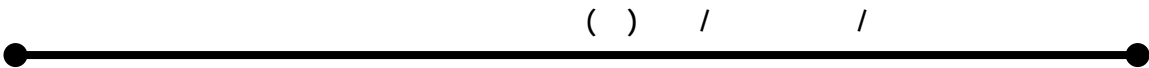
## **Abstract**

Is waiting for merchant ships in the port a major problem leading to material losses for traders maritime companies on either end so the merchants and maritime companies seeking always to prefer ports where commercial traffic, including high speed in the work of Almnadlh Stevedoring The aim of this theory to explain the time covered by commercial vessels in the ports of Iraq and the pursuit of trade to reduce the time, either during operations or shipping or wait Altrig



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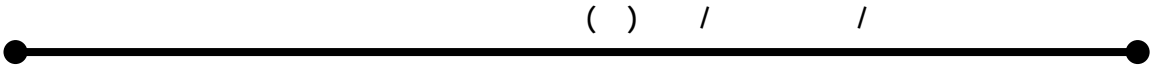
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$\lambda$		-
$M$		-
$\rho$		-
$Ls$	( )	-
$Lq$		-
$Ws$		-
$Wq$		-

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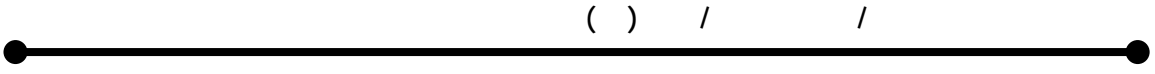
$$\rho = \lambda / M$$

$$Ls = \rho / (1 - \rho)$$

$$Lq = \rho^2 / (1 - \rho)$$

$$Ws = 1 / M (1 - \rho)$$

$$Wq = 1 / M (1 - \rho^2)$$



$\lambda$

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Wq	Ws	Lq	Ls	p	$\mu$	$\lambda$		
0,0238 1	0,04167	6	3	0,75	96	72		
0,0353 5	0,5556	2,666 67	1,333 33	0,571 43	42	24		
0,05	0,8333	4	2	0,666 67	36	24		
0,13	0,25	24	12	0,923 08	52	48		
0,0341 9	0,05556	3,333 33	1,666 67	0,625	48	30		
0,0170 9	0,02778	3,333 33	1,666 67	0,625	96	60		
0,0909 1	0,16667	10	5	0,833 33	36	30		

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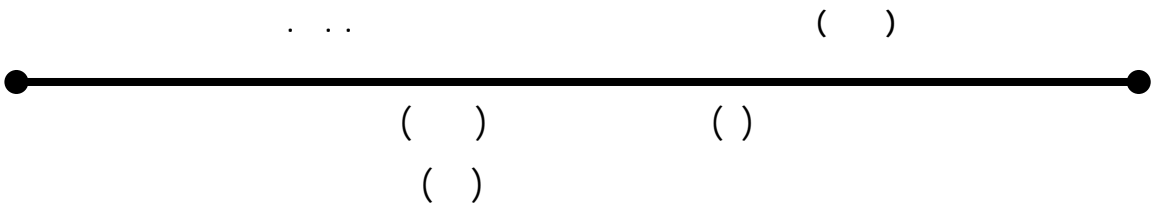
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Wq	Ws	Lq	Ls	$\rho$	$\mu$	$\lambda$		
0,0121 5	0,0208 3	5	2,5	0,7142 9	16 8	12 0		
0,0219 3	0,0416 7	18	9	0,9	24 0	21 6		
0,0142 9	0,0277 8	33,333 3	16,66 67	0,9434	63 6	60 0		
0,0155 6	0,0277 8	7,3333 3	3,666 67	0,7857 1	16 8	13 2		
0,0314	0,0555 6	6,6666 7	3,333 33	0,7692 3	78	60		
0,0123 1	0,0208 3	4,5	2,25	0,6923 1	15 6	10 8		
0,0088 4	0,0138 9	2,6666 7	1,333 33	0,5714 3	16 8	96		

المصدر :- الدراسة الميدانية

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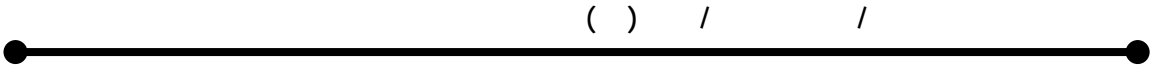
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**Ls**

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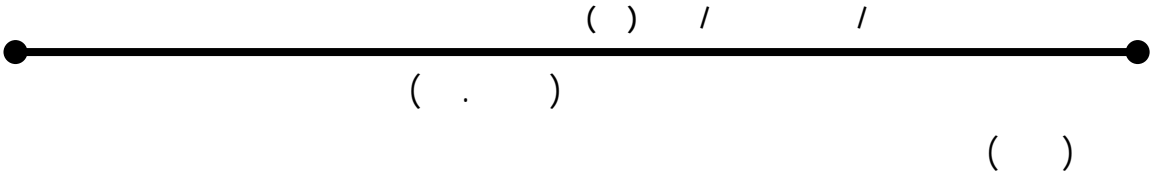
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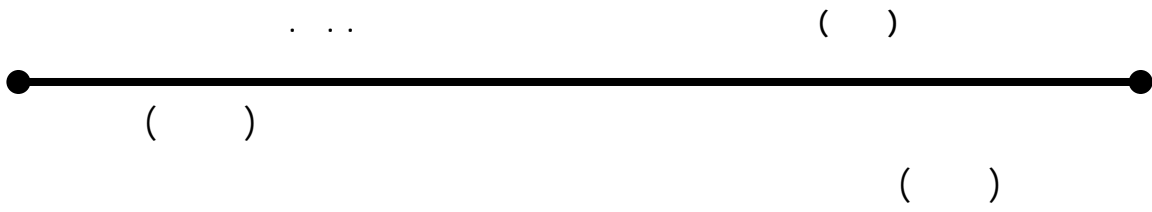
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**Lq**

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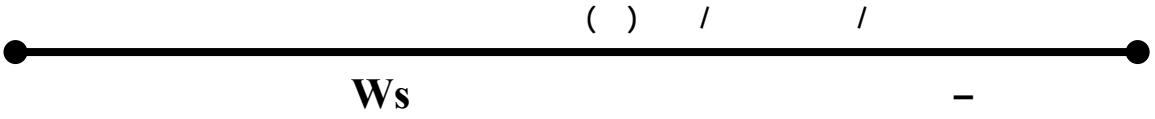
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**Wq**

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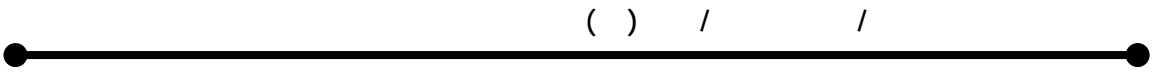
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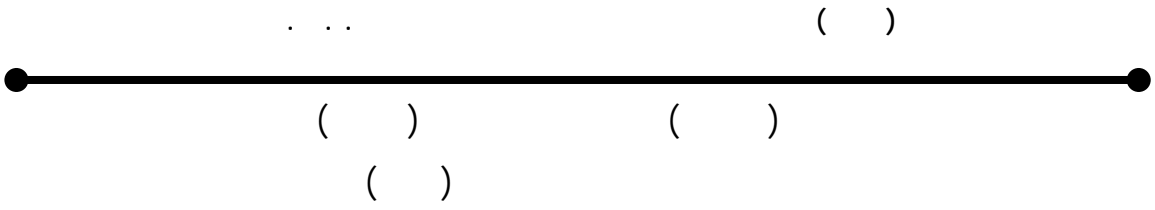


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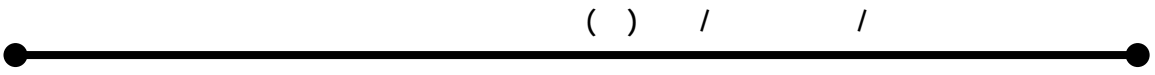
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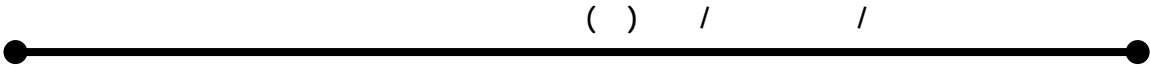
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(Hamdy A. Jaha ; ' Operations Research ; " Macmillan Publishing ,  
Co . inc . fourth Education , 1987 , p. 600 .

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5-Hamdy A. Jana , " operations Research , Macmillan publishing  
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