KC#485Q

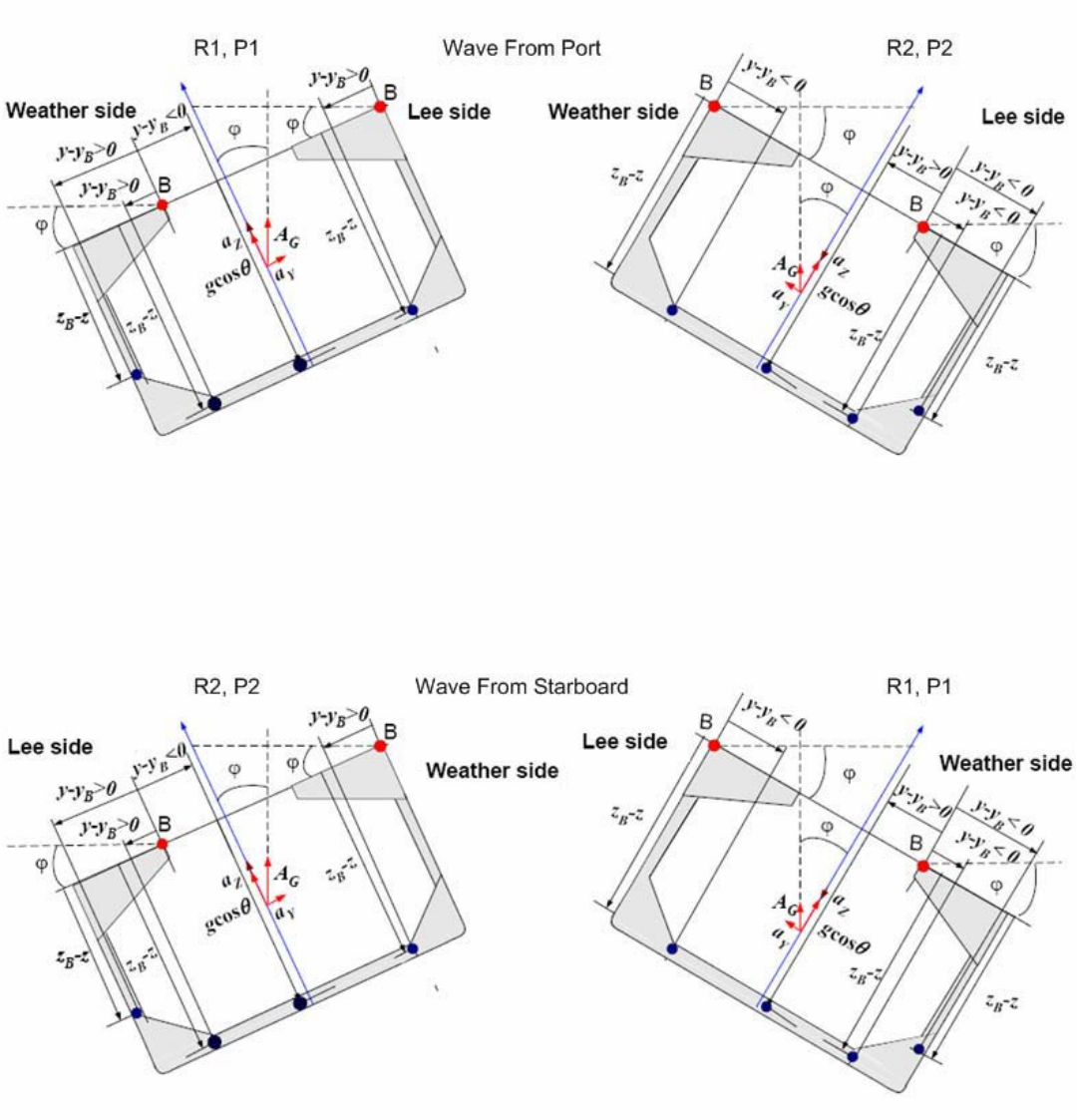
Table 2 of Chapter 4 section 4: Reference hull girder loads and motions of ship

	weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)
	R1	R1	R2	R2	P1	P1	P2	P2
Vert.BM & SF	-	-	-	-	Yes	**Yes**	Yes	**Yes**
Hor.BM	Yes	**Yes**	Yes	**Yes**	-	-	-	-
Heave	Down	**Down**	Up	**Up**	Down	**Down**	Up	**Up**
Pitch	-	-	-	-	-	-	-	-
Roll	Stbd up	**Stbd down**	Stbd down	**Stbd up**	Stbd up	**Stbd down**	Stbd down	**Stbd up**
Surge	-	-	-	-	-	-	-	-
Sway	-	-	-	-	Port	**Stbd**	Stbd	**Port**

Table 3 of Chapter 4 section 4: Load combination factors

		weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)	weather side (port)	weather side (stbd)
		R1	R1	R2	R2	P1	P1	P2	P2
ax	asurge	0	**0**	0	**0**	0	**0**	0	**0**
	apicth	0	**0**	0	**0**	0	**0**	0	**0**
	g sin	0	**0**	0	**0**	0	**0**	0	**0**
ay	asway	0	0	0	0	1	**-1**	-1	**1**
	aroll	1	**-1**	-1	**1**	0.3	**-0.3**	-0.3	**0.3**
	g sin	1	**-1**	-1	**1**	0.3	**-0.3**	-0.3	**0.3**
az	aheave	Sqrt(L)/40	**Sqrt(L)/40**	- Sqrt(L)/40	**- SQRT(L)/40**	1	**1**	-1	**-1**
	aroll	1	**-1**	-1	**1**	0.3	**-0.3**	-0.3	**0.3**
	apitch	0	0	0	0	0	0	0	0

Figure 3 of Chapter 4, section 6: Definition of Xb, Yb



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Load Case and load combination factors for all wave directions

Table 1: Definition of load cases

Load case	*H1*	*H2*	*F1*	*F2*	*R1*	*R2*	*P1*	*P2*
EDW	"H"		"F"		"R"		"P"	
Heading	Head		Follow		Beam		Beam	
Effect	Max Bending Moment		Max Bending Moment		Max. roll		Max Ext. Pressure	
	Sagging	Hogging	Sagging	Hogging)	(+)	(-)	(+)	(-)

Table 2: Reference hull girder loads and motions of ship

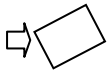
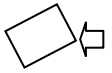
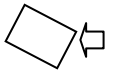
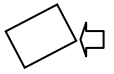
Load case	*H1*	*H2*	*F1*	*F2*	*R1*	*R2*	*P1*	*P2*	*R1*	*R2*	*P1*	*P2*
Vert. BM & SF	*Yes*		*Yes*		-		*Yes*				*Yes*	
Hor. BM	-		-		*Yes*		-		Yes			
Wave Direction	*Head*		*Follow*		*Port*				*S'board*			
Heave	*Down*	*Up*	-	-	*Down*	*Up*	*Down*	*Up*	*Down*	*Up*	*Down*	*Up*
Pitch	*Bow down*	*Bow up*	-	-	-	-	-	-	-	-	-	-
Roll	-	-	-	-	*Stbd up*	*Stbd down*	*Stbd up*	*Stbd down*	*Port up*	*Port down*	*Port up*	*Port down*
Surge	*Bow*	*Bow*	-	-	-	-	-	-	-	-	-	-
Sway	-	-	-	-	-	-	*Port*	*Port*	-	-	*S'board*	*S'board*
Weather side and ship motion in beam sea												

Table 3: Load combination factors LCF

	LCF	*H1*	*H2*	*F1*	*F2*	*R1*	*R2*	*P1*	*P2*	*R1*	*R2*	*P1*	*P2*
Wave Direction		*Head*		*Follow*		*Port*				*S'board*			
M_{WV}	C_{WV}	-1	1	-1	1	0	0	$0,4-\frac{T_{LC}}{T}$	$\frac{T_{LC}}{T}-0,4$	0	0	$0,4-\frac{T_{LC}}{T}$	$\frac{T_{LC}}{T}-0,4$
Q_{WV}	C_{QW}*	-1	1	-1	1	0	0	$0,4-\frac{T_{LC}}{T}$	$\frac{T_{LC}}{T}-0,4$	0	0	$0,4-\frac{T_{LC}}{T}$	$\frac{T_{LC}}{T}-0,4$
M_{WH}	C_{WH}	0	0	0	0	$1,2-\frac{T_{LC}}{T}$	$\frac{T_{LC}}{T}-1,2$	0	0	$\frac{T_{LC}}{T}-1,2$	$1,2-\frac{T_{LC}}{T}$	0	0
a_{surge}	C_{XS}	-0.8	0.8	0	0	0	0	0	0	0	0	0	0
$a_{pitch\ x}$	C_{XP}	1	-1	0	0	0	0	0	0	0	0	0	0
$g\sin\Phi$	C_{XG}	1	-1	0	0	0	0	0	0	0	0	0	0
a_{sway}	C_{YS}	0	0	0	0	0	0	1	-1	0	0	-1	1
$a_{roll\ y}$	C_{YR}	0	0	0	0	1	-1	0.3	-0.3	-1	1	-0.3	0.3
$g\sin\theta$	C_{YG}	0	0	0	0	1	-1	0.3	-0.3	-1	1	-0.3	0.3
a_{heave}	C_{ZH}	$0,6\frac{T_{LC}}{T}$	$-0,6\frac{T_{LC}}{T}$	0	0	$\frac{\sqrt{L}}{40}$	$-\frac{\sqrt{L}}{40}$	1	-1	$\frac{\sqrt{L}}{40}$	$-\frac{\sqrt{L}}{40}$	1	-1
$a_{roll\ z}$	C_{ZR}	0	0	0	0	1	-1	0.3	-0.3	-1	1	-0.3	0.3
$a_{pitch\ z}$	C_{ZP}	1	-1	0	0	0	0	0	0	0	0	0	0

1) Note * The LCF for C_{QW} is only used for the aft part of midship section. The inverse value of it should be used for the forward part of the midship section.