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0 Principle Dimensions

Input :			
project (max. 16 characters)		Raptor-2	
gl-reg.-no. (max. 16 characters)			
modelled by (max. 16 characters)			
refer no. (max. 16 characters)			
project identification (max. 16 characters)			
class : Germanischer Lloyd		GL + 100 A5	
length of the hull	LH	16,000	[m]
waterline length	LWL	13,200	[m]
scantling length	L	14,600	[m]
breadth	B	3,800	[m]
max. beam at waterline	BWL	3,400	[m]
depth	H	2,200	[m]
draught	T	0,700	[m]
keel depth	Hk	0,000	[m]
displacement (sum of lightweight and deadweight)	D	15,000	[t]
displacement	V	15,000	[m**3]
speed	v	23,000	[kn]
operating category :		III	
type of vessels :		motor boat	

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6.1.1 Shell Bottom Laminate

Input :			
identification (max. 16 character)		Raptor 16m	
material type :		alu (min. value)	
sheet aluminium plates (min.values) : Al		Mg 4.5 Mn	
extent of area 0.4L from aft edge of transom		5,840	[m]
(is calculated internally)			
calculate area within 0.4L from aft edge of		no	
transom :			
frame spacing	a	400,000	[mm]
shell plating made in hard-chine construction :		yes	
chine angle (>= 90 degree, see fig. 6.2)	Alpha	130,000	[degree]
curved plate panel or frame :		no	
Results :			
load on bottom	Pd	38,439	[kN/m**2]
material factor for aluminium	k	1,550	
hard chine correction factor in accordance	kw	1,075	
plate thickness	t	6,509	[mm]
min. plate thickness	tmin	4,281	[mm]

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6.1.2 Shell Side Laminate

Input :			
identification (max. 16 character)		Raptor 16m	
material type :		alu (min. value)	
sheet aluminium plates (min.values) : Al		Mg 4.5 Mn	
extent of area 0.4L from aft edge of transom		5,840	[m]
(is calculated internally)			
calculate area within 0.4L from aft edge of		no	
transom :			
frame spacing	a	400,000	[mm]
shell plating made in hard-chine construction :		yes	
chine angle (>= 90 degree, see fig. 6.2)	Alpha	130,000	[degree]
curved plate panel or frame :		no	
Results :			
load on side	Pd	26,287	[kN/m**2]
material factor for aluminium	k	1,550	
hard chine correction factor in accordance	kw	1,075	
plate thickness	t	4,641	[mm]
min. plate thickness	tmin	4,281	[mm]

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6.2.1 Floors

Input :			
identification (max. 16 character)		Raptor 16m	
material type :		alu (min. value)	
sheet aluminium plates (min.values) : Al		Mg 4.5 Mn	
extent of area 0.4L from aft edge of transom		5,840	[m]
(is calculated internally)			
calculate area within 0.4L from aft edge of		no	
transom :			
frame spacing	a	400,000	[mm]
span of stiffening	l	0,800	[m]
unsupported span of the floor			
Results :			
load on bottom	Pd	38,439	[kN/m**2]
material factor for aluminium	k	1,550	
section modulus of the floors	WB , W	11,561	[cm**3]
min.section modulus of floors	WBmin	10,352	[cm**3]
min. plate thickness	tmin	6,233	[mm]

Warning/Remark :

WHERE THERE IS A SHARP DEADRISE, THE REQUIRED SECTION MODULUS W SHALL STILL BE PRESENT AT A DISTANCE OF b/4 FROM THE CL ++++ IF THE LENGTH IS GREATER THAN 100TIMES THE PLATE THICKNESS, A TOP CHORD IS REQUIRED ++++ IF THE GIRTH CONSISTS OF A FLANGE, ONE WIDTH IS TO CORRESPOND TO APPROX. 10TIMES THE WEB THICKNESS ++++