



## BERTHING ENERGY CALCULATIONS

### PROJECT INFORMATION

Project Title	Venstpils piestātne Nr.35 (Mazākais kuģis)
Country	Latvija
Project Reference	Not Stated
Prepared By	Not Stated

### SHIP DATA

Ship Category		Tanker
Select Dimensions By		Length Overall
Deadweight	dwt	10 400 t*
Displacement	Md	13 650 t*
Overall Length	LOA	126,0 m
Length Between Perpendiculars	LBP	119,1 m
Beam	B	16,83 m
Laden Draft	D	7,60 m*
Freeboard	F	1,98 m
Block Coefficient	CB	0,874

### BERTHING DATA

Berthing Mode		Dolphin Berthing
Structure Type		Open Structure
Eccentricity Calculation Method		Full Calculation
Under Keel Clearance	KD	5,00 m
Impact from Bow	x	25,00 %
		29,77 m
Radius of Gyration	K	32,87 m
Impact to Centre of Mass	R	30,94 m
Berthing Angle	$\alpha$	10,00 deg
Velocity Vector Angle	$\Phi$	64,22 deg
Added Mass Coefficient	CM	1,500
Eccentricity Coefficient	CE	0,619
Berth Configuration Coefficient	CC	1,000
Softness Coefficient	CS	1,000

PIANC (2002)

### BERTHING ENERGY

Berthing Velocity	VB	283 mm/s
PIANC 2002: Fig 4.2.1 (Deadweight v Velocity)	"c"	Easy berthing, exposed
Normal Energy	EN	508 kNm 51,7 t-m
Factor of Safety	Fs	1,75
	EA	888 kNm 90,5 t-m