

## Mooring line base design certificate TS CERT 7804 E rev. 1

### General information

<b>Issue date:</b>	11.07.2019	<b>Expiry date:</b>	10.07.2024
<b>Line manufacturer:</b>	TIMM SLOVAKIA s.r.o	<b>Independent inspection agency:</b>	DNV GL
<b>Line design designation:</b>	Acera daGama, Acera daGama SBA	<b>Material type and grade:</b>	HMPE Acera/HT PES
<b>Line construction:</b>	Core 12x1 – braided/plaited Jacket 24x1 or 32x1 -overbraided	<b>Jacketed:</b>	Yes
<b>Design range:</b>	16 mm – 64 mm	<b>DNV GL Type Approval:</b>	TAK0000097 rev.1

### Base design performance indicators

Performance Indicators	Smallest Diameter				Largest Diameter			
	Design:	16mm	Measured:	20,5mm	Design:	64mm	Measured:	72mm
Diameter								
Line Design Break Force (LDBF)	23 t				270 t			
Line Linear Density (LLD)	0,236 kg/m				2,76 kg/m			
Line Linear Density (LLD) with SBA	0,258 kg/m				2,849 kg/m			
Load Bearing Linear Density (LBLD)	0,144 kg/m				1,862 kg/m			
Line Tenacity (LT) without SBA	162,9 t/kg/m				145,4 t/kg/m			
	<b>D/d Ratio: 5</b>				<b>D/d Ratio:10</b>			
Angled Break Force* (ABF) % Avg NSBF	184,68% / 92,34%				199,18% / 99,59%			
Angled Endurance* (AE) % Avg NSBF	60,04%				86,00%			
	<b>-20 °C</b>	<b>0 °C</b>	<b>20 °C</b>	<b>40 °C</b>	<b>60 °C</b>	<b>80 °C</b>		
Temperature (T)** % BF at 20°C	111%/101%	110%/103%	100%/100%	94%/93%	86%/89%	57%/89%		
Axial Compression Resistance* (ACR)	93,16%							
	<b>%LDBF:10</b>	<b>%LDBF:20</b>	<b>%LDBF:30</b>	<b>%LDBF:40</b>	<b>%LDBF:50</b>			
Average Immediate Strain* (e)	0,20%	0,42%	0,62%	0,82%	1,01%			

Splice type: Tension/Inside splice

Maximum Line Tenacity: 162,9 T/kg/m

\*Performance indicators are tested on samples: 16mm for Acera Amundsen mooring line

\*\*Temperature indicator performed at yam level

### Name and address of manufacturing facility:

Timm Slovakia, Nozdrkovce 3140/37, 911 04 Trenčín, Slovakia

### Independent inspector:

Henrich Illáš

### Completion date:

24.07.2020

### Address of independent inspector:

DNV GL, Rolníckej Školy 1519, 94525 Komárno, Slovak Republic

### Base design testing information

#### Name and address of test facility:

Timm Slovakia, Nozdrkovce 3140/37, 911 04 Trenčín, Slovakia

#### Completion date:

24.07.2020

#### Independent inspector:

Henrich Illáš

#### Address of independent inspector:

DNV GL, Rolníckej Školy 1519, 94525 Komárno, Slovak Republic

### Base design sample and product documentation reviewed

Independent inspector: Henrich Illáš

Date of review:

24.07.2020

Base design sample manufacturing report	<input checked="" type="checkbox"/>	Material test report	<input checked="" type="checkbox"/>	Splicing instructions	<input checked="" type="checkbox"/>
Base design sample manufacturing ITP	<input checked="" type="checkbox"/>	Design specification	<input checked="" type="checkbox"/>	Jacketed line internal inspection report	<input checked="" type="checkbox"/>
Base design sample test report	<input checked="" type="checkbox"/>	Manufacturer's disc: inspection criteria	<input checked="" type="checkbox"/>	Procedures for testing and inspection of	<input checked="" type="checkbox"/>

Independent inspector

