

Form E - Inspection Checklist and Report

Purchaser					
Owner (if other than purchaser)					
Order number		Serial number		Order date	
Order description					
Manufacturer					
Inspection dates					
Inspector					
Company					

Quality Assurance Documentation

The Inspector should have the following manufacturer’s documentation available for reference.

	Available	
	Yes	No
Quality Assurance Manual	<input type="checkbox"/>	<input type="checkbox"/>
Rope Design Specification	<input type="checkbox"/>	<input type="checkbox"/>
Material Specification	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing Specification	<input type="checkbox"/>	<input type="checkbox"/>
Splicing Instructions	<input type="checkbox"/>	<input type="checkbox"/>

The Inspector should review the Rope Quality Report and Checklist			
Reviewed?		Acceptable?	
Remarks			
<p>The manufacturer’s QA Supervisor should sign the Quality Control Report and Checklist.</p> <p>The Inspector should sign to certify they have examined and approved the Quality Control Checklist.</p>			

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Inspection of Sample Rope Section

Determination of linear density

Weight of sample rope section		Length of sample rope section	
Linear density			
Nominal value of linear density (from Rope Design Specification)			

Double braid rope

				<i>Nominal value</i>	<i>Production value</i>	<i>Allowable tolerance</i>
Cover weight		Core weight				
Core-to-cover weight ratio						+/- 5%
Strand pitch in core						+/- 5%
Number of rope strands in core						0
Number of rope strands in cover						0
Number of strands in parallel path group in core						0
Number of strands in parallel path group in cover						0

Eight strand and laid rope

Number of rope yarns in one strand			
	For nylon and polyester		+/- 2%
	For polypropylene and polyethylene		+/- 4%

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Determination of Rope Strength (See appendix C for calculation example)

Yarn position	Number of samples	Average strength		Number of yarns in this position in a strand		Number of strands in rope		Total position strength	
			×		×		=		
			×		×		=		
			×		×		=		
			×		×		=		
			×		×		=		
			×		×		=		
Total yarn strength									
Rope/Yarn Strength Ratio (RYSR) (from Manufacturing Specification)								×	
Calculated strength (total yarn strength times RYSR)									
Nominal rope strength (Product rope strength shall not be less than 95% of the nominal strength)									

Material Identification Tests

At least two and sufficient of the following tests shall be conducted to identify material (see appendix B for description of tests).

Fibre identification solubility tests

(Check fibre(s) applicable or add below)

Solvent	98% Formic Acid	Boiling Dimethyl Formamide	20% HCL	15.5% HCL	m-Cresol	Carbon Tetrachloride
Nylon 6 <input type="checkbox"/>	dissolves	dissolves	dissolves	dissolves		does not dissolve
Nylon 6.6 <input type="checkbox"/>	dissolves	does not dissolve	dissolves	does not dissolve		does not dissolve
Polyester <input type="checkbox"/>	does not dissolve				dissolves	does not dissolve
Polypropylene <input type="checkbox"/>	does not dissolve				does not dissolve	partially dissolves
Polyethylene <input type="checkbox"/>	does not dissolve				does not dissolve	dissolves

Melting point of synthetic fibres

Nylon 6 and 6.6	Polyester	Polypropylene	Polyethylene		
Expected melting point of fibre (°C)					
Melting point test value (°C)					

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Specific gravity of synthetic fibres

Nylon 6 and 6.6	Polyester	Polypropylene	Polyethylene		
Expected specific gravity of fibre					
Specific gravity test value					

Burning characteristics of synthetic fibres

Nylon 6 and 6.6	Polyester	Polypropylene	Polyethylene		
In flame					
Melts and burns	Melts and burns	Shrinks and burns	Shrinks, curls and melts		
White smoke	Blackish smoke				
Yellowish melted falling drops	Yellowish melted falling drops	Melted falling drops	Melted falling drops		
Removed from flame					
Stops burning	Stops burning	Continues to burn rapidly	Continues to burn slowly		
Small bead on end	Small black bead				
Hot melted bead	Hot melted bead	Hot melted substance	Hot melted substance		
Can be stretched into fine thread	Can be stretched into fine thread	Can be stretched into fine thread	Cannot be stretched		
Residue					
Yellowish bead	Blackish bead	Brown/yellowish bead	Like paraffin wax		
Hard round bead Not crushable	Hard round bead Not crushable	Hard round bead Not crushable	No bead Crushable		
Smell of smoke					
Celery-like fishy odour	Oily sooty odour Faintly sweet, like sealing wax	Like burning asphalt or paraffin wax	Like burning paraffin wax		
The colour only applies to undyed fibre. The smell might be altered by agents in or on the fibre. The sense of smell is subjective and should be used with reservation.					

Remarks

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Inspection at Reference Load

Reference load			
	<i>Nominal or specified value</i>	<i>Product value</i>	<i>Tolerance</i>
Overall hawser assembly length			
		Individual assembly	+/- 1%
		Between matched hawsers	+/- 0.5%
Strand pitch			+/- 5%
Yarn lay angle			+/- 10%
Maximum rope width/diameter (if specified)			+0

Rope Quality

Eight strand and laid rope:

	<i>Observed value</i>	<i>Allowable</i>
Maximum number of separated rope yarns in any 1 m length		2
Total number of hockled strands		0
Number of areas of stain or discolouration		
Did any area extend over 50% of the rope yarns on any strand surface?		*
Did any area extend beyond surface yarns?		*

Single and double braid:

Total number of separated strands		0
Number of areas of stain or discolouration		
Did any area extend over 10% of the strands in either core or cover?		*

* If any area is extended beyond stated tolerance, describe nature and extent of stain or discolouration and tests or other methods used to determine nature of and effect of damage	
Is nature of damage of a type that causes degradation of rope material?	

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Inspection of Splice

Splice checked against splice procedure? (use separate page for each splice in order)		Acceptable?	
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Double braid rope

	<i>Nominal value</i>	<i>Product value</i>	<i>Tolerance</i>
Distance between match points on core and cover			+/-10% of rope circ.
Distance from crotch to cross-over point			+/- 20% of rope circ.
Distance of cross-over point to match point			+/- 20% of rope circ.

Eight strand and laid rope

Number of tucks			0
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Single braid and parallel strand rope

Use procedure for double braid or eight strand as appropriate

Eyes (use separate page for each eye in order)

Eyes are thimbled?		Unthimbled?	
Unthimbled eye: Size of eye specified		Size of eye measured	+20%
Thimbled eye: Size of thimble specified		Size of thimble measured	0

Quality of thimble:

Strength of thimble specified		Strength of thimble observed	
Is thimble free from sharp edges and rough surfaces that might contact rope?			
Does thimble have provision to prevent shackle or link from contacting rope?			

Chafe protection:

Type and quality was specified by purchaser and is in accordance with specification?	
Or; type and quality was not specified and is as proposed by manufacturer?	
Describe material, thickness, method of application, and extent of coverage	
Is this in accordance with section 4.8.5?	
Remarks	

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Auxiliary Gear

Types and qualities were specified by purchaser and are in accordance with specification?	
Or; types and qualities were not specified and are as proposed by manufacturer?	
Describe types, qualities, quantities, and extents of auxiliary gear	
Describe methods by which auxiliary gear is applied	
Are these in accordance with section 4.8.6?	
Remarks	

Markings

Double braid rope

Are at least two strands of cover marked?		Colour		This matches material code?	
Is at least one strand of core marked?		Colour		This matches material code?	
Is marker tape run between core and cover?					

Eight strand and twisted rope

Is at least one outer yarn marked?		Colour		This matches material code?	
Is marker tape incorporated into this strand?					

Marker tape

Information on marker tapes is as follows					
Is this information legible?		Does this information meet specifications?			
Does marker tape meet quality requirements?					

Hawser marking

Markings meet requirements?		Serial number corresponds to specification?	
If one of matched pair, serial number and other markings correspond?			

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Packing

Describe proposed method of packing and of available packing materials

Is this in accordance with section 4.10?

General and Other Remarks