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The manufacturer shall issue product certificates, in accordance with DNV-ST-E271 section 8.5, using Holloway Houston, Inc. Certificate of Conformance. This certificate shall only be used for lifting sets certified in accordance with this type approval certificate.

The WLL to be referenced in certificates and marked on lifting sets shall be the maximum working load limit (WLL) of the lifting set, as per the definition in DNV-ST-E271.

If using wire rope manufactured in US Customary Units sizes (inch) for DNV type approved lifting sets, care should be taken to ensure that the correct minimum breaking load is applied during the selection process

## For lifting sets manufactured in accordance with DNV-ST-E271

Lifting sets shall be assembled in accordance with the strength requirements described in DNV-ST-E271 section 8. The angle of the sling legs from vertical should be taken into account when choosing slings. This angle should normally be 45°, but smaller angles may be used.

Special lifting sets, assembled in accordance with the principles described in DNV-ST-E271 section 8 and appendix E, are also covered by this type approval. If unsymmetrical slings are to be assembled, the local DNV office shall be contacted to review each case, unless otherwise agreed in advance.

Note: The sling leg is not necessarily the weakest part of the lifting set. Master Link assemblies selected for lifting sets with legs at 45° may not be suitable for lifting sets with a smaller angle.

#### For lifting sets manufactured in accordance with DNV-ST-E273

Prior to selection of the lifting set, the minimum required working load limit (WLL) shall be calculated in accordance with the strength requirements in DNV-ST-E273 section 7.3. The resultant sling force (RSF) is provided in the DNV design verification report (DVR) for the portable offshore unit. The DVR should be made available for the lifting set manufacturer.

#### Type Approval documentation

Document No.	Rev.	Title
100000	L	Quality Manual
314007	Α	Work Instruction
HHI-271-22-1110406-1-1	-	Holloway Certificate of Conformance and Test
SOP 2-9.1	D	General Testing
SOP-2.2-1	Α	Manufacturing Thimble Eye Wire Rope Sling
SOP-7.2.8-1	С	Swagging

In addition, the following documents are also used as information:

Prototype break test reports.

DNV periodic assessment reports.

Sample calculations.

Material certificates for wire rope.

### **Tests carried out**

Prototype breaking load test of assembled wire rope sling leg.

#### Marking of product

For lifting sets manufactured in accordance with DNV-ST-E271: refer to section 8. For lifting sets manufactured in accordance with DNV-ST-E273: refer to section 7.6.

## Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out every 12 months.

#### **END OF CERTIFICATE**

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# **Appendix 1**

Wire rope slings with Flemish eye and steel ferrules assembled by Holloway Houston, Inc. covered by this type approval:

Product Name	Applicable	Material Grades	Parameter range			
	Applicable Standards		Size(Ø)	WLL	PL	BL
	Otanuarus		[mm]	[t]	[kN]	[kN]

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