

## CERTIFICATE OF TEST OF WIRE ROPE

PS. 008 Edition 1. Page 1 of 2.

Test Certificate Number : 09 44236 6980  
Customer Name : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

Customer Purchase Order No. : 4500058033  
BRIDON International Order No. : X0436980

### DESCRIPTION OF THE WIRE ROPE

Rope Diameter & Construction :	35mm	DF 34x7 (16/6/6/6/1)
Rope Number :	Q44236/1-4	
Quantity and Rope Length :	4 X 2700	Metres
Standard to which the Rope complies :	PS.008.	
Date of Manufacture :	24/12/2009	
Nominal Wire Tensile Strength and Finish	1960 N/sq. mm	Galvanised
Rope Lay :	L/HAND	LANGS
Lubricant :	Brilube 16	
Design Metallic Area :	715.97	sq. mm
Design Weight :	6.16	Kg/ Mtr.
Gross Weight :	17804:17798	17798:17859 Kg
Nett Weight :	16875:16869	16869:16930 Kg

### TEST INFORMATION

Actual Diameter, on tension :	36	mm
Actual Diameter, off tension :	36.16	mm
Design Aggregate Breaking Load :	140.98	kN
Actual Aggregate Breaking Load :	143.97	kN
Date of Test :	12/01/2010	

### OTHER INFORMATION

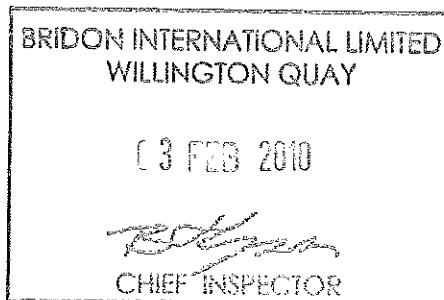
Application : Personnel & Cargo

The above complies with all applicable requirements of the Machinery Directive.  
Read our publication No. 1291 before using this product.

I certify that the above particulars are correct.

Name:

Signature :



*The Difference is* **BRIDON**

# BRIDON ROPES

## Certificate of Test of Wire Rope For Norilsk Nickel - PS.008

### CALCULATION OF AGGREGATE BREAKINGLOAD FROM POST SPIN WIRE TESTS

PS. 008 Edition 1. Page 2 of 2.

Customer : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

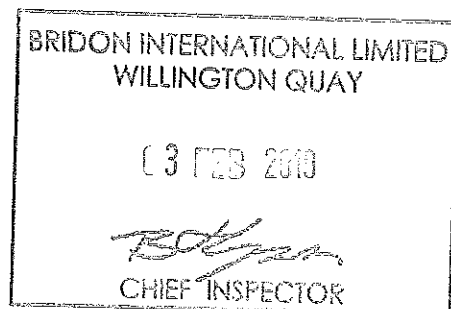
Test Certificate Number : 09 44236 6980

Rope Number : Q44236/1-4

ROPE CONSTRUCTION  34x7	NOMINAL WIRE DIAMETER (m.m.)	EQUIVALENT ROUND DIAMETER (m.m.)	WIRE TENSILE STRENGTH (N/sq. m.m.)		
			MIN.	MAX.	MEAN
16	1.92	N/A	1954	2058	2014
6	1.72	N/A	1914	1946	1932
6	2.04	N/A	1970	2045	2017
6	2.04	N/A	1980	2081	2037
1	2.04	N/A	2085	2085	2085

Name :

Signature :



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**BRIDON International Limited**

Willington Quay Wallsend Tyne & Wear NE28 6TT United Kingdom Tel: +44(0)191 262 5231 Fax: +44(0)191 263 4117

Registered in England Number 416671 Registered Office: Precision House, Arden Road, Alcester, Warwickshire B49 6HN

# BRIDON

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## ROPES

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS  
TEST REF. : 09 44236 6980  
SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS  
ROPE No. : Q44236/1-4

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### SUMMARY OF WIRE TEST RESULTS

#### OUTER STRANDS

LAYER 1	16	WIRES	1.92	mm DIA.	91019	N.
LAYER 1	3	WIRES	2.12	mm DIA.	20742	N.
LAYER 2	5	WIRES	1.72	mm DIA.	21821	N.
LAYER 2	1	WIRES	1.26	mm DIA.	2393	N.
LAYER 3	6	WIRES	2.04	mm DIA.	39101	N.
LAYER 3	1	WIRES	2.20	mm DIA.	7277	N.
LAYER 4	6	WIRES	2.04	mm DIA.	39552	N.
LAYER 4	1	WIRES	2.20	mm DIA.	7502	N.
LAYER 5	1	WIRES	2.04	mm DIA.	6816	N.
LAYER 5	1	WIRES	2.20	mm DIA.	8385	N.

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TOTAL AGGREGATE BREAKING LOAD 16% OF ROPE	244606	N.
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TOTAL AGGREGATE BREAKING LOAD 16% OF ROPE	244.61	kN.
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TOTAL AGGREGATE BREAKING LOAD 16% OF ROPE	24.94	t.
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TOTAL AGGREGATE BREAKING LOAD OF ROPE	143.97	t.
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CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

No. Of. Wire LAYER 1 OUTERS	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2. 1910	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
	1.92		2250	19	6	99
1	1.89	5737	2045	31	9	107
2	1.90	5688	2006	28	10	119
3	1.90	5835	2058	33	10	113
4	1.88	5541	1996	32	12	107
5	1.89	5639	2010	30	11	138
6	1.90	5541	1954	32	8	126
7	1.90	5757	2030	30	10	107
8	1.89	5590	1992	33	13	123
9	1.89	5737	2045	30	15	119
10	1.90	5541	1954	31	12	126
11	1.90	5806	2048	30	11	132
12	1.91	5737	2002	31	9	123
13	1.89	5737	2045	32	13	126
14	1.90	5737	2023	31	9	126
15	1.90	5688	2006	32	11	107
16	1.90	5708	2013	29	10	113

91019 1954  
2058  
2014

Tested to P.S. 008 edition 7 Rev. 0

Signed : BRIDON INTERNATIONAL LIMITED for Bridon International.  
WILLINGTON QUAY

Date :

13 FEB 2010

  
CHIEF INSPECTOR

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 1			1910			
Outers	2.12		2220	19	10	99
King Wire						
1	2.12	6963	1973	35	12	117
2	2.11	6865	1963	34	10	117
3	2.11	6914	1977	35	10	137

20742

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Signed :

BRIDON INTERNATIONAL LIMITED  
WILLINGTON QUAY

for Bridon International.

Date :

03 FEB 2010

  
CHIEF INSPECTOR

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2. 1910	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 2 Small	1.72		2250	21	8	90
Warringtons						
1	1.70	4345	1914	40	12	114
2	1.70	4354	1918	36	15	116
3	1.69	4364	1946	41	11	129
4	1.70	4394	1936	37	19	129
5	1.69	4364	1946	43	13	139

21821 1914  
1946  
1932

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WILLINGTON QUAY

Date :

03 FEB 2010

  
CHIEF INSPECTOR

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

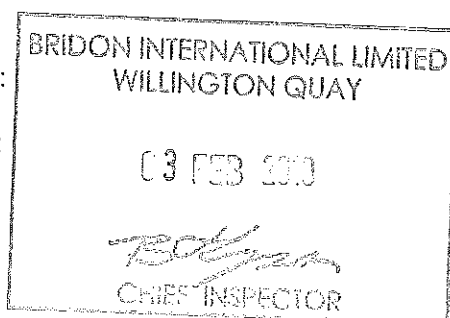
No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 2			1910			
Small	1.26		2280	20	10	81
Warringtons						
King Wire						
1	1.25	2393	1950	46	39	129

2393

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Signed :

Date :



for Bridon International.

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TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

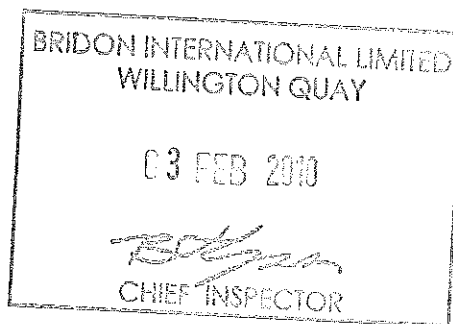
No. Of. Wire LAYER 3 Warringtons	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2. 1910	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
	2.04		2220	19	5	99
1	2.02	6473	2020	30	12	119
2	2.04	6571	2010	31	13	116
3	2.02	6522	2035	32	10	122
4	2.03	6541	2021	32	8	116
5	2.03	6620	2045	32	7	110
6	2.03	6375	1970	33	8	110

39101 1970  
2045  
2017

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Signed :

Date :



for Bridon International.



CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 3			1910			
Warringtons	2.20		2220	19	10	99
King Wire						
1	2.19	7277	1932	36	11	129

7277

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Signed :

BRIDON INTERNATIONAL LIMITED  
WILLINGTON QUAY

for Bridon International.

Date :

03 FEB 2000

  
CHIEF INSPECTOR

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

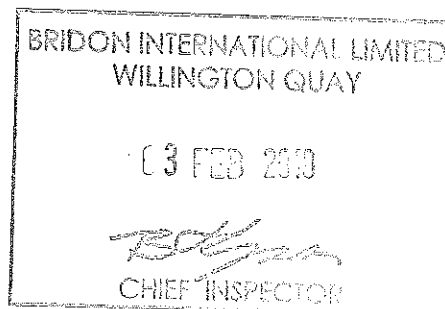
No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 4 INNERS	2.04		1910 2220	19	5	99
1	2.02	6345	1980	31	11	140
2	2.02	6620	2066	29	10	105
3	2.04	6541	2001	32	10	128
4	2.04	6688	2046	31	10	116
5	2.02	6669	2081	30	9	105
6	2.04	6688	2046	29	13	116

39552 1980  
2081  
2037

Tested to P.S. 008 edition 7 Rev. 0

Signed :

Date :



for Bridon International.

CUSTOMER : THYSSEN SCHACHTBAU GMBH/GREMYACHINKS

TEST REF. : 09 44236 6980

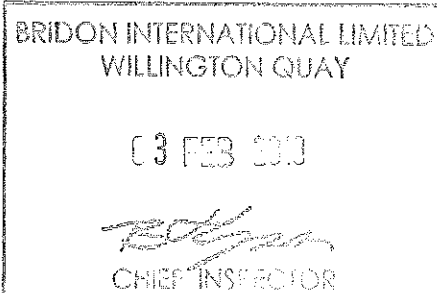
SAMPLE : 35mm DF 34x7 (16/6/6/1)  
L/HAND LANGS


ROPE No. : Q44236/1-4

No. of Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 4			1910			
INNERS	2.20		2220	19	10	99
King Wire						
1	2.20	7502	1974	37	11	134

7502

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Date : 

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SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

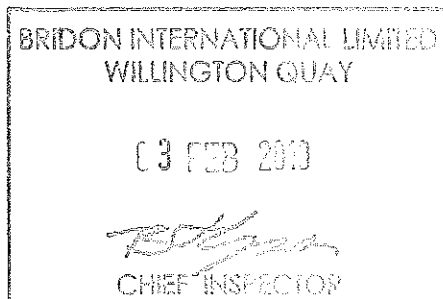
No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 5mm	Zinc Wt. g/m2.
LAYER 5			1910			
Centre Wire	2.04		2220	19	5	99
1	2.04	6816	2085	37	10	102

6816 2085  
2085  
2085

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TEST REF. : 09 44236 6980

SAMPLE : 35mm DF 34x7 (16/6/6/6/1)  
L/HAND LANGS

ROPE No. : Q44236/1-4

No. Of. Wire	Diameter Nominal mm.	Breaking Load N.	U.T.S. N/mm2.	Torsions dia x 100	Bends on 7.5mm	Zinc Wt. g/m2.
LAYER 5			1910			
Centre Wire	2.20		2220	19	10	99
King						
1	2.20	8385	2206	36	14	137

8385

Tested to P.S. 008 edition 7 Rev. 0

Signed : BRIDON INTERNATIONAL LIMITED  
WILLINGTON QUAY for Bridon International.

Date :

03 FEB 2019

*[Signature]*  
CHIEF INSPECTOR