

Lloyd's
Register

TA

TYPE APPROVED

LR Type Approval Certificate

This is to certify that the undernoted product has been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

PRODUCER	DK Tech Co., Ltd.																								
PLACE OF PRODUCTION	568-17, Kwebup-dong, Sasang-gu, Pusan, 617-060 Korea																								
DESCRIPTION	Stainless steel double ferrule compression type tube fittings, inch and metric sizes																								
TYPE	DK-LOK Tube Fitting																								
APPLICATION	High pressure tube connections for use in marine, offshore and industrial piping systems with hydraulic system fluids, fuel oil, lubricating oil, fresh water, salt water, sanitary, gas, steam and condensate.																								
DESIGN CODE	LR Rules and Regulations for the Classification of Ships, Part 5, Chapter 12 JIS B 2351 - 1990: 25 MPa bite type tube fittings for hydraulic use																								
RATING	Imperial Tubing:- <table><thead><tr><th>Tube O.D. (inch)</th><th>Nominal pressure ratings (psi)</th></tr></thead><tbody><tr><td>1/8"</td><td>8,500 to 10,900</td></tr><tr><td>3/16"</td><td>5,400 to 10,200</td></tr><tr><td>1/4"</td><td>4,000 to 10,200</td></tr><tr><td>5/16"</td><td>4,000 to 8,000</td></tr><tr><td>3/8"</td><td>3,300 to 6,500</td></tr><tr><td>3/4"</td><td>2,400 to 5,800</td></tr><tr><td>7/8"</td><td>2,000 to 4,700</td></tr><tr><td>1"</td><td>2,400 to 4,700</td></tr><tr><td>1-1/4"</td><td>2,400 to 4,900</td></tr><tr><td>1-1/2"</td><td>2,400 to 4,900</td></tr><tr><td>2"</td><td>2,000 to 3,600</td></tr></tbody></table>	Tube O.D. (inch)	Nominal pressure ratings (psi)	1/8"	8,500 to 10,900	3/16"	5,400 to 10,200	1/4"	4,000 to 10,200	5/16"	4,000 to 8,000	3/8"	3,300 to 6,500	3/4"	2,400 to 5,800	7/8"	2,000 to 4,700	1"	2,400 to 4,700	1-1/4"	2,400 to 4,900	1-1/2"	2,400 to 4,900	2"	2,000 to 3,600
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Certificate No.	01/10047																								
Issue Date	28 June 2001																								
Expiry Date	27 June 2006																								
Sheet	1 of 2																								

N. Terashita

N. Terashita

Lloyd's
Register

Lloyd's Register of Shipping
71 Fenchurch Street, London EC3M 4BS

RATING
(Continued)

Metric Tubing:

Tube O.D(mm)

Nominal pressure ratings (psi)

3	10,800 to 15,300
4	7,900 to 14,400
6	5,000 to 12,700
8	4,700 to 9,300
10	3,700 to 7,300
12	3,000 to 7,300
16	2,500 to 6,800
18	2,800 to 6,700
20	2,500 to 6,000
22	2,300 to 5,400
25	2,000 to 5,200
28	2,600 to 4,800
32	2,300 to 4,800
38	2,000 to 4,500

Pressure-temperature ratings : see the producer's catalogue

**OTHER
CONDITIONS**

- 1) The fittings are to be installed in accordance with the manufacturer's instructions.
- 2) Attention is drawn to Section 3.6 of IMO MSC/Circular.851 - Guidelines on Engine-Room Oil Fuel Systems which describes that compression couplings require careful attention to tightening procedures and torques to avoid leaks or damage to the pipe when subjected to overtightening and they should not be used in the fuel supply line of the (oil engine) injection pumps and spill system.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify LR of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 01/10047 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No. 01/10047
Issue Date 28 June 2001
Expiry Date 27 June 2006
Sheet 2 of 2

N. Terashita
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LR Type Approval Certificate

This is to certify that the undernoted product has been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

PRODUCER DK Tech Co., Ltd.

PLACE OF PRODUCTION 568-17, Kwebup-dong, Sasang-gu, Pusan, 617-060 Korea

DESCRIPTION Carbon steel and stainless steel single compression type tube fittings, inch and metric sizes

TYPE DK Bite Type Fitting

APPLICATION High pressure tube connections for use in marine, offshore and industrial piping systems with hydraulic system fluids, fuel oil, lubricating oil, fresh water, salt water, sanitary, gas, steam and condensate.

DESIGN CODE LR Rules and Regulations for the Classification of Ships, Part 5, Chapter 12
JIS B 2351 - 1990: 25 MPa bite type tube fittings for hydraulic use

RATING

Imperial Tubing:-

Tube O.D. (inch)

1/8"
1/4"
3/8"
1/2"
3/4"
1"
1-1/4"
1-1/2"
2"

Normal pressure ratings (kgf/cm²)

500
500
400
400
350
250
210
210
210

Certificate No. 01/10048

Issue Date 28 June 2001

Expiry Date 27 June 2006

Sheet 1 of 2



N. Terashita

RATING
(Continued)

Metric Tubing:

<u>Tube O.D.(mm)</u>	<u>Nominal pressure ratings (kgf/cm²)</u>
3	500
4	500
6	500
8	500
10	500
12	500
16	400
18	400
20	400
22	400
25	350
28	350
32	250
38	250
40	210
42	210

Pressure-temperature ratings : see the producer's catalogue

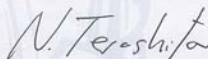
**OTHER
CONDITIONS**

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- 2) Attention is drawn to Section 3.6 of IMO MSC/Circular.851 - Guidelines on Engine-Room Oil Fuel Systems which describes that compression couplings require careful attention to tightening procedures and torques to avoid leaks or damage to the pipe when subjected to overtightening and they should not be used in the fuel supply line of the (oil engine) injection pumps and spill system.

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The attached Design Appraisal Document No. 01/10048 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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