



Lloyd's  
Register

## Type Approval Certificate Extension

This is to certify that Certificate No. 01/10075(E2) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

**PRODUCER**

Hy-Lok Corporation

**PLACE OF  
PRODUCTION**

97, Noksansandan 27-ro, Gangseo-gu, Busan, Korea

**DESCRIPTION**

Stainless steel and brass double ferrule compression type tube  
Fittings, inch and metric sizes

**TYPE**

Hy-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  
STANDARD**

Lloyd's Register's Rules and Regulations for the Classification of  
Ships, Part 5, Chapters 12 - July 2016

**RATINGS**

Stainless steel tube fittings for stainless steel fractional / metric tubing:

<u>Tube O.D. (inch / mm)</u>	<u>Nominal pressure ratings (bar)</u>
1/16" to 1/8"	760
3/16"	500
1/4" to 5/8"	360
3/4" to 7/8"	300
1" to 1-1/2"	280
2"	250
3 (mm)	760
4 (mm)	500
6 to 16 (mm)	360
18 to 22 (mm)	300
25 to 38 (mm)	280

**Certificate No.**

16 / 40081(E3)

**Issue Date**

02 October 2016

**Expiry Date**

01 October 2021

**Sheet**

1 of 2



LR031.1.2013.12

Y. D. Kong

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#### RATINGS (continued)

Brass tube fittings for copper fractional / metric tubing:

<u>Tube O.D. (inch / mm)</u>	<u>Nominal pressure ratings (bar)</u>
1/16" to 3/4"	150
7/8" to 1"	105
3 to 22 (mm)	150
25 (mm)	105

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.
- 3) The fittings are to be used for permanent pipe connection only.

*"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 Lloyd's Register Asia of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 16/40081(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 01/10075 (E2) to which this extension should be attached.

Certificate No. 16/40081(E3)  
Issue Date 02 October 2016  
Expiry Date 01 October 2021  
Sheet 2 of 2



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## Design Appraisal Document

Lloyd's Register Asia  
Busan Technical Support Office  
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119, Daegyo-ro, Jung-gu (2, 6-ga, Jungang-dong)  
Busan 48943, Republic of Korea  
Tel.: +82 51 640 5000 Fax: +82 51 637 4114

Date  
02 October 2016

Please quote the document number on all future communications

### LR TYPE APPROVAL SYSTEM, 2014

Issued to: HY-LOK CORPORATION  
for: HY-LOK TUBE FITTING  
TYPE APPROVAL CERTIFICATE No. 16/40081(E3)

The undernoted documents have been reviewed for compliance with the requirements of the LR Type Approval System, 2014 and this Design Appraisal Document forms part of the Certificate.

#### APPROVAL DOCUMENTATION

Request for Marine Services, Form 2502TA dated 13 September 2016  
Application Checklist – Appendix to Form 2502TA dated 13 September 2016  
Declaration from manufacture for extension of LR Type approval dated 19 September 2016  
Production Quality Assessment Form (Form-PQA) dated 13 September 2016  
LR Busan Port Memorandum dated 21 September 2016, Ref. BUS/JPP/BUS1611708/O-7223 together with the submitted documents

#### Supplementary Type Approval Terms and Conditions

*Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register Asia reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.*

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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## Type Approval Certificate Extension

This is to certify that Certificate No. 01/10076(E2) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

**PRODUCER**

Hy-Lok Corporation

**PLACE OF  
PRODUCTION**

97, Noksansandan 27-ro, Gangseo-gu, Busan, Korea

**DESCRIPTION**

Carbon steel, stainless steel and brass single sleeve compression type tube fittings

**TYPE**

24° Tube fittings - DIN 2353 & ISO 8434-1

**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  
STANDARD**

Lloyd's Register's Rules and Regulations for the Classification of Ships, Part 5, Chapters 12 - July 2016

**RATINGS**

Carbon steel and stainless steel tube fittings:

Series	Tube O.D (mm)	Nominal pressure ratings (bar)
LL	4 to 12	100
L	6 to 18	315
L	22 to 42	160
S	6 to 14	630
S	16 to 30	400
S	38	315

**Certificate No.**

16 / 40082(E3)

**Issue Date**

02 October 2016

**Expiry Date**

01 October 2021

**Sheet**

1 of 2



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## RATINGS (continued)

### Brass tube fittings:

Series	Tube O.D (mm)	Nominal pressure ratings (bar)
LL	4 to 8	100
L	6 to 15	250
L	18 to 22	160
L	24 to 42	100
S	6 to 14	630
S	16 to 25	400
S	30 to 38	315

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 Lloyd's Register Asia of any modification or changes to the equipment in order to obtain a valid certificate."*

The attached Design Appraisal Document No. 16/40082(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 01/10076(E2) to which this extension should be attached.

Certificate No. 16 / 40082(E3)  
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### LR TYPE APPROVAL SYSTEM, 2014

Issued to: HY-LOK CORPORATION  
for: 24° TUBE FITTINGS - DIN 2353 & ISO 8434-1  
TYPE APPROVAL CERTIFICATE No. 16/40082(E3)

The undernoted documents have been reviewed for compliance with the requirements of the LR Type Approval System, 2014 and this Design Appraisal Document forms part of the Certificate.

#### APPROVAL DOCUMENTATION

Request for Marine Services, Form 2502TA dated 13 September 2016  
Application Checklist – Appendix to Form 2502TA dated 13 September 2016  
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LR Busan Port Memorandum dated 21 September 2016, Ref. BUS/JPP/BUS1611781/O-7224 together with the submitted documents

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*Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.*

*Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*Lloyd's Register Asia reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.*

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