



TYPE APPROVAL CERTIFICATE

Certificate No. : GCH80268-VV002 **Initial Approval** : 9th July, 2008.
Product : Cryogenic Needle Valve
Manufacturer : HY-LOK Corporation
1467-1, Songjeong-dong, Kangseo-gu, Busan, Korea

Product Description : Product description ;
A. Model :
1) Size(1/2") ; CRYON-8FA, -8BWA8FA, -8BWA
2) Size(1") ; CRYON-16FA, -16BWA16FA, -16BWA
B. Body Material : F TYPE - ASTM A351 CF8M
B TYPE / BF TYPE - ASTM A351 CF3M
" See Appendix 1 "

Approval Condition : " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt.7, Ch.5, Art.503 of the Rules for Classification of Steel Ships and BS 6364.

This Certificate is valid until 8th July, 2018.
Issued at Gamcheon, Korea on 29th May, 2013.



KOREAN REGISTER OF SHIPPING

Seonah

General Manager of
Gamcheon Branch Office

*Note :1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.
2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.*

Appendix 1

Product Description and/or Approval Condition

Certificate No : GCH80268-VV002

Date of Issue : 29th May, 2013.

1. Product description :

A. Model :

- 1) Size(1/2") ;
CRYON-8FA, -8BWA8FA, -8BWA
- 2) Size(1") ;
CRYON-16FA, -16BWA16FA, -16BWA

B. Design Pressure : 10 bar at -196°C

C. Minimum Design Temperature : -196°C

D. Material :

- 1) ASTM A351 CF8M ; CRYON-8FA, -16FA
- 2) ASTM A351 CF3M ; CRYON-8BWA8FA, -8BWA, -16BWA16FA, -16BWA

E. Approved Drawing No. :

CRYON-8FA, CRYON-8BWA8FA, CRYON-8BWA, CRYON-16FA, CRYON-16BWA16FA, CRYON-16BWA,
2006I01H002, 2006I01H004, 2006I01H018, 2006I01H102, 2006I01H202, 2006I02H004,
2006I02H016, 2006I11PVA02, 2006I11PVA03, 2006I12PVA02, 2006I12PVA03, 2005L26H006,
2005L26H007, 2005L26H008, 2005L27H002, 2005L27H006, 2005L27H009, 2005L27H102,
2005L27H502, 2001J08D07, 2001J25D03,

2. Approval Conditions :

- A. This approval is granted on the basis of the approval test report no. ATR-08C04-01, CVTR-08C04-01, CVTR-08C04-02 performed in the presence of the KR surveyor.
- B. The materials for body and bonnet are to be certified by this Society.
- C. The minimum average energy for Charpy V-notch impact test should be complied with the relevant requirements of the Rules, Pt. 7, Ch. 5.
- D. Individual Product Certification is required. < The End >