



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	President Engineering Group Limited President Park President Way S47UR
DESCRIPTION	Stainless steel cryogenic Globe, Lift Check and Swing Check Valves, for butt welded or flanged connections.
TYPES	Manually Operated Globe Valve Cryogenic Actuated Globe Valve Miniature Needle Globe Valve (MNGV) Cryogenic Lift Check Valve Cryogenic Swing Check Valve
APPLICATION	Cryogenic valves for the use with LNG, LPG and other flammable gases
STANDARD	Lloyd's Register Rules and Regulations for the Classification of Ships 2014 LR Rules and Regulations for the construction and Classification of Ships for the carriage of Liquefied Gases in Bulk

Certificate No.	14/20079
Issue Date	28 November 2014
Expiry Date	27 November 2019
Sheet	1 of 2


Torsten Schröder
Hamburg Technical Support Office
Lloyd's Register EMEA

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

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RATINGS

Type	Nominal diameter DN	
	Class 150 Design pressure 10 bar	Class 300 Design pressure 50 bar
Globe Valve (Manually, hydraulically and pneumatically operated)	15, 25, 40, 50, 65, 80, 100, 200, 300, 350	15, 25, 40, 50, 65 80, 100
Miniature Needle Globe Valve	25	
Cryogenic Lift Check Valve	25, 40, 50, 65, 200	
Cryogenic Swing Check Valve	25, 50, 65, 80, 100, 150, 200, 250, 350	

Temperature Range: -196 °C to +65°C

OTHER CONDITIONS

Where valves are required to be capable of being closed remotely in the event of fire, also the control gear, is to be of steel construction or of an acceptable fire tested design.

Valves are to be installed and maintained in accordance with the manufacturer's recommendations.

"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 EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HTS/ENS 31777-14 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No. 14/20079
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Marine Design Appraisal Document

Lloyd's Register EMEA
Hamburg Technical Support Office
Am Sandtorkai 41
20457 Hamburg
Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480
E-mail: hamburg-technical-support@lr.org

Date
28 November 2014

Please quote this reference number on all future communications
HPC 1461044/31777-14/DS/TS/MCG

**THE LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002
ISSUED TO: PRESIDENT ENGINEERING GROUP LIMITED
FOR: CRYOGENIC GLOBE, LIFT CHECK AND SWING CHECK VALVES
TYPE APPROVAL CERTIFICATE NO. 14/20079**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Form LR2571	Application for Type Approval	15.04.2014
CNM30 TO CNM80 Rev. B	DRAWING DN15 - DN50 MANUAL GLOBE VALVE	28.01.2014
CNM90 TO CNMB0 Rev. B	DRAWING DN65 - DN100 MANUAL GLOBE VALVE	28.01.2014
CNM30 PA TO CNM80 PA Rev. B	DRAWING DN15 - DN50 ACTUATED GLOBE VALVE	28.01.2014
CNM90 PA TO CNMB0 PA Rev. B	DRAWING DN65 - DN100 ACTUATED GLOBE VALVE	28.01.2014
CNME0 TO CCNMG0 Rev. A	DRAWING DN200 - DN300 ACTUATED GLOBE VALVE	05.07.2013
CGT30 TO CGT80 Rev. B	DN15 - DN50 LIFT CHECK VALVE	28.01.2014
CGT90 TO CGTE0 Rev. B	DRAWING DN65 - DN200 LIFT CHECK VALVE	28.01.2014
CHC50 TO CHCB0 Rev. A	DRAWING DN25 - DN100 SWING CHECK VALVE	11.07.2013
CHCD0 TO CHCH0 Rev. A	DRAWING DN150 - DN350 SWING CHECK VALVE	15.07.2013

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

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Lloyd's Register EMEA
Hamburg Technical Support Office
Am Sandtorkal 41
20457 Hamburg
Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480
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APPROVAL DOCUMENTATION, cont.

Q128 issue 9	Test Specification – Q128 Ambient temperature pressure and operability testing of Stainless Steel LNG Globe, Check and SDNR Valves. Body Strength-, Shell Tightness-, Seat Tightness-, Operability- and Reverse Seat Test Maximum working pressure 10 bar	02/2013
Q129 issue 9	Test Specification – Q129 Cryogenic pressure and operability testing of Stainless Steel LNG Globe, Check and SDNR Valves. Shell Tightness-, Seat Tightness-, Operability- and Reverse Seat Test Maximum working pressure 10 bar	10/2012
Q31 issue 4	Test Specification – Q31 Globe Valves with metal to metal seats. Body Strength-, Shell Tightness-, Seat Tightness Test Maximum working pressure 50 bar	08/2010
Q46 issue 1	Test Specification – Q46 Cryogenic pressure and operability testing of Stainless steel LNG Globe valves. Shell Tightness-, Seat Tightness-, Operability Test Maximum working pressure 50 bar	01/2013
Q153 issue 4	Test Specification – Q153 Pneumatically Operated Globe Valves. Body Strength-, Body Porosity Test-, Seat Test and Repeat Seat Test Maximum working pressure 10 bar	02/2014
IOM 018 issue 2	LNG Actuated Globe Valves / Installation, Operation and Maintenance Manual	22.03.2013
IOM 019 issue 2	LNG Check Valves / Installation, Operation and Maintenance Manual	29.11.2012
IOM 020 issue 2	LNG Manual Globe Valve / Installation, Operation and Maintenance Manual	26.03.2014
IOM 027 issue 2	Pneumatic Actuated Globe Valve (DN15 – DN100) / Installation, Operation and Maintenance Manual	13.08.2013
-	Asbestos-Free Declaration	11.07.2013
-	Set of valve data sheets	-

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TEST REPORTS

LIV 1400651	LR Surveillance visit report	26.06.2014
-	Set of Inspection Certificates which represent the entire range of class 150 (PN 10) valves to be type approved, witnessed or reviewed by recognised classes. The Inspection Certificates include body strength test with 20,9 bar and seat test with 11 bar at room temperature and shell and operability test with 11 bar at -196°C.	2012 to 2014
-	Set of Inspection Certificates which represent the entire range of class 300 (PN 50) valves to be type approved, witnessed or reviewed by recognised classes. The Inspection Certificates include body strength test with 75 bar and seat test with 55 bar at room temperature and shell and operability test with 55 bar at -196°C.	2012 to 2014
207918-1	Fire test according BS EN ISO 10497 Second Edition August 2004 and ANSI/API Standard 607 Fifth Edition June 2005 Globe Valve DN150 at SCORE (EUROPE) LIMITED Sizes qualified by this test: DN 150, 200, 250, 300	29.05.2008
148490-1	Fire test according BS EN ISO 10497 Second Edition August 2004 and ANSI/API Standard 607 Fifth Edition June 2005 Globe Valve DN40 at SCORE (EUROPE) LIMITED Sizes qualified by this test: DN40 (and below), 50, 65, 80	09.12.2004



Dirk Schröder
Specialist
Engineering Systems
Hamburg Technical Support Office
Lloyd's Register EMEA
T +49 (0)40 328107-217
E dirk.schroeder@lr.org



Torsten Schröder
Senior Specialist
Engineering Systems
Hamburg Technical Support Office
Lloyd's Register EMEA
T +49 (0)40 328107-463
E torsten.schroeder@lr.org

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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 EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

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Part 1A

Subject: Valves

Product: Valves - General (Part 1A)

Producer/Licence No.		Description of Product			Remarks	Cert. No.																
Type	Details of Approval	Application																				
<p>President Engineering Group Limited President Park President Way S47UR</p>	<p>Manually Operated Globe Valve Cryogenic Actuated Globe Valve Miniature Needle Globe Valve Cryogenic Lift Check Valve Cryogenic Swing Check Valve</p>	<p>Stainless steel cryogenic Globe, Lift Check and Swing Check Valves, for butt welded or flanged connections.</p> <p><u>Ratings:</u></p> <table border="1"> <thead> <tr> <th rowspan="2">Type</th> <th colspan="2">Nominal diameter DN</th> </tr> <tr> <th>Class 150 Design pressure 10 bar</th> <th>Class 300 Design pressure 50 bar</th> </tr> </thead> <tbody> <tr> <td>Globe Valve (Manually, hydraulically and pneuma- tically operated)</td> <td>15, 25, 40, 50, 65, 80, 100, 200, 300, 350</td> <td>15, 25, 40, 50, 65 80, 100</td> </tr> <tr> <td>Miniature Needle Globe Valve</td> <td>25</td> <td></td> </tr> <tr> <td>Cryogenic Lift Check Valve</td> <td>25, 40, 50, 65, 200</td> <td></td> </tr> <tr> <td>Cryogenic Swing Check Valve</td> <td>25, 50, 65, 80, 100, 150, 200, 250, 350</td> <td></td> </tr> </tbody> </table> <p>Temperature Range [°C] -195 to +65</p> <p><u>Other Conditions:</u> Where valves are required to be capable of being closed remotely in the event of fire, also the control gear, is to be of steel construction or of an acceptable fire tested design. Valves are to be installed and maintained in accordance with the manufacturer's recommendations.</p>	Type	Nominal diameter DN		Class 150 Design pressure 10 bar	Class 300 Design pressure 50 bar	Globe Valve (Manually, hydraulically and pneuma- tically operated)	15, 25, 40, 50, 65, 80, 100, 200, 300, 350	15, 25, 40, 50, 65 80, 100	Miniature Needle Globe Valve	25		Cryogenic Lift Check Valve	25, 40, 50, 65, 200		Cryogenic Swing Check Valve	25, 50, 65, 80, 100, 150, 200, 250, 350		<p>Cryogenic valves for the use with LNG, LPG and other flammable gases.</p>	<p>Expiry Date: 27 November 2019</p>	<p>14/20079</p>
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