DNV·GL

Certificate No:
TAP000029M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Safety Valve

with type designation(s)
Eagle SV01 (10K), SV02 (20K), SV03 (30K)

Issued to
BY Controls Inc.
Gimhae-si, Gyungsangnam-do, Republic of Korea

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV GL class programme DNVGL-CP-0186 – Type approval – Valves

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV GL.
K. factor: See page 2

Issued at **Høvik** on **2020-12-29**
This Certificate is valid until **2023-11-01**.
DNV GL local station: **Gimhae Station**

for **DNV GL**

Approval Engineer: **Maheshraja Venkatesan**

Zeinab Sharifi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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Product description

Spring-loaded full-bore safety valves with end flanges and pressure ratings 10K, 20K and 30K according to JIS B2220 with following types and sizes:

Series		SV01		SV02		SV03	
Description		Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Sizes	15Ax25A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	JIS 30K	JIS 10K
	20Ax40A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	JIS 30K	JIS 10K
	25Ax50A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	JIS 30K	JIS 10K
	40Ax65A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	JIS 30K	JIS 10K
	50Ax80A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	65Ax100A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	80Ax125A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	100Ax150A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	150Ax200A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	200Ax250A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
	250Ax300A	JIS 10K	JIS 10K	JIS 20K	JIS 10K	-	-
Materials	Body/Bonnet	JIS G5101 SC480					
	Gaskets	PTFE					
Discharge coefficient	Liquid	0.62		0.62		0.62	
	Steam & gas	0.85-0.87		0.85-0.87		0.85-0.87	

Application/Limitation

Valves covered by this certificate may be used with gas, steam or liquid with following design conditions:

Design pressure : As per JIS B2220 10K, 20K and 30K
Design temperature : -30°C to 190°C (depending on non-metallic material – PTFE)

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions. Valves of austenitic stainless steel shall not be used in direct contact with seawater.

Threaded joints may not be used for piping systems conveying toxic or flammable media or services where fatigue, severe erosion or crevice corrosion is expected to occur.
Threaded joints with tapered thread are only to be allowed for:

- class I piping system, when outside diameter not more than 33.7 mm
- class II and class III piping systems, when outside diameter not more than 60.3 mm.

The valves covered by this certificate are not to be considered fire safe and therefore shall not be installed wherever fire safe application is required; e.g. as pressure relief valves on cargo tanks in liquefied gas tankers.

Type Approval documentation

Production Testing

Each valve body shall be subjected to:

- hydrostatic pressure test at 1.5 times the maximum working pressure at room temperature.
- seat leakage testing at 0.9 times the set pressure.

Testing shall follow procedures and acceptance criteria in API 527.

Production testing for valves that require DNV GL product certificate shall be witnessed by DNV GL surveyor.

Certification

Product certificate issued by DNV GL is required for valves with DN > 100 mm having a design pressure and p > 16 bar. For other valves, works certificate will be accepted.

Valves shall be delivered with material certificates in accordance with Sec.2 Table 3.

Marking of product

For traceability to this type approval the valves are to be marked as a minimum with:

- manufacturer's name or trademark
- valve type designation
- size
- maximum design pressure and temperature

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.