

Istanbul, 30.06.2008
Our Ref: NC/L/2116 /GY/08

BURÇELİK VANA SAN. VE TİC. A.Ş.
Attn. Mr.Rahşan YORULMAZ

**Subject: BURÇELİK VANA SAN. VE TİC. A.Ş.
TYPE APPROVAL CERTIFICATE
Certificate Number: 19899/A0 BV
BUTTERFLY VALVES FOR OIL/PRODUCT/CHEMICAL TANKERS**

Dear Sirs,

We are sending you the certificate listed below which have been approved by us and which are intended for your use.

Best regards,


GÜRCAN YILMAZ

Encls: (1 Copy)

- Bureau Veritas Marine Division Type Approval Certificate 19899/A0
(3 pages)

MARINE DIVISION

17 bis Place des Reflets - La Défense 2
92400 Courbevoie - France

Tel. 33 1 42 91 52 91
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www.veristar.com



Certificate number: 19899/A0 BV

File number : ACM 145/2531/01

Product code : 72321

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

BURCELIK VANA SAN. VE TIC. A.S.
BURSA - TURKEY

for the type of product

BUTTERFLY VALVES FOR OIL/PRODUCT/CHEMICAL TANKERS

High Performance Butterfly Valve - Wafer type

Regulations and standards :

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units
- NR 216 Materials Rules
- IBC Code

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 09 Jun 2013

At Paris la Défense, on : 09 Jun 2008

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV ISTANBUL

Surveyor : G. Yilmaz

L.COURREGELONGUE



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

High Performance Butterfly Valve - Wafer type

1.1 Rating

Design	PTFE seated type
Size	DN 50 - DN 300 (2" - 12")
Max. working pressure (bar)	20
Temperature range (°C)	- 30/ 190
End connection	Wafer
Actuator	Lever and gearbox

1.2 Material specification

Body, disc,	Stainless steel CF8M
Disc seat	PTFE-Teflon
Stem	Stainless steel AISI 316
Seat retainer	Stainless steel AISI 316

When other choices of materials are used per manufacturer's instructions, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

2.1 General documentation:

- Manufacturer's catalogue
- Mounting manual and maintenance manual
- Quality plan dated 12/03/2007

2.2 Details drawings + Material list

- N° 308609E-0001 and N° 308609E-0002 - High performance wafer butterfly valve DN 100 PN 16
- N° 308611E-0001 and N° 308611E-0002 - High performance wafer butterfly valve DN 150 PN 16
- N° 308613E-0001 - High performance wafer butterfly valve DN 250 PN 16

3. TEST REPORTS

3.1 Tests carried out according to ISO 5208 standard on valve DN 100, DN 150 and DN 250:

- Mill certificate, mechanical test and NDE (penetrant)
- Body pressure test, seat leakage test, corrosion test and cycle test

The tightness has been tested at the 1st, 25 th, 50 th, 75 th and 100 th cycles, and measure the torque for each operation.

3.2 Test report dated 20/08/2007.

4. APPLICATION / LIMITATION

4.1 The PTFE lined butterfly valves may be used on cargo handling systems for chemical tanker, product tanker and oil tanker.

4.2 The valves intended to be used for handling of Propylene Oxide or Ethylene Oxide/ Propylene Oxide mixtures shall be of a fire safe design.

4.3 The valves belong to class I, class II or class III according to the relevant requirements stated in Part D, Ch 8, Sec 5 of the Bureau Veritas Rules.

4.4 The materials for valves housing, disc and sealing should be of a suitable type at the temperature and the pressure for use with cargoes intended to be carried.

4.5 The approval does not include any operating gear for remote control of the valves.

4.6 The valve is to be installed according to manufacturer's instructions and Society's Rule requirements.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and Bureau Veritas Rules and Regulations stated on the front page of this certificate. Arrangements shall be made for a Society's Surveyor to attend the tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme, BV Mode I, has been arranged, in order to issue the Bureau Veritas certificate for the approved type to be fitted on board ships classed with Bureau Veritas.

5.2 The manufacturer has declared to Bureau Veritas that the products detailed in this certificate are manufactured at the production site stated on the front page of this certificate.

5.3 Bureau Veritas Certificates are required for materials of valve housings of class I (DN \geq 50) and class II (DN \geq 100). Materials of valve housings of class I (DN<50) and class II (DN< 100) and other pressure boundary parts of class I and class II are to be with work's certificates.

5.4 Each valve housing for class I and class II is to be hydraulically pressure tested to 1.5 times the design pressure.



6. MARKING OF PRODUCT

The valve is to be at least marked with:

- Manufacturer's name or logo
- Type designation
- Size and pressure class
- Society's brand as relevant

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the approved product and of the conditions of this approval.

*** END OF CERTIFICATE ***

