



Marine & Offshore

Certificate number: 13769/D0 BV

File number: MAT 53362

Product code: 90071

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

www.veristar.com

APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

OZKAN DEMIR CELIK SAN. A.S.
IZMIR - TURKEY

for the type of product

HIGHER STRENGTH HULL STEEL ROLLED PRODUCTS

Wide flat and Bulb flat in steel grades AH36/AH40, DH36/DH40, EH36/EH40
Bulb flats, flat bars and angles in steel grades AH32/AH36, DH32/DH36, EH32/EH36

Requirements:

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

ÖZKAN
DEMİR ÇELİK SANAYİ A.Ş.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate is a renewal of certificate N° 13769/C1 BV expiring on 13/10/2019

This certificate will expire on: 13 Oct 2024

For Bureau Veritas Marine & Offshore,

At BV ISTANBUL, on 07 Oct 2019,

Gurcan Yilmaz



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 Marine & Offshore. 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 & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore 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 :

1.1 Bulb flats, flat bars and angles. Bulb flats of maximum width 370mm. Angles of maximum width 350mm.

Steel grade	Deoxydation practice & Refining	Delivery conditions
AH32-AH36	Killed and fine grain treated with Al+V	As Rolled (AR) with thickness up to 28mm
DH32-DH36	Killed and fine grain treated with Al+V	As Rolled (AR) with thickness up to 28mm
EH32-EH36	Killed and fine grain treated with Al+V	As Rolled (AR) with thickness up to 28mm

Steelmaking by Electric Arc furnace, Ladle Furnace; Continuous casting.

1.2 Bulb flats of maximum width 370mm. Wide flats of maximum width 180mm.

Steel grade	Deoxydation practice & Refining	Delivery conditions
AH36,DH36, EH36 AH40,DH40, EH40	Killed and fine grain treated with Al+V	Thermo-Mechanical Controlled Processing (TMCP) with thickness up to 15mm for bulb flat and up to 28mm for wide flat.

Steelmaking by Electric Arc furnace, Ladle Furnace and Vacuum Degassing; Continuous casting.

2. DOCUMENTS AND DRAWINGS :

As per following document issued by Özkan Demir Celik San. A.S.:

- "Approval of the manufacturing process of metallic materials"; "Application for the approval of Özkan steel meltshop",
- "Approval test program-Wide flat 180×28 mm and bulb flat 370×15mm" and Doc. No.TAPS007/00 dated 01/07/2015.

3. TEST REPORTS :

As per following reports issued by Özkan Demir Celik San.A.S.:

- "Mechanical test results for approval" dated 08/07/2010; "Mechanical test results for approval" dated 07/07/2010.
- "TAC Modification Request for adding EH32/EH36 material grades" dated 3/04/2009; "Mechanical test results" dated 26/12/2006.
- Certificates number 115 and 116 dated 16/07/2004 and Report on microstructural investigation dated 01/07/2004 issued by Dokuz Eylül University.
- Certificates number 01 dated 11/10/2004 and 354 dated 19/10/2004; "EH32/36 Approval Tests 2011" dated September 2011.
- Reports Ref.2015/QAM/14 and Ref.2015/QAM/15 dated 15/07/2015, and data Ref.TAPS007/00 dated 01/07/2015.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The steel sections are to be supplied by Özkan Demir Celik San. A.S. in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate replaces approvals from No. 13769/A0 BV to No. 13769/C1BV.

*** END OF CERTIFICATE ***





Marine & Offshore

Certificate number: 13019/D0 BV

File number: MAT 53362/01

Product code: 90061

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

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APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

OZKAN DEMIR CELIK SAN. A.S.
IZMIR - TURKEY

for the type of product

NORMAL STRENGTH HULL STEEL ROLLED PRODUCTS

Bulb flats, flat bars and angles made of steel grades A, B, D and E.

Requirements:

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

OZKAN
DEMİR ÇELİK SANAYİ A.Ş.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 02 Apr 2024

For Bureau Veritas Marine & Offshore,

At BV ISTANBUL, on 02 Apr 2019,

Gurcan Yilmaz



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 Marine & Offshore. 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 & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore 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 :

Bulb flats, angles and flat bars.

Steel grade	Deoxydation practice & Refining	Delivery conditions
A	Killed	As Rolled (AR) with maximum thickness up to 30mm
B	Killed	As Rolled (AR) with maximum thickness up to 30mm
D	Killed and fine grain treated with Al+V	As Rolled (AR) with maximum thickness up to 30mm
E	Killed and fine grain treated with Al+V	Thermomechanical rolled (TMCP) with maximum thickness up to 15mm

Steelmaking by Electric Arc Furnace (EAF) and Ladle furnace (LD)
Continuous Casting.

2. DOCUMENTS AND DRAWINGS :

As per documents issued by ÖZKAN DEMİR ÇELİK SAN. A.Ş.

- "Approval of the manufacturing process of metallic materials" submitted 2003.
- "Application for the Approval of Özkan Steel Melshop" dated 04 October 2011.
- "Grade D Approval tests 2012", submitted 2012.
- "Thermomechanical rolling process - Doc. No. T.328/01 dated 21 August 2012.
- "Manufacturing procedure specification - Doc. No. MPS15-01/00 dated 12 May 2015.
- "Type approval for ship - Doc No. TAPS15-01/00 dated 12 May 2015.

3. TEST REPORTS :

As per documents issued by ÖZKAN DEMİR ÇELİK SAN. A.Ş.

- Test reports for bulb flats (mechanical tests, micrographic examination and sulphur prints) submitted 2003.
- "Mechanical test results" dated 09 July 2009.
- "Grade D Approval tests 2012", submitted 2012.
- Test report N° 2015/QAM/14 Rev.01 dated 23 June 2015.
- Mechanical and chemical test results Grade A, B, D, submitted 2018.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The rolled products are to be supplied by ÖZKAN DEMİR ÇELİK SAN. A.Ş. in compliance with the type and the requirements described in this certificate.
5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
5.3 - BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Materials Rules for Classification.

7. OTHERS :

This certificate replaces approval certificates No.19203/A0 BV and from No. 13019/A0 BV to 13019/C0 BV.

*** END OF CERTIFICATE ***