



Marine & Offshore
Division

Certificate number: 09707/D0 BV

File number: MAT 23608/01

Product code: 9006I

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

Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co. Ltd
Suqian - CHINA

for the type of product

NORMAL STRENGTH HULL STEEL ROLLED PRODUCTS

Hot rolled sections in steel grades A, B, D and E

Requirements:

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

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 mentioned above.

This certificate will expire on: 16 Dec 2021

For BUREAU VERITAS,

At BV SHANGHAI, on 16 Dec 2016,

Jennifer Zhang



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 & Offshore Division 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 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 :

Hot rolled sections.

| Steel grade | Type of product | Deoxydation practice & Refining | Maximum dimensions | Delivery conditions |
|------------------------|---------------------|----------------------------------|--------------------|---------------------|
| AH32 | Bulb flats | Killed and Al or Al + Nb treated | 400*15mm | As Rolled (AR) |
| | Equal/Unequal angle | Killed and Al or Al + Nb treated | 125*75*10mm | As Rolled (AR) |
| | Inverted angle | Killed and Al or Al + Nb treated | 400*100*13*18mm | As Rolled (AR) |
| AH36 | Bulb flats | Killed and Al + Nb treated | 400*15mm | As Rolled (AR) |
| | Equal/Unequal angle | Killed and Al + Nb treated | 125*75*10mm | As Rolled (AR) |
| | Inverted angle | Killed and Al + Nb treated | 400*100*13*18mm | As Rolled (AR) |
| AH32/AH36 | Bulb flats | Killed and Al + Nb treated | 450*20mm | Control rolled (CR) |
| | Equal/Unequal angle | Killed and Al + Nb treated | 200*200*20mm | Control rolled (CR) |
| | Inverted angle | Killed and Al + Nb treated | 450*150*13*18mm | Control rolled (CR) |
| DH32/DH36 AH40/DH40 | Bulb flats | Killed and Al + V treated | 450*20mm | Control rolled (CR) |
| | Equal/Unequal angle | Killed and Al + V treated | 200*200*20mm | Control rolled (CR) |
| | Inverted angle | Killed and Al + V treated | 450*150*13*18mm | Control rolled (CR) |

Steelmaking by Basic Oxygen Converter LD. Continuous casting.

| Steel grade | Type of product | Deoxydation practice & Refining | Maximum dimensions | Delivery conditions |
|-------------|----------------------|---------------------------------|--------------------|-------------------------|
| AH32/DH32 | Flat | Killed and Al + V treated | 350*20mm | Controlled Rolling (CR) |
| AH36/DH36 | Bulb flat | Killed and Al + V treated | 430*20mm | Controlled Rolling (CR) |
| AH40/DH40 | Equal /Unequal angle | Killed and Al + V treated | 250*250*20mm | Controlled Rolling (CR) |
| | Inverted angle | Killed and Al + V treated | 450*125*13*18mm | Controlled Rolling (CR) |
| EH32/EH36 | Flat | Killed and Al+V+Ti treated | 350*20mm | Controlled Rolling (CR) |
| | Bulb flat | Killed and Al+V+Ti treated | 430*20mm | Controlled Rolling (CR) |
| | Equal /Unequal angle | Killed and Al+V+Ti treated | 250*250*20mm | Controlled Rolling (CR) |
| | Inverted angle | Killed and Al+V+Ti treated | 450*125*13*18mm | Controlled Rolling (CR) |

Steelmaking by Basic Oxygen Furnace (BOF) and LF/RH. Continuous casting.

2. DOCUMENTS AND DRAWINGS :

As per following document issued by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd.:

- "Documents for application of factory approval for rolled section steels" dated May 2015, Doc. No.1602001 dated 08/03/2016,
- "Process programmes of section steel certification with B, AH36, D, DH32, DH40"; "Approval application for enterprise renaming after integer removal" dated July 2009.

3. TEST REPORTS :

As per reports issued by Wuxi Jinxin Steel Rolling Co. Ltd of Nanjin Iron & Steel Group:

- "The report of Works Approval Tests - Applied grade of bulb flats grade AH32 and AH36" dated July 2000; "The report of Works Approval Tests" dated July 2004.

As per following reports issued by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd.:

- "The report of Works Approval Tests "dated December 2009; "The report of Works Approval Tests - bulb flats" dated January 2013,
- "The report of Works Approval Tests - Inverted angles" dated January 2013; "The report of Works Approval Tests - Equal/Unequal angles" dated January 2013,
- "The report of Works Approval Tests - Flat, Bulb flat, Equal/Unequal angle, Inverted angle" dated November 2015.

As per following reports issued by Testing and verifying report of ship materials :

- Ref.WR151202;Ref.WR151204;Ref.WR151206; Ref.WR151207 dated 04/12/2015.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

The rolled sections are to be supplied by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of Bureau Veritas Rule Note NR320. BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate replaces approvals from No.10332/A0 BV to No.10332/C2 BV.

*** END OF CERTIFICATE ***



Marine & Offshore
Division

Certificate number: 10332/D0 BV

File number: MAT 23608/02

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

Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co. Ltd
Suqian - CHINA

for the type of product

HIGHER STRENGTH HULL STEEL ROLLED PRODUCTS

Hot rolled sections in steel grades AH32, AH36, AH40, DH32, DH36, DH40, EH32 and EH36

Requirements:

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

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 mentioned above.

This certificate will expire on: 16 Dec 2021

For BUREAU VERITAS,

At BV SHANGHAI, on 16 Dec 2016,

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The electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfType.jsp?id=few5n5rrfx>

BV Mod. Ad.E 1533 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Hot rolled sections.

| Steel grade | Type of product | Deoxydation practice & Refining | Maximum dimensions | Delivery conditions |
|-------------|----------------------|------------------------------------------|--------------------|---------------------|
| A, B | Bulb flat | Killed or Killed and Al+Nb treated | 430*20mm | As Rolled (AR) |
| | Equal /Unequal angle | Killed or Killed and Al+Nb treated | 200*200*20mm | As Rolled (AR) |
| | Inverted angle | Killed or Killed and Al+Nb treated | 450*150*13*18mm | As Rolled (AR) |
| D | Bulb flat | Killed and Al+V treated | 430*20mm | As Rolled (AR) |
| | Equal /Unequal angle | Killed and Al+V treated | 200*200*20mm | As Rolled (AR) |
| | Inverted angle | Killed and Al+V treated | 450*150*13*18mm | As Rolled (AR) |

Steelmaking by Basic Oxygen Converter LD. Continuous casting.

| Steel grade | Type of product | Deoxydation practice & Refining | Maximum dimensions | Delivery conditions |
|-------------|----------------------|---------------------------------|--------------------|-------------------------|
| A, B | Flat | Killed | 350*20mm | As Rolled (AR) |
| | Bulb flat | Killed | 430*20mm | As Rolled (AR) |
| | Equal /Unequal angle | Killed | 250*250*20mm | As Rolled (AR) |
| | Inverted angle | Killed | 450*125*13*18mm | As Rolled (AR) |
| E, D | Flat | Killed and Al+Ti treated | 350*20mm | Controlled Rolling (CR) |
| | Bulb flat | Killed and Al+Ti treated | 430*20mm | Controlled Rolling (CR) |
| | Equal /Unequal angle | Killed and Al+Ti treated | 250*250*20mm | Controlled Rolling (CR) |
| | Inverted angle | Killed and Al+Ti treated | 450*125*13*18mm | Controlled Rolling (CR) |

Steelmaking by Basic Oxygen Furnace (BOF) and LF/RH. Continuous casting.

2. DOCUMENTS AND DRAWINGS :

As per following document issued by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd.:

- "Documents for application of factory approval for rolled section steels" dated May 2015, Doc. No.1602001 dated 08/03/2016,
- "Process programmes of section steel certification with B, AH36, D, DH32, DH40"; "Approval application for enterprise renaming after interger removal" dated July 2009.

3. TEST REPORTS :

As per reports issued by Wuxi Jinxin Steel Rolling Co. Ltd of Nanjin Iron & Steel Group:

- "The report of Works Approval Tests" dated December 1999; "The report of Works Approval Tests" dated July 2004.

As per following reports issued by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd.:

- "The report of Works Approval Tests" dated December 2009; "The report of Works Approval Tests - bulb flats" dated January 2013,

- "The report of Works Approval Tests - Inverted angles" dated January 2013; "The report of Works Approval Tests - Equal/Unequal angles" dated January 2013,

- "The report of Works Approval Tests - Flat, Bulb flat, Equal/Unequal angle, Inverted angle" dated November 2015.

As per following reports issued by Testing and verifying report of ship materials :

- Ref.WR151201;Ref.WR151203;Ref.WR151205; Ref.WR151208 dated 04/12/2015.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

The rolled sections are to be supplied by Suqian Nanjing Iron & Steel Group Jinxin Steel Rolling Co., Ltd in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of Bureau Veritas Rule Note NR320. BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate replaces approvals from No.09707/A0 BV to No.09707/C2 BV.

*** END OF CERTIFICATE ***