



CERTIFICATE NUMBER  
13-MMPS-CF&PAC-492

PORT OFFICE  
ABS MATERIALS HOUSTON

## CERTIFICATE OF CASTING FACILITY AND PROCESS APPROVAL

This is to certify that a representative of ABS did, at the request of

### **Shanxi Taigang Stainless Steel Co., Ltd., Shanxi, China**

attend its facilities as indicated in the ABS Qingdao port office survey report number QD2206824-B dated 04 March 2013, in order to carry out a survey of the facilities and associated quality procedures. The facility is considered capable of manufacturing

#### **Steel Cast Ingots for Marine Applications**

in accordance with the ABS Approval letter, ABS Rules, designated standards and ABS approved drawings. The approval is valid subject to adherence to relevant ABS Rules and survey requirements and annual facility endorsement by an ABS representative.

ISSUE DATE 04 Mar 13 EXPIRATION DATE 03 Mar 18

SIGNATURE

  
Gopal Magadi  
MANAGER, ABS MATERIALS, HOUSTON



FIRST ANNUAL  
ENDORSEMENT

SECOND ANNUAL  
ENDORSEMENT

THIRD ANNUAL  
ENDORSEMENT

FOURTH ANNUAL  
ENDORSEMENT

Project #: 3064914; Task #: T1059481; Office Ref #: 8051

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, Guides, standards or other criteria of ABS as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a full description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of ABS who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.



Steel Foundry Approval Letter

4<sup>th</sup> March 2013

**Shanxi Taigang Stainless Steel Co., Ltd.**  
**No.2 Jiancaoping**  
**Taiyuan City**  
**Shanxi Province 030003**  
**P.R.China**

Refer to: BSHI/LXS

File Ref: S-6

Re: Plant Survey & Testing

Gentlemen:

A survey of steel foundry of **Shanxi Taigang Stainless Steel Co., Ltd**, at their plant at Taiyuan, Shanxi Province, The People's Republic of China, was conducted by an exclusive Surveyor to the American Bureau of Shipping on 23<sup>rd</sup> September 2012 and subsequent dates. Results of the survey indicated that the steel foundry is capable of producing steel cast ingots for marine applications as listed on the attachment(s) in accordance with the Rules of this Bureau.

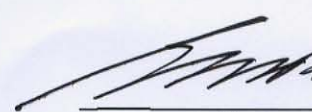

Therefore, **Shanxi Taigang Stainless Steel Co., Ltd** may produce above steel cast ingots provide that the relevant ABS Rules and appropriate grade specification are adhered to in all respects, and production, inspection, testing and NDT procedures of the steel cast ingots are to the satisfaction of the attending Surveyor.

Please note that our plant survey carried out is for the product and process as listed in the attachment(s). When new or special materials or production methods are proposed, data in support of mechanical properties, weldability and compliance with ABS Rules are required to be submitted for review and at which time another plant survey by an exclusive Surveyor will be required. It is the responsibility of your company to inform ABS of any changes in manufacturing parameters.

**This approval letter and accompanied certificate number 13-MMPS-CF & PAC-492 are valid until 3<sup>RD</sup> March 2018 or ABS Rules or specification used in the assessment are revised(whichever occurs first), and subject to subsequent annual plant audit by an exclusive surveyor.**

Renewal of approval is subject to a plant audit and re-approval test as applicable on or before the expiry date.

Very truly yours,

  
  
L.X.Sun  
Principal surveyor

cc : ABS Greater China – Yantai, Hong Kong, Dalian & Shanghai  
cc : ABS Houston Materials

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GREATER CHINA DIVISION

5TH FLOOR, SILVER TOWER, NO. 85 TAO YUAN ROAD, LUWAN DISTRICT, SHANGHAI 200021, P. R. CHINA  
TEL: 86-21-23270888 FAX: 86-21-63229649(OPS)/63605391(ENG) WEBSITE: www.eagle.org

**Attachment A**

**Attachment to Steel Foundry Approval letter Dated 4<sup>th</sup> March 2013**

**Shanxi Taigang Stainless Steel Co., Ltd.  
No.2 Jiancaoping  
Taiyuan City  
Shanxi Province 030003  
P.R.China**

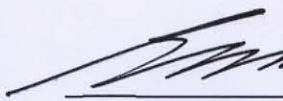

**Refer to: BSHI/LXS**

**File Ref: S-6**

Product	:	Steel Cast Ingots <sup>(1)(2)</sup>
Alloy Type	:	Non-ABS Grades
	:	Carbon, C-Mn & Low Alloy Steels
	:	In accordance with: MAN B & W:S44SY EN 10250-3:42CrMo4
Manufacturing	:	Ingot Casting
Maximum Weight	:	16,000 kg

**NOTE:**

1. It is the responsibility of the facility to inform and obtain ABS approval, if any changes are made in the manufacturing procedure specifications, and/or to the processing parameters as compared to initial approved technical documents.
2. Weld repairs of listed and approved steel cast ingots are not permitted as indicated in the reviewed documents.

  
  
**L.X.Sun**  
 Principal surveyor

cc : ABS Pacific – Shanghai, Hong Kong, Dalian  
cc : ABS Houston Material

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**GREATER CHINA DIVISION**



CERTIFICATE NUMBER  
13-MMPS-FF&PAC-489

PORT OFFICE  
ABS MATERIALS HOUSTON

## CERTIFICATE OF FORGING FACILITY AND PROCESS APPROVAL

This is to certify that a representative of ABS did, at the request of

**Shanxi Taigang Stainless Steel Co., Ltd., Shanxi, China**

attend its facilities as indicated in the ABS Qingdao port office survey report number QD2206824-A dated 04 March 2013, in order to carry out a survey of the facilities and associated quality procedures. The facility is considered capable of manufacturing

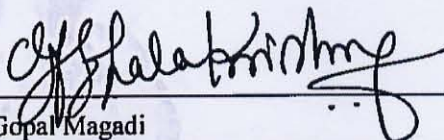
**Steel Forgings for Marine Applications**

in accordance with the ABS Approval letter, ABS Rules, designated standards and ABS approved drawings. The approval is valid subject to adherence to relevant ABS Rules and survey requirements and annual facility endorsement by an ABS representative.



ISSUE DATE 04 Mar 13 EXPIRATION DATE 03 Mar 18

SIGNATURE

  
Gopal Magadi  
MANAGER, ABS MATERIALS, HOUSTON

FIRST ANNUAL  
ENDORSEMENT

SECOND ANNUAL  
ENDORSEMENT

THIRD ANNUAL  
ENDORSEMENT

FOURTH ANNUAL  
ENDORSEMENT

Project #: 3064914; Task #: T1059482; Office Ref #: 8051

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, Guides, standards or other criteria of ABS as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a full description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of ABS who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.



## Steel Forging Facility Approval Letter

4<sup>th</sup> March 2013

**Shanxi Taigang Stainless Steel Co., Ltd.**  
**No.2 Jiancaoping**  
**Taiyuan City**  
**Shanxi Province 030003**  
**P.R.China**

Refer to: BSHI/LXS

File Ref: S-6

Re: Plant Survey & Testing

Gentlemen:

A survey of steel forging facility of **Shanxi Taigang Stainless Steel Co., Ltd**, at their plant at Taiyuan, Shanxi Province, The People's Republic of China, was conducted by an exclusive Surveyor to the American Bureau of Shipping on 23<sup>rd</sup> September 2012 and subsequent dates. Results of the survey indicated that the steel forging facility is capable of producing steel forgings for marine applications as listed on the attachment(s) in accordance with the Rules of this Bureau.


Therefore, **Shanxi Taigang Stainless Steel Co., Ltd** may produce above steel forgings provide that the relevant ABS Rules and appropriate grade specification are adhered to in all respects, and production, inspection, testing and NDT procedures of the steel forgings are to the satisfaction of the attending Surveyor.


Please note that our plant survey carried out is for the product and process as listed in the attachment(s). When new or special materials or production methods are proposed, data in support of mechanical properties, weldability and compliance with ABS Rules are required to be submitted for review and at which time another plant survey by an exclusive Surveyor will be required. It is the responsibility of your company to inform ABS of any changes in manufacturing parameters.

**This approval letter and accompanied certificate number 13-MMPS-FF & PAC-489 are valid until 3<sup>RD</sup> March 2018 or ABS Rules or specification used in the assessment are revised(whichever occurs first), and subject to subsequent annual plant audit by an exclusive surveyor.**

Renewal of approval is subject to a plant audit and re-approval test as applicable on or before the expiry date.

Very truly yours,

  
L.X.Sun  
Principal surveyor



cc : ABS Greater China – Yantai, Hong Kong, Dalian & Shanghai  
cc : ABS Houston Materials

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TEL: 86-21-23270888 FAX: 86-21-63229649(OPS)/63605391(ENG) WEBSITE: www.eagle.org



Attachment to Steel Forging Facility Approval letter Dated 4<sup>th</sup> March 2013

Shanxi Taigang Stainless Steel Co., Ltd.  
No.2 Jiancaoping  
Taiyuan City  
Shanxi Province 030003  
P.R.China

Refer to: BSHI/LXS

File Ref: S-6

Product	:	Steel Forgings <sup>(1)(2)</sup> (Shaft) <sup>(3)</sup>
Alloy Type	:	Non-ABS Grades
	:	Carbon, C-Mn & Low Alloy Steels
	:	In accordance with: MAN B & W:S44SY EN 10250-3:42CrMo4
Manufacturing	:	Drop Forging, Radial Forging
Maximum Weight	:	12,000 kg
Maximum Diameter	:	400 mm

NOTE:

1. Steel forgings are to be design approved when used on ABS classed vessels.
2. It is the responsibility of the facility to inform and obtain ABS approval, if any changes are made in the manufacturing procedure specifications, and/or to the processing parameters as compared to initial approved technical documents.
3. Weld repairs of listed and approved steel forgings are not permitted as indicated in the reviewed documents.

L.X. Sun  
Principal surveyor

cc : ABS Pacific – Shanghai, Hong Kong, Dalian  
cc : ABS Houston Material

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