

Table of contents

Business License.....	2
ISO9001.....	3
ISO14001.....	4
ISO45001.....	5
AS9100D.....	6
CE.....	7
CCS.....	9
ABS.....	13
BV.....	15
DNGVL.....	16
RS.....	18

(Translation)

Serial No. 320206000201612090153



BUSINESS LICENSE

(Duplicate)

Unified Social Credit Code: 91320200783369081F (1/1)

Name	AVIC Excellence Forging (Wuxi) Co., Ltd.
Type	Limited Liability Company
Location	Yudong Village, Yuqi Subdistrict, Huishan District, Wuxi City
Legal Representative	Ren Yixin
Registered Capital	RMB 94530500.00
Date of Foundation	December 31, 2005
Period of Operation	From December 31, 2005 to December 31, 2036
Business Scope	Manufacturing of forged pieces of aviation, aerospace, nuclear power, wind power, ships, petrification, etc.; software development, technical transfer and consulting service of forging technology; processing of forging machinery; sales of metal materials and metal parts; self-operation and agent of import and export of various commodities and technologies (excluding the commodities and technologies which the state limits the company to operate or prohibits the company from importing or exporting) (The items, which need approval by law, shall be operated after being approved by relevant departments.)

QR Code

Registration Organ:

(With the seal of Wuxi Huishan Market
Supervision and Management Bureau)

December 9, 2016

Website of Enterprise Credit Information Publicity System: www.jsgsj.gov.cn:58888/province
Formulated by the State Administration for Industry and Commerce of P. R. China



BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.
**QUALITY MANAGEMENT SYSTEM
CERTIFICATION**

AVIC EXCELLENCE FORGING(WUXI) CO.,LTD.

Registration No : 03422Q50311R2M

Organization Code: 91320200783369081F

Registration Address: Yudong Village, Yuqi Street, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

Audition Address: Industrial Zone, Yuqi Town, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

In conformity with : GB/T19001-2016 idt ISO9001:2015

Certification scope: Production and service of forging products

Issue Date: Apr .07,2022

Expiry Date: Jun .10,2025

First Issue Date: Jun .13,2016



中国认可
国际互认
管理体系
MANAGEMENT SYSTEM
CNAS C034-M

General Manager: _____

BEIJING HANGXIE
CERTIFICATION CENTER CO.,LTD.

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn) The certificate Information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn) It is also available by scanning the two-dimensional code at the bottom right corner.

Address : NO.7 Jingshun Road, Chaoyang District, Beijing, China.





BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.
**ENVIRONMENTAL MANAGEMENT
SYSTEM CERTIFICATION**

AVIC EXCELLENCE FORGING(WUXI) Co., LTD.

Registration No : **03419E30196R1M**

Organization Code: 91320200783369081F

Registration Address: Yudong Village, Yuqi Street, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

Audition Address: Industrial Zone, Yuqi Town, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

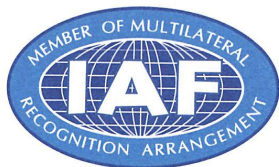
In conformity with : **GB/T 24001-2016 idt ISO14001:2015**

Certification scope: **Environmental management activities related to the production of
forgings**

Issue Date: Jun .12,2019

Expiry Date: Jun .11,2022

First Issue Date: Jun .13,2016



中国认可
国际互认
管理体系
MANAGEMENT SYSTEM
CNAS C034-M

General Manager:

BEIJING HANGXIE
CERTIFICATION CENTER CO.,LTD.

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn) The certificate information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn) It is also available by scanning the two-dimensional code at the bottom right corner.



Address : NO.7 Jingshun Road,Chaoyang District,Beijing,China.



BEIJING HANGXIE CERTIFICATION CENTER CO.,LTD.
**OCCUPATIONAL HEALTH & SAFETY MANAGEMENT
SYSTEM CERTIFICATION**

AVIC EXCELLENCE FORGING(WUXI) Co., LTD.

Registration No : **03420S20376R0M**

Organization Code: 91320200783369081F

Registration Address: Yudong Village, Yuqi Street, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

Audition Address: Industrial Zone, Yuqi Town, Huishan District, Wuxi City, Jiangsu
Province, China P.C 214183

In conformity with : **GB/T45001-2020 idt ISO45001:2018**

Certification scope: **Occupational health and safety management activities related to the
production of forgings**

Issue Date: Aug .18,2020 Expiry Date: Aug .17,2023

First Issue Date: Aug .18,2020

General Manager:

BEIJING HANGXIE
CERTIFICATION CENTER CO.,LTD.



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C034-M

After this certificate is issued, there should be at least 2 surveillance audits within the 3 year period of validity, the current validity of the certificate can be checked on (www.bhxcc.com.cn) The certificate information is available on the official website of the National Certification and Accreditation Administration (www.cnca.gov.cn) It is also available by scanning the two-dimensional code at the bottom right corner.

Address : NO.7 Jingshun Road,Chaoyang District,Beijing,China.





兹证明

中航卓越锻造（无锡）有限公司

中国江苏省无锡市惠山区玉祁镇工业集中区祁北路

邮编：214183

建立的质量管理体系符合下列标准，按照单一场所质量管理体系予以注册

ISO 9001:2015 and AS9100D

审核依据 SAE AS9104/1:2012-01 的要求进行
PRI RegistrarSM 在 ICOP 方案下获得认可

认证范围：

民用航空航天锻件产品的制造及服务




Randy Daugherty
Director of PRI Registrar

证书编号 16694
发证日期: 2022 年 06 月 30 日
有效期至: 2025 年 06 月 29 日
Page 2 of 2

161 Thorn Hill Road • Warrendale, Pennsylvania 15086-7527, USA

Certificate of Compliance



No. 1N181224.AEFCU88

Technical Construction File no. CLK(GTSD)-0729- PED

Certificate's
Holder:

AVIC EXCELLENCE FORGING (WUXI) CO., LTD.
Qibei Road, Industrial Zone, Yuqi Town, Wuxi, Jiangsu
Province, China

Certification
ECM Mark:



Product:
Model(s):

Forgings & Forged Flange
Product Material Scope:
EN10222-2, EN10222-3, EN10222-4, EN10222-5,
EN10250-2, EN10250-4, EN10250 3, EN10083 3,
EN10088, EN10025-1, EN10025-2, EN10025-3,
EN10025-4, ASME SA182, ASME SA266, ASME SA336,
ASME SA105, ASME SA350, ASME SA965, ASME SA765,
JIS4051, JIS4053 (see the following annex I)

Verification to:

Has implemented, operates and maintains a
Quality Assurance System

related to CE Directive(s):
2014/68/EU (Pressure Equipment) Annex I, Paragraph 4.3

Remark: The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Compliance Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. The regulation can be found at www.entecerma.it. This Certificate of Compliance can be checked for validity at www.entecerma.it.

This verification doesn't imply assessment of the production of the product(s).

Additional information, clarification about the **CE** Marking:



We attest that a TCF for the **CE** Marking process is in place. Whereas the Manufacturer is Responsible to start the **CE Marking Certification Procedure** through an appointed Notified Body and the perform all the necessary activities, as required by the Directive and accepted by the Notified Body, before placing the **CE** Mark on the product(s).

Date of issue 24 December 2018

Expiry date 23 December 2023

Chief Manager
Marta Morino

Deputy Manager
Amanda Payne

Ente Certificazione Macchine Srl

Via Ca' Bella, 243 - Loc. Castello di Serravalle - 40053 Valsamoggia (BO) - ITALY
☎ +39 051 6705141 📠 +39 051 6705156 ✉ info@entecerma.it 🌐 www.entecerma.it

Annex I

No. 1N181224.AEFCU88

Technical Construction File no. CLK(GT2D)-0729- PED



Material	Standard
P235GH, P245GH, P250GH, P265GH, P280GH, P295GH, P305GH, 16Mo3, 13CrMo4-5, 11CrMo9-10, etc	EN10222-2 2017
13MnNi6-3, 15NiMn6, 12Ni14, X12Ni5, X8Ni9	EN10222-3 2017
P355QH1	EN10222-4 2017
X3CrNiMo13-4, X2CrNi18-9, X2CrNi19-11, X2CrNi18-10, X5CrNi18-10, X6CrNi18-10, X6CrNi18-10, X7CrNiNb18-10, X2CrNiMo17-12-2, X2CrNiMo17-11-2, X5CrNiMo17-12-2, X6CrNiMoTi17-12-2, X2CrNiMo17-12-3, X2CrNiMo17-13-3, X3CrNiMo17-13-3, X2CrNiMo18-14-3, X3CrNiMoBN17-13-3, X2CrNiMo17-13-5, X1CrNiMoCu25-20-5, X1CrNiMoCuN20-18-7, X1CrNiMoCuN25-20-7, X2CrNiCu19-10, X3CrNiMo18-12-3, X2CrNiN23-4, X2CrNiMoN22-5-3, X2CrNiMoCuN25-6-3, X2CrNiMoN25-7-4, X2CrNiMoCuWN25-7-4	EN10222-5 2017
S235JRG2, S235J2G3, S355J2G3, C25, C30, C35, C40, C45, C45E, C50, C55, C55E, C60, C60E, 28Mn6, 20Mn5	EN10250-2 2000
38Cr2, 46Cr2, 34Cr4, 37Cr4, 41Cr4, 25CrMo4, 34CrMo4, 42CrMo4, 50CrMo4, 36CrNiMo4, 34CrNiMo6, 30CrNiMo8, 36NiCrMo16, 51CrV4, 33NiCrMoV14-5, 40CrMoV13-9, 18CrMo4, 20MnMoNi4-5, 30CrMoV9, 32CrMo12, 28NiCrMoV8-5	EN10250-3 2000
X6CrAl13, X6Cr17, X12Cr13, X20Cr13, X30Cr13, X17CrNi16-2, X3CrNiMo13-4, X4CrNiMo16-5-1, X5CrNiCuNb16-4, X2CrNi18-9, X2CrNi19-11, X2CrNi18-10, X5CrNi18-10, X6CrNi18-10, X2CrNiMo17-12-2, X2CrNiMo17-11-2, X5CrNiMo17-12-2, X6CrNiMoTi17-12-2, X2CrNiMo17-13-3, X3CrNiMo17-13-3, X2CrNiMo18-14-3, X1NiCrMoCu25-20-5, X6CrNiNb18-10, X1CrNiMoCu31-27-4, X1CrNiMoCuN20-18-7, X1NiMoCuN25-20-7, X2CrNiN23-4, X3CrNiMoN27-5-2, X2CrNiMoN22-5-3, X2CrNiMoCuN25-6-3, X2CrNiMoN25-7-4, X2CrNiMoCuWN25-7-4	EN10250-4 2000
38Cr2, 46Cr2, 34Cr4, 34CrS4, 37Cr4, 37CrS4, 41Cr4, 41CrS4, 25CrMo4, 25CrMoS4, 34CrMo4, 34CrMoS4, 42CrMo4, 42CrMoS4, 50CrMo4, 34CrNiMo6, 30CrNiMo8, 35NiCr6, 36NiCrMo16, 39NiCrMo3, 30NiCrMo16-6, 51CrV4, 20MnB5, 30MnB5, 38MnB5, 27MnCrB5-2, 33MnCrB5-2, 39MnCrB5-2	EN10083-3 2006
X2CrNi12, X2CrTi12, X6CrNiTi12, X6Cr13, X6CrAl13, X6Cr17, X3CrTi17, X3CrNb17, X6CrMo17-1, X2CrMoTi18-2, X2CrTi17, X2CrMoTi17-1, X6CrMoNb17-1, X2CrNbZr17, X2CrAlTi18-2, X2CrTiNb18, X2CrMoTi29-4, X2Cr13, X20Cr13, X30Cr13, X39Cr13, X46Cr13, X50CrMoV15, X39CrMo17-1, X3CrNiMo13-4, X4CrNiMo16-5-1, X5CrNiCuNb16-4, X7CrNiAl17-7, X8CrNiMoAl15-7-2, X10CrNi18-8, X2CrNi18-7, X2CrNi18-9, X2CrNi19-11, X2CrNi18-10, X5CrNi18-10, X8CrNi18-9, X6CrNiTi18-10, X4CrNi18-12, X2CrNiMo17-12-2, X2CrNiMoN17-11-2, X5CrNiMo17-12-2, X6CrNiMoTi17-12-2, X2CrNiMo17-12-3, X2CrNiMo18-14-3, X2CrNiMoN17-13-5, X1NiCrMoCu25-20-5, X1CrNi25-21, X6CrNiNb18-10, X1CrNiMoN25-22-2, X6CrNiMoNb17-12-2, X2CrNiMoN17-13-3, X3CrNiMo17-13-3, X2CrNiMoN18-12-4, X2CrNiMo18-15-4, X1CrNiSi18-15-4, X12CrMnNiN17-7-5, X2CrMnNiN17-7-5, X12CrMnNiN18-9-5, X1NiCrMoCu31-27-4, X1CrNiMoCuN25-25-5, X1CrNiMoCuN20-18-7, X1NiCrMoCuN25-20-7, X2CrNiN23-4, X2CrNiMoN22-5-3, X2CrNiMoCuN25-6-3, X2CrNiMoN25-7-4, X2CrNiMoCuWN25-7-4	EN10088-2 2005
S275N, S275NL, S355N, S355NL, S420N, S420NL, S460N, S460NL	EN10025-3 2009
S275M, S275ML, S355M, S355ML, S420M, S420ML, S460M, S460ML	EN10025-4 2009
All grades	EN10025-6 2009
SA-105/SA-105M, SA-266/SA-266M, SA-336/SA-336M, SA-350/SA-350M, SA-182/SA-182M, SA-965/SA-965M, SA-765/SA-765M	ASME BPVC SEC.II-A 2017
N02200, N04400, N06022, N06025, N06035, N06045, N06058, N06059, N06110, N06200, N06210, N06219, N06230, N06603, N06617, N06625, N06600, N06674	ASME SB564 2015
AW-2219, AW-5083, AW-5754, AW-6061, AW-7075, AW-7050	EN573-3 2013
F-1, F-2, F-3, F-5	ASTM B381 2013

Ente Certificazione Macchine Srl

Via Ca' Bella, 243 - Loc. Castello di Serravalle - 40053 Valsamoggia (BO) - ITALY

☎ +39 051 6705141 📠 +39 051 6705156 ✉ info@entecerma.it 🌐 www.entecerma.it



中国船级社
CHINA CLASSIFICATION SOCIETY
工厂认可证书
CERTIFICATE OF WORKS APPROVAL

证书编号/Certificate No.
JS20PWA00028 01

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。

This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

中航卓越锻造(无锡)有限公司
AVIC Excellence forging (Wuxi) Co., Ltd.

地址/Address

无锡市惠山区玉祁工业园祁北路
Qihai Road, Industrial Zone, Yuqi Town, Wuxi City

产品名称/Product

环型锻钢件
Ring Type Steel Forgings
起重设备用锻钢件
Steel Forgings for Lifting Appliances

附加标志/Notations

无/Nil.

认可标准/Approval Standard

- 中国船级社《船舶与海上设施起重设备规范》(2007)及其修改通报第6章
Chapter 6 of China Classification Society Rules for Lifting Appliances of Ships and Offshore Installations 2007 and its Amendments.
- 中国船级社《材料与焊接规范》(2018)及其修改通报第1篇第5章
Chapter 5, Part One of China Classification Society Rules for Materials and Welding 2018 and its Amendments

用于/Intended for

船用起重船用回转支承/Slewing Bearing for Marine Crane

产品明细/Product Description

起重设备用锻钢件/Steel Forgings for Lifting Appliances (M0001)

名称/Name	属性(值)/Value	单位/Unit
材料/Material	合金钢, 碳钢与碳锰钢 Alloy steel, Carbon steel and carbon-manganese steel	
最大重量/Maximum Weight	27000	KG
锻造方式/Forging Method	油压机+碾环机 Oil press +Ring rolls	

证书有效期至/This Certificate is valid until

2024年06月01日/ Jun. 01, 2024

发证机构 中国船级社江苏分社
Issued by CCS Jiangsu Branch

签发日期 2020年06月09日
Date Jun. 09, 2020

本证书根据中国船级社规范和相关标准颁发。所有证书作为一个整体, 必须同时使用。纸质证书每页均须由本社盖章方为有效, 电子证书含数字签名方为有效。本证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。有关方对所持证书的真实性负责, 可以向本社检验机构咨询。This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.

Form No. W01.

联系方式/Contact Us: 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)



UTN:P020-29383184



Nº 19266683

最大尺寸/Max. Size	Φ9000 (外径) × 490 (厚度) × 410 (高度) ; Φ9000 (External diameter) × 490 (Thickness) × 410 (Height)	mm
----------------	--	----

批准的图纸/Approved Drawings

图纸批准号/Drawings Approval No.: JS20PWA00028

产品认可试验报告/Approval Test Report

试验报告编号/ Test Report No.: (2016)YJWJ02381/2382/2720/2721/3191/3190
试验报告日期/ Test Report Date: 2016-04-29

试验报告编号/ Test Report No.: 20160501
试验报告日期/ Test Report Date: 2015-05-25

认可后的产品检验方式/Method of Product Inspection after Approval

按照规范逐件检验的产品/The product inspected one by one in term of the rules:

认可后的产品检验应由本社验船师根据本社规范规定逐件按批准的产品检验计划进行检验, 经检验合格后由本社颁发船用产品证书。

After approval, product inspection should be carried out one by one by the Surveyor of the Society in accordance with the approved product inspection scheme, and the Marine Product Certificate will be issued by the Society upon satisfactory inspection.

认可保持条件/Maintenance Requirements of Approval

1. 工厂认可后, 如果图纸、技术文件、工艺规程有较大改变, 应征得本社同意。若改变涉及或影响到产品的设计、主要制造材料、关键工艺或产品的特性、特征, 则与特性有关的图纸和技术文件应经过本社审批, 并在检验机构认为必要时, 经本社检验人员到厂进行检查和见证有关试验, 其结果应能证实仍符合认可条件。

After works approval, if there are any major changes to the drawings, technical documents, specifications, prior consent should be obtained from the survey office of the Society. If the changes involve or affect product design, major construction materials, key workmanship or product characteristics and properties, drawings and technical documents related to properties are to be examined and approved by the Society and, where deemed necessary by the survey office, the surveyor to the Society will go to the manufacturer to inspect or witness relevant tests and the results of the tests should be able to demonstrate compliance with the approval conditions

2. 工厂的质量管理体系应保持有效运行, 并且与认可时一致。如果质量管理体系发生改变, 应经原体系认证机构审核并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 工厂认可证书获得者应接受本社每年一次的定期审核, 定期审核日为认可证书期满之日对应的每一周年日, 检查工作可在定期审核日的前后三个月内进行。Those who have obtained the certificate of works approval shall receive periodical audit done by the Society on an annual basis. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit may be done within a time span of three months before and after the annual surveillance date.

4. 在认可证书有效期内, 本社验船师可在未经事先通知的情况下对工厂的产品制造过程进行审核, 以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 认可证书有效期内, 如果出现可能导致本社暂停或撤销认可的情况, 工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to suspend or withdraw the certificate, the manufacturer should take corrective actions in a prompt and effective manner.

备注/Remarks

本证书由原工厂认可证书 (No. NJ18W00097_01) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Works Approval Certificate No. NJ18W00097_01.

中国船级社江苏分社
CCS Jiangsu Branch



第 2 页 共 2 页 / Page 2 of 2

Nº 19832862





中国船级社
CHINA CLASSIFICATION SOCIETY
工厂认可证书
CERTIFICATE OF WORKS APPROVAL

证书编号/Certificate No.
JS20PWA00028_02

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。

This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

中航卓越锻造（无锡）有限公司
AVIC Excellence forging (Wuxi) Co., Ltd.

地址/Address

无锡市惠山区玉祁工业园祁北路
Qibei Road, Industrial Zone, Yuqi Town, Wuxi City

产品名称/Product

锻件
Forging
锻钢件
Steel Forgings

附加标志/Notations

无/Nil.

认可标准/Approval Standard

1. 中国船级社《材料与焊接规范》（2018）及其修改通报第1篇第5章
Chapter 5, Part One of China Classification Society Rules for Materials and Welding 2018 and its Amendments

用于/Intended for

船舶与海上设施/Ships and Offshore Installations

产品明细/Product Description

锻钢件/Steel Forgings (M0001)

名称/Name	属性(值)/Value	单位/Unit
产品名称/Product Name	船体结构用锻钢件, 轴系与机械结构用锻钢件 Steel Forgings for Hull Structure, Steel Forgings for Shafting and Machinery	
材料/Material	碳钢与碳锰钢, 合金钢 Carbon Steel and Carbon-manganese Steel, Alloy Steel	
最大重量/Maximum Weight	23000(轴), 20000(饼) 23000(Shaft), 20000(Disc)	KG
锻造方式/Forging Method	自由锻 Free Forging	

证书有效期至/This Certificate is valid until 2024年06月01日/Jun. 01, 2024

发证机构 中国船级社江苏分社
Issued by CCS Jiangsu Branch

签发日期 2020年06月09日
Date Jun. 09, 2020

本证书根据中国船级社规范和相关标准签发, 所有证书为一个整体, 必须同时使用。纸质证书每页均须由本社盖章方为有效, 电子证书含数字签名方为有效。本证书复印件无效, 任何单位和个人均不得伪造或篡改本证书的部分内容。有关方所持证书的真实性负责, 可以向本社检验机构咨询。
This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.

Form No: W01.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)



UTN:P020-75921821

第 1 页共 2 页/Page 1 of 2

Nº 19266884

最大尺寸/Max. Size	轴: $\leq \Phi 770$ (直径) $\times 8000$ (长度); 饼: $\leq \Phi 2650$ (直径) $\times 420$ (高度) Shaft: $\leq \Phi 770$ (Diameter) $\times 8000$ (Length); Disc: $\leq \Phi 2650$ (Diameter) $\times 420$ (Height);	mm
----------------	---	----

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: JS20PWA00028

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.: 20180901

试验报告日期/ Test Report Date: 2018-09-26

试验报告编号/ Test Report No.: (2018)YJWJ09485/09486

试验报告日期/ Test Report Date: 2018-09-17

认可后的产品检验方式/Method of Product Inspection after Approval

按照规范逐件检验的产品/The product inspected one by one in term of the rules:

认可后的产品检验应由本社验船师根据本社规范规定逐件按批准的产品检验计划进行检验, 经检验合格后由本社颁发船用产品证书。

After approval, product inspection should be carried out one by one by the Surveyor of the Society in accordance with the approved product inspection scheme, and the Marine Product Certificate will be issued by the Society upon satisfactory inspection.

认可保持条件/Maintenance Requirements of Approval

1. 工厂认可后, 如果图纸、技术文件、工艺规程有较大改变, 应征得本社同意。若改变涉及或影响到产品的设计、主要制造材料、关键工艺或产品的特性、特征, 则与特性有关的图纸和技术文件应经过本社审批, 并在检验机构认为必要时, 经本社检验人员到厂进行检查和见证有关试验, 其结果应能证实仍符合认可条件。

After works approval, if there are any major changes to the drawings, technical documents, specifications, prior consent should be obtained from the survey office of the Society. If the changes involve or affect product design, major construction materials, key workmanship or product characteristics and properties, drawings and technical documents related to properties are to be examined and approved by the Society and, where deemed necessary by the survey office, the surveyor to the Society will go to the manufacturer to inspect or witness relevant tests and the results of the tests should be able to demonstrate compliance with the approval conditions

2. 工厂的质量管理体系应保持有效运行, 并且与认可时一致。如果质量管理体系发生改变, 应经原体系认证机构审核并获本社批准。
The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 工厂认可证书获得者应接受本社每年一次的定期审核, 定期审核日为认可证书期满之日对应的每一周年日, 检查工作可在定期审核日的前后三个月内进行。Those who have obtained the certificate of works approval shall receive periodical audit done by the Society on an annual basis. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit may be done within a time span of three months before and after the annual surveillance date.

4. 在认可证书有效期内, 本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核, 以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 认可证书有效期内, 如果出现可能导致本社暂停或撤消认可的情况, 工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to suspend or withdraw the certificate, the manufacturer should take corrective actions in a prompt and effective manner.

备注/Remarks

本证书由原工厂认可证书 (No. NJ18W00097_02) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Works Approval Certificate No.

NJ18W00097_02.

中国船级社江苏分社

CCS Jiangsu Branch



CERTIFICATE NUMBER
FOR-T1982545

ISSUING OFFICE
Houston Materials

CERTIFICATE OF FORGING FACILITY AND PROCESS APPROVAL

This is to certify that a representative of ABS did, at the request of
AVIC EXCELLENCE FORGING (WUXI) CO., LTD.
QIBEI ROAD, INDUSTRIAL ZONE, WUXI, China

attend its facilities as indicated in the ABS CN Nantong Port (MLO) port office survey report number 4220455 dated 08 April 2020 in order to carry out a survey of the facilities and associated quality procedures. The facility is considered capable of manufacturing

Steel Forging components for marine applications

in accordance with the ABS Approval letter (Reference T1982545), ABS Rules, designated standards and ABS approved drawings. The approval is valid till 03 May 2025 subject to adherence to relevant ABS Rules, Survey requirements and annual endorsement by an ABS representative.



Marcus Cridland
Chief Metallurgist, ABS

ISSUE DATE: 08 April 2020
EXPIRY DATE: 03 May 2025

FIRST ANNUAL
ENDORSEMENT:

SECOND ANNUAL
ENDORSEMENT:

THIRD ANNUAL
ENDORSEMENT:

FOURTH ANNUAL
ENDORSEMENT:

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.

MAR A CERT R1

ABS

Electronically published by ABS Houston.
Reference T1982545, dated 06-MAY-2020.

Page 2 of 2



Documents List

Drawing No.	Rev. No.	Title	Status
FOR REN DOC-WX AVIC	-	FOR REN DOC-WX AVIC-4220455	Reviewed

Electronic copies of the documents, appropriately stamped, are available in the ABS Client Portal.

Process/Product Approval

Grade	: Non-ABS Grades: C-Mn & Low Alloy Steels
Melting Practice	: ABS Approved Sources
Casting Practice	: ABS Approved Sources
Manufacturing Practice	: Drop Forging, Ring Rolling
Maximum Weight	: 25,000 kg
Maximum Diameter	: 8,000 mm
Heat Treatment Facility	: In-House
Product Examples	: Rings

Note: Weld repair is generally not permitted, unless specially approved by the ABS Engineering Office.



Marine & Offshore

Certificate number: SMS.W.II./83412/C.1

www.veristar.com

RECOGNITION FOR BV MODE II SCHEME

AVIC Excellence Forging (Wuxi) Co. Ltd.
Wuxi - CHINA

Summary of the range of the recognition which is detailed in the subsequent page(s):

FORGING - G0247

Ring Steel Forgings & other Normal forgings

Grade: Carbon & C-Mn Steel, Low Alloy Steel

Heat treatment: N+T or Q+T

Max.weight: 22 t. Max.Dia.: 7400 mm

The forgings are to be manufactured, examined and test by AVIC Excellence Forging (Wuxi) Co.,Ltd

This certificate is issued to attest that Bureau Veritas Marine & Offshore has performed, at the above company's request and in compliance with the requirements of NR320, a satisfactory assessment of the manufacturing facilities and associated quality procedures related to the range of the recognition.

This certificate will expire on: 01 Mar 2023

For BUREAU VERITAS,

At BV SHANGHAI, on 23 Sep 2019,

George Qiao



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. 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 electronic version is available at: <http://www.veristarm.com/veristarmb/jsp/viewPublicPdfRecognition.jsp?id=qstplzcpjr>

BV Mod. Ad.E 697 June 2017

This certificate consists of 2 page(s)

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001UK
Revision No:
1

This is to certify:

That

AVIC Excellence Forging (Wuxi) Co., Ltd.
#18 Qibei Rd, Yuqi Town, Huishan District, Wuxi, Jiangsu Province,
China

is an approved manufacturer of
Steel Forgings

in accordance with
DNV GL rules for classification – Ships
DNVGL-OS-B101 – Metallic materials

and the following particulars:

Application area	Forgings for hull structures and equipment, Forgings for shafting and machinery
Steel type	Carbon and carbon-manganese, Alloy
Forging method	Open die forging
Max. weight	25 000 kg
Max. diameter / section	See page 2
Heat treatment condition	See page 2

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2020-11-16**

This Certificate is valid until **2023-12-31**.

DNV GL local station: **Jiangyin**

Approval Engineer: **Andreas Koch**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian
Location: DNV GL Hamburg, Germany
Signing Date: 17.11.2020, on behalf of

Thorsten Lohmann
Head of Section

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.



Form code: AM 311

Revision: 2020-01

www.dnvgl.com

Page 1 of 2

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Job Id: **263.11-008184-2**
 Certificate No: **AMMM00001UK**
 Revision No: **1**

Particulars of the approval

Forgings for hull structures and equipment

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	OD	25 000	490	N, QT
Alloy	VL F550AW, VL F620AW, VL F650AW	OD	25 000	490	N, QT

Forgings for shafting and machinery

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U, VL F640U, VL F680U, VL F720U, VL F760U	OD	25 000	490	N, QT
Alloy	VL C600A, VL C700A, VL C800A, VL C900A, VL F1000A, VL F1100A	OD	25 000	490	N, QT

Remarks:

- ¹⁾ OD: Open die forging
- ²⁾ QT: Quenched and tempered
N: Normalised
- ³⁾ Incl. equivalent grades in acc. to other standards

RS

РОССИЙСКИЙ МОРСКОЙ РЕГИСТР СУДОХОДСТВА
RUSSIAN MARITIME REGISTER OF SHIPPING

7.1.4.1



СВИДЕТЕЛЬСТВО О ПРИЗНАНИИ ИЗГОТОВИТЕЛЯ
RECOGNITION CERTIFICATE FOR MANUFACTURER

Настоящим удостоверяется, что
This is to certify that

AVIC EXCELLENCE FORGING (WUXI) CO., LTD. (91320200783369081F)
Qibei Road, Industrial zone, Yuqi, Wuxi, Jiangsu, 214183, China

признается Российским морским регистром судоходства как изготовитель:
is recognized by Russian Maritime Register of Shipping as a Manufacturer of:

Код / Code 13131120

Поковок из легированной, углеродистой и углеродисто-марганцевой стали для судовых механизмов и механических установок, удовлетворяющих требованиям Главы 3.7 Части XIII "Материалы" "Правил классификации и постройки морских судов", издания РС 2020г.

Forgings of alloy, carbon and carbon manganese steel for ship machinery and machinery installations, in accordance with Chapter 3.7 of Part XIII "Materials" of "Rules for Classification and Construction of Sea-Going Ships", RS edition 2020.

См. Приложение к Свидетельству
See Annex to the Certificate

Настоящее Свидетельство о признании действительно при условии полного выполнения требований Российского морского регистра судоходства.

This Recognition Certificate is granted on condition that the requirements of Russian Maritime Register of Shipping are complied with in all respects.

Настоящее Свидетельство о признании действительно до 19.04.2026
This Recognition Certificate is valid until

при условии подтверждения через каждые 12 месяцев(ев).
subject to confirmation each month(s).

Настоящее Свидетельство о признании теряет силу в случаях, установленных в Правилах технического наблюдения за постройкой судов и изготовлением материалов и изделий для судов.

This Recognition Certificate becomes invalid in cases stipulated in Rules for the Technical Supervision during Construction of Ships and Manufacture of Shipboard Materials and Products.

Дата выдачи 19.04.2021
Date of issue

№ 21.10020.269

Российский морской регистр судоходства
Russian Maritime Register of Shipping



Иванов С. А. / S. Ivanov

(фамилия, инициалы)
name



RS

Лист 1 из 1 / Page 1 of 1

ПРИЛОЖЕНИЕ
ANNEX

(к форме 7.1.4.1
to 7.1.4.1)

к Свидетельству о признании изготовителя № 21.10020.269
to Recognition Certificate for Manufacturer No.

Перечень одобренных изделий и материалов List of approved products and materials	Номер СТО или одобренной техдокументации и дата выдачи или одобрения No. of Type Approval Certificate or approved technical documentation and date of issue or approval
<p>Код номенклатуры / Code of nomenclature 13131120</p> <p>Поковки из легированной, углеродистой и углеродисто-марганцевой стали для судовых механизмов и механических установок (максимальным весом не более 25000 кг, максимальная толщина не более 8500 мм) Состояние поставки - NT, QT, N Forgings of alloy, carbon and carbon manganese steel for ship machinery and machinery installations (max.weight not more than 25000 kg, max.thickness not more than 8500 mm) Condition of supply - NT, QT, N</p> <p>Примечание / Note:</p> <p>N - нормализация / normalizing QT - закалка и отпуск / quenching and tempering NT - нормализация и отпуск / normalizing and tempering</p>	<p>Техническая документация одобрена письмом 269-381-03-68828 от 22.03.2021 / The technical documentation was approved by RS letter 269-381-03-68828 dated 22.03.2021</p> <p>При изготовлении изделий выполняются требования гл. 3.7 Части XIII "Материалы" Правил классификации и постройки морских судов (2020). / At manufacturing of products are fulfilling the requirements of Chapter 3.7 of Part XIII "Materials" of Rules for the Classification and Construction of Sea-Going Ships (2020).</p>

Российский морской регистр судоходства
Russian Maritime Register of Shipping



Иванов С.А. / S. Ivanov

(фамилия, инициалы)
name

РС 7.1.4.1

01/2010