



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
FS22PTB00027

型式认可证书
CERTIFICATE OF TYPE APPROVAL

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

HANSUN ENGINEERING CO.,LTD.

地址/Address

27, Noksansandan 361-ro, Gangseo-gu, Busan, Korea

产品名称/Product

管系附件
Piping Fitting
机械接头
Mechanical Joint

附加标志/Notations

无/Nil.

认可标准/Approval Standard

1. 中国船级社《钢质海船入级规范》（2022）及其变更通告 第3篇第2章
Chapter 2, Part Three of China Classification Society Rules for Classification of Sea-Going Steel Ships 2022 and its Change Notices

用于/Intended for

国际航行海船/International sea-going ship
产品使用限定/Restriction for Application of Product: 见备注/See Remarks

产品明细/Product Description

机械接头/Mechanical Joint (M0001)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	S-LOK Tube Fittings; Bite Type Tube Fittings for JIS B2351; Bite Type Tube Fittings for DIN 2353	
最大设计压力/Max. Design Pressure	见附页 See Additional Pages	MPa
壳体材料/Casing Material	见附页 See Additional Pages	

证书有效期至/This Certificate is valid until 2026年10月23日/Oct. 23,2026

发证机构/中国船级社釜山分社
Issued by CCS Busan Branch

签发日期 2022年12月30日
Date Dec. 30,2022

本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体，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有疑问时，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: T01.

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:P022-16841060

设计温度/Design Temperature	见附页 See Additional Pages	℃
-------------------------	--------------------------	---

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : NP14A00394, NP14A00395, NP14A00396

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : HSET-CCS-001
 试验报告日期/ Test Report Date : 2014-10-17
 试验单位/ Laboratory: HANSUN ENGINEERING CO., LTD.
 试验单位地址/ Test Address: 27, Noksansandan 361-ro, Gangseo-gu, Busan, Korea

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

按规范只认可不进行产品检验的产品/The product approved only in term of the rules:
 认可后的产品检验由制造厂按本社批准的产品检验计划进行检验, 经检验合格后由制造厂签发合格证明, 并连同该产品的本社认可证书复印件一并交付用户, 制造厂对产品符合公约、法规、本社规范和本社认可的标准规定负责。
 After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society. Upon satisfactory inspection, and the Quality Certificate issued by the Manufacturer should be provided to the purchaser together with the copy of the approval certificate issued by the Society. The manufacturer should take responsibility for the product being in compliance with the convention, statutory regulation, the Society rules and the standard accepted by the Society.

认可保持条件/ Maintenance Requirements of Approval

1. 型式认可后, 如果产品及其重要零部件的设计、所用材料或制造方法有所改变, 且影响到产品的主要特性、特征; 或产品的性能指标有所更改, 且超过认可的范围, 则有关图纸和文件应经检验机构审批。并在检验机构认为必要时, 经本社检验人员见证有关试验和进行检查, 其结果应能证实仍符合认可条件。

After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results 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. 认可证书有效期内, 如果出现可能导致本社取消认可的情况, 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 withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.

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. 如果属于获得型式认可B 模式证书, 且无需颁发船用产品证书/等效证明文件的情况, 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, 检查工作应在周年日的前后三个月内进行。

If belong to the situation of the product has type approval mode B certificate, and marine product certificate/equivalent document is not necessary, those who have obtained the certificate should be subject to periodical audit every year. 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 shall be done within a time span of three months before and after the annual surveillance date.

备注/Remarks

1. 本证书由原型式认可证书 (No. FS18T00029) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Type Approval Certificate No. FS18T00029.

2. 产品使用限定条件/Restriction for application of product:

.1 该证书所列举的机械接头均为非耐火型, 因此不适用于要求耐火型接头的处所; 不能适用的处所详见中国船级社《钢质海船入级规范》(2022) 及其变更通告第3篇第2章表2.5.3.1(2)。

The mechanical joints listed in this certificate are non-fire resistant type, so the products can't be used in the place where requires the mechanical joints of fire-resistant type. The place where the mechanical joints can't be used refer to Table 2.5.3.1(2), Chapter 2, Part Three of CCS Rules for the Classification of Sea-going Steel Ships 2022 and its Change Notices.

.2 机械接头不应用于下列场合: 1) 穿过压载舱和燃料舱的舱底水管系; 2) 穿过货舱和燃料舱的海水和压载管系, 包括空气和溢流管系; 3) 穿过机器处所、货舱和压载舱的燃料和油类管系, 包括空气和溢流管系; 4) 压力水雾系统中的非注水管(干管系统)。

Mechanical joints are not be used in the following cases: 1) bilge piping through ballast tanks and fuel tanks; 2) sea water and ballast piping (including air and overflow pipes) through cargo holds and fuel tanks; 3) fuel and oil piping (including air and overflow pipes) through machinery spaces, cargo holds and ballast tanks; 4) non-water filled pressure water spraying systems (dry pipe systems).

3. 本认可产品为不含弹性和橡胶密封的机械接头, 属于非耐火型机械接头。

The approval products are mechanical joints without resilient and elastomeric seals, and attributed to non-fire resistant type.

4. 外购的机械接头的本体材料须持有工厂质量合格证明; I、II级管系用接头本体原材料应由本社认可工厂制造或持有本社产品证书或进行材料复验。

The body materials of mechanical joints must have Quality Certificate of Manufacturer. The body materials of the mechanical joints which are used for class I and class II piping systems should be manufactured by the plant approved by CCS, or hold the product certificate issued by CCS, or be retested.

5. 本社已审核了产品厂无石棉声明, 但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。

The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

中国船级社釜山分社
CCS Busan Branch

注: 本证书含有附页, 共2页

Note: The certificate is attached with additional 2 page(s)

Product Description

1. S-LOK Tube fittings

Material	Tube O.D.(inches)	Max. Design Pressure/Max. working Pressure (MPa)	Temperature Range (°C)
Stainless Steel	1/8 " ~ 1 1/2 "	33.78~75.15	-196°C~649°C
Carbon Steel		33.78~75.15	-53°C~426°C
Copper		10.34~24.82	-40°C~205°C

Types and Design

Type Description	Fitting Designation	Type Description	Fitting Designation
Tube to Tube Union	SU,SL,SUR,ST,SX,SUB	Plug and Cap	SP,SC
Tube to Male Pipe	SMC-N/R/G,SMCT,SOM,SMCB,SLBM,SLM,STRM.STBM	Tube Insert	SI
Tube to Female Pipe	SCF,SCG,SCBF,SLF,STRF,STBF	Nut	SN
Stub Tube Connector	SR,SAB,SAM,SAF,SCP,SCR	Front Ferrule	SFF
Tube to AN Tube	SUA,SUBA,SAA	Back Ferrule	SFB
Tube to SAE O-ring Seal	SMCS,SLS,SLBS,STRS,STBS,SCOS,SCOP	Ferrule Set	SFS
Tube to Weld End	SCW,SLW,SCSW,SLSW		

2. Bite Type Tube Fittings for (JIS B2351+Company's SPEC.)

Material	Tube O.D.(mm)	Max. Design Pressure/Max. working Pressure (MPa)	Temperature Range (°C)
Stainless Steel	6mm ~42mm	21.0~50.0	-20°C~300°C
Carbon Steel		21.0~50.0	-23°C~300°C
Copper		14.7~35.0	-20°C~200°C

Types and Design

Type Description	Fitting Designation	Type Description	Fitting Designation
Straight Union	BU	Plug	BP
Union Elbow	BL	Nut	BN
Union Tee	BT	Sleeve	BS
Straight Bulkhead Union	BBU	Hose Male Union	BHUM
Bulkhead Elbow	BBL	Hose Female Union	BHUF
Long Male Connector	BLMC	Hose Bulkhead Male Union	BHBM
Male Connector	BMC-R/G,BOM	Hose Bulkhead Female Union	BHBF
Male Elbow	BLM	Hose Male Elbow	BHLM
Long Male Elbow	BLLM	Hose Female Elbow	BHLF
O-Seal Male Elbow	BOLM	Hose Bulkhead Male Elbow	BHBLM
Banjo Elbow	BSLM	Hose Bulkhead Female Elbow	BHBLF
Male Branch Tee	BBTM	Welding Connector	BCW

证书编号/Certificate No. FS18T00029

附页

Male Run Tee	BRTM	Welding Bulkhead Union	BBUW
Bulkhead Female Connector	BBFC	Adapter	BA-R
Female Connector	BFC	Adapter(for Copper Gasket)	BA-G
Gauge Connector	BGC	Reducer	BR
Female Elbow	BLF	Positionable Elbow	BLA
Female Branch Tee	BBTF	Positionable Branch Tee	BBTA
Female Run Tee	BRTF	Positionable Run Tee	BRTA
Jig	BJ	Air Purge Valve(tube end)	BAP-A
Cap	BC	Air Purge Valve(thread end)	BAP-2

3. Bite Type Tube Fittings for DIN 2353

Material	Tube O.D.(mm)	Max. Design Pressure/Max. working Pressure (MPa)	Temperature Range (°C)
Stainless Steel	6mm ~42mm	10.0~63.0	-60°C~400°C
Carbon Steel		10.0~63.0	-40°C~120°C
Copper		7.0~44.1	-60°C~175°C

Types and Design

Type Description	Fitting Designation
Tube to Tube	DDU,DDL,DDUR,DDT,DDC,DDTR,DDBU,DDBUW,DDBL
Tube to Female Port	DDOM-U/M,DDMC-R/G/M/GED/MED/N,DDML-R/M
Tube to Male Thread	DDFC-G/M
Tube to Tube Port(adjustable fitting)	DDLA,DDBTA,DDRTA,DDEW,DDET,DDEL,DDKOR,DDR,DDRED
Tube Port to Female Port	DDA-GED/MED,DDEGE-G/M
Tube Port to Tube Port	DDUE
Banjo Fitting	DDSWVE-G/M,DDWH-G/M,DDTH-G/M
Gauge Connector & Test Couplings	DDGC-G,DDGE-G,DDGA-G,DDGMA,DDEMA3
Weld Fitting	DDAS,DDASK,DDAK,DDAKR
Adaptor	DMFAD,DMFAE,DMFAD-ED,DMFAE-ED
Plug and Caps	DDVSTI-GED/MED,DDVSTI,DDVKA,DDCA
Cutting Ring	DDS
Nut	DDN

-----END-----