



TESTING  
CNAS L4986

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张家港市海宇金属材料测试有限公司

Zhangjiagang Haiyu Metallic Material Testing Co.,Ltd.

# 检测报告

## TEST REPORT

委托单位: 上海咏岩工业技术有限公司  
Client: Shanghai winrock industrial Technologies Co.,Ltd

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委托单位地址: 上海  
Address: Shanghai

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收样日期: 2015-10-13  
Date of Receipt:

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检测类别: 委托测试  
Test Kind: Request test

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- 1、本报告无本机构报告专用章无效。  
The test report is invalid without the stamp of the testing organization.
- 2、本报告无编制、审核人、批准人签名无效。  
The test report is invalid without signatures of the examiner and approval.
- 3、本报告涂改无效。  
The test report with defacement will be invalid.
- 4、送样委托测试仅对来样负责。  
The test result is only for the received samples.
- 5、受检单位如对测试报告有异议应及时提出（本机构样品一般保留三个月备查）。  
Any concerns and questions on the test report should be brought to the testing organization immediately after testing by client. Tested samples will be kept for three (3) months unless otherwise required.
- 6、复制检测报告无效（全文复制检测报告加盖本机构报告专用章除外）。  
Any copied test report is invalid (except complete copy with the stamp of the testing organization).

批准: 李志明 审核: 陈春花 编制: 陈春花  
Approved by Reviewed by Compiled by

签发日期: 2015-10-17  
Date



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HYJS-BG-518-03-3

样品名称 Description of Sample	圆棒(固溶) Round bar(Solution treatment)	检测日期 Testing Date	2015-10-16~2015-10-17
试样编号 Number of Sample	15H1013-35	牌号/规格 Grade/ Dimension	UNS S32750 / 2507 / 022Cr25Ni7Mo4N
检测地点 Place of Test	物理室、光谱室、化学室、金相室、腐蚀室 Physical laboratory、Spectrum laboratory、 Chemical laboratory、Metallographic laboratory、Corrosion laboratory	环境条件 Environmental Conditions	温度(TEMP.): 23℃ 湿度(Humidity): 70%
样品状态 Sample State	Φ30×200mm 试样 2 件。 2 pieces of specimens of Φ30×200mm.		
客户编号 Number of Client	炉号: 14ZT4523 Heat No.		

**1、拉伸试验 Tensile Test**

检测依据 Reference of Test: ASTM A370-14

检测项目 Item of Test	单位 Unit	检测结果 Result of Test
抗拉强度 Tensile Strength	MPa	825
屈服强度 (0.2% offset) Yield strength	MPa	575
伸长率 (G=50mm) Percentage elongation	%	41
断面收缩率 Percentage reduction of area	%	73

**2、化学分析 Chemical Analysis**

检测依据 Reference of Test: ASTM E1019-11

检测项目 Item of Test	单位 Unit	检测结果 Result of Test
氮 (N)	%	0.26

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### 3、光谱分析 Spectrometric Analysis

检测依据 Reference of Test: GB/T 11170-2008

检测项目 Item of Test	单位 Unit	检测结果 Result of Test
碳 (C)	%	0.011
硅 (Si)	%	0.41
锰 (Mn)	%	0.71
磷 (P)	%	0.034
硫 (S)	%	0.004
铬 (Cr)	%	25.39
镍 (Ni)	%	6.66
钼 (Mo)	%	3.39
铜 (Cu)	%	0.20

Note: 点腐蚀当量  $PREN=1\times\%Cr+3.3\times\%Mo+20\times\%N(w/w)=41.78$

### 4、金相试验 Metallographic Test

检测依据 Reference of Test: ASTM E407-07e1、ASTM E562-11

检测项目 Item of Test	检测结果 Result of Test	说明 Comment
显微组织 Microstructure	铁素体+奥氏体, 铁素体含量约占 48%。 Ferrite and austenite, ferrite account for 48%.	见图 1 see Fig.1

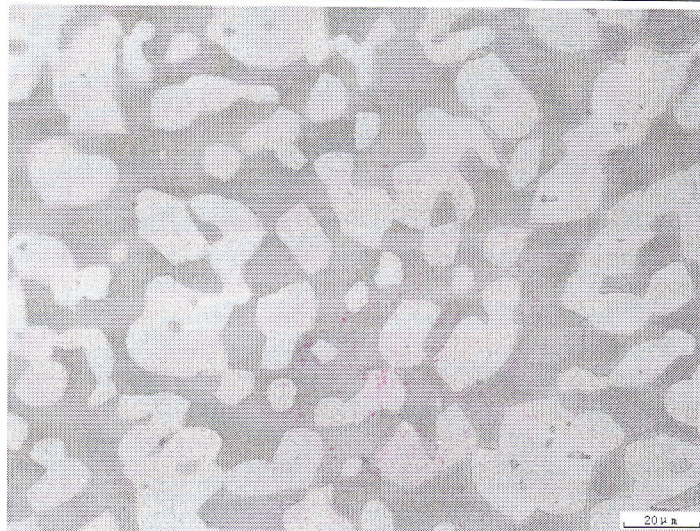


图 1、显微组织 500×  
Fig.1、Microstructure

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### 5、晶间腐蚀试验 Intergranular corrosion Test

检测依据 **Reference of Test:** ASTM G48-11 Method A

检测项目 Item of Test	检测结果 Result of Test
三氯化铁麻点腐蚀试验 Ferric chloride pitting test	<p>按 ASTM G48-11 方法 A, 将试样浸入温度为 <math>(22 \pm 2)^\circ\text{C}</math> 的约 6% 浓度的三氯化铁溶液中进行 24 小时点腐蚀试验。</p> <p>经检验, 试样表面无点腐蚀, 试样的腐蚀率为 <math>0.000022\text{g}/\text{cm}^2</math>。</p> <p>According to ASTM G48-11 Method A, the specimens were immersed for 24h in the ferric chloride solution (about 6 % <math>\text{FeCl}_3</math> by mass) and temperature fixed at <math>(22 \pm 2)^\circ\text{C}</math>.</p> <p>The test result showed no pitting on the specimens, the corrosion rate of the specimen is <math>0.000022\text{g}/\text{cm}^2</math>.</p>

检测依据 **Reference of Test:** ASTM A923-14 Method A

检测项目 Item of Test	检测结果 Result of Test	说明 Comment
用于双相不锈钢腐蚀组织分类的 氢氧化钠腐蚀试验 Sodium Hydroxide Etch Test for Classification of Etch Structures of Duplex Stainless Steels	<p>按 ASTM A923-14 方法 A, 试样经氢氧化钠电解液腐蚀后, 用 500 倍显微镜观察, 铁素体已腐蚀, 金属间相未显现, 相间的边界是光滑的, 浸蚀组织属未受影响的组织。</p> <p>According to ASTM A923-14 Method A, the specimen was observed under <math>500\times</math> microscope after it was etched by electrolyte of sodium hydroxide, the ferrite has been etched without revelation of intermetallic phase, the interphase boundaries are smooth, the etch structures is unaffected structure.</p>	见图 2 see Fig.2
		
<p>图 2、金相照片 <math>500\times</math> Fig.2、Metallographic photo</p>		

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