

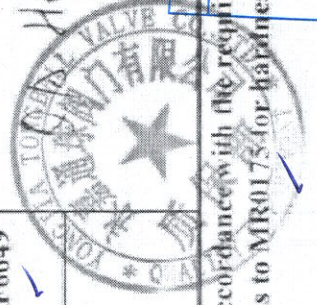
# MATERIAL TEST CERTIFICATE

EN10204:2004 3.1

YONGJIA TONG BALL Valve Co., Ltd.

Address: Dongou Industrial Zone, Oubei Street, Yongjia County, Zhejiang Province (1st Floor Plant of Wenzhou Huajiang Industrial Co., Ltd)

Purchaser: JC VALVULAS INDIA PVT LTD		Material Specification: ASTM A182 Gr F316-Edition 2024A		NO: R24120142							
Order No.: JCCMP-2425001581		Date: 2025-01-06									
<b>Chemical Composition (%)</b>											
Heat No.	C	Mn	Si	S	P	Cr	Mo	Ni	N	Forging Ratio	
Specification	≤0.08	≤2.00	≤1.00	≤0.030	≤0.045	16.0-18.0	2.00-3.00	10.0-14.0	≤0.10	≥3: 1	
Actual	0.017	0.783	0.376	0.0011	0.0389	16.23	2.02	10.01	0.0391	4.20:1	
<b>Mechanical Property Test</b>											
SF6649	<b>Tensile Test</b>			<b>Impact Test</b>							
	Test Temp.	Tensile σb (Mpa)	Yield σs 0.2 (Mpa)	Elongation (%)	Reduction of Area (%)	Temp. (°C)	Specimen	Akv	Hardness (HB)(max)		
H.T Batch No.	STD	Min 515	Min 205	Min 30	Min 50	(°C)	Size	(J)(minimum)	(HB)(max)		
BD032412095	Ambient Temp.	Actual 561	258	59	76			(1) (2) (3)	150,153		
Heat No.		<b>Other Test</b>			<b>Heat Treatment</b>			<b>Remarks</b>			
SF6649	PT	UT	ASME BPVC SECTION VIII, DIVISION.1 UF-45 & UF-46			solution treat 1040°C, 2h, Quenching below 260 °C, water cold					
PO.SR.No.	Drawing No.	Item Description			Qty	Heat No.	YONGJIA TONG BALL Valve Co., Ltd. Q.A. Head: Zhongli Hu				
8	X2B-040-6060N REV.1	BALL DN40CL150-600ASTM A182 Gr.F316 SP-008 MDS No. JC-MDS-341 Rev.7			7	SF6649	Head: Zhongli Hu				



JC Valvulas India Pvt. Ltd.  
 100/1001, Phase 1, Industrial Specification  
 Park, Tattai Nadi, India  
 Verified & Accepted  
 Q.A. P. Dity

We hereby certify that the parts listed above are manufactured and inspected, tested in accordance with the respective specification ASTM A182 Gr F316-Edition 2024A & JC-MDS-341 REV.7 & SP-008 the material conforms to MR0175 (for hardness). Verified & Accepted


# Heat treatment record report 热处理记录报告

委托单位 (Entrust Company): 永嘉通球阀有限公司 NO: TQ02412101

Material trademark 材料牌号	F316		Process name 工艺名称	固溶	
Equipment number 设备编号	BD1701-7	Thermocouple number 热电偶编号	70387	Order number 炉序号	BD032412095
Procedure content 工序内容	Holding temperature 保温温度	Soaking time 保温时间 h	Cooling medium 冷却介质	Pre-quenching temperature (介质) 淬前温度℃	Quenching temperature (介质) 淬后温度℃
固溶	1040	2	水冷	30	39
product name 产品名称	Production number 生产编号	Description 型号规格	Quantity 数量	Heat NO. 炉号	Mechanical property 机械性能
固定球	1YD2412006	65. 4*38*51. 2	7	SF6649	EMR
阀座	1YD2412024-2	124. 8*100*17. 8	8	SF6649	$\sigma_b$ MPa
试棒	1YD2412024-4	30*360	1	SF6649	$\delta\%$
					AK/J/Cm <sup>2</sup>
					硬度值
<p style="font-size: 2em; font-family: cursive;">Q.A. Head: Zhongli Hu</p>					
<p>Yongjia Boda machinery heat treatment co., Ltd 永嘉县博大机械热处理有限公司</p>					

填表人: 叶建玲      审核人: 方建东

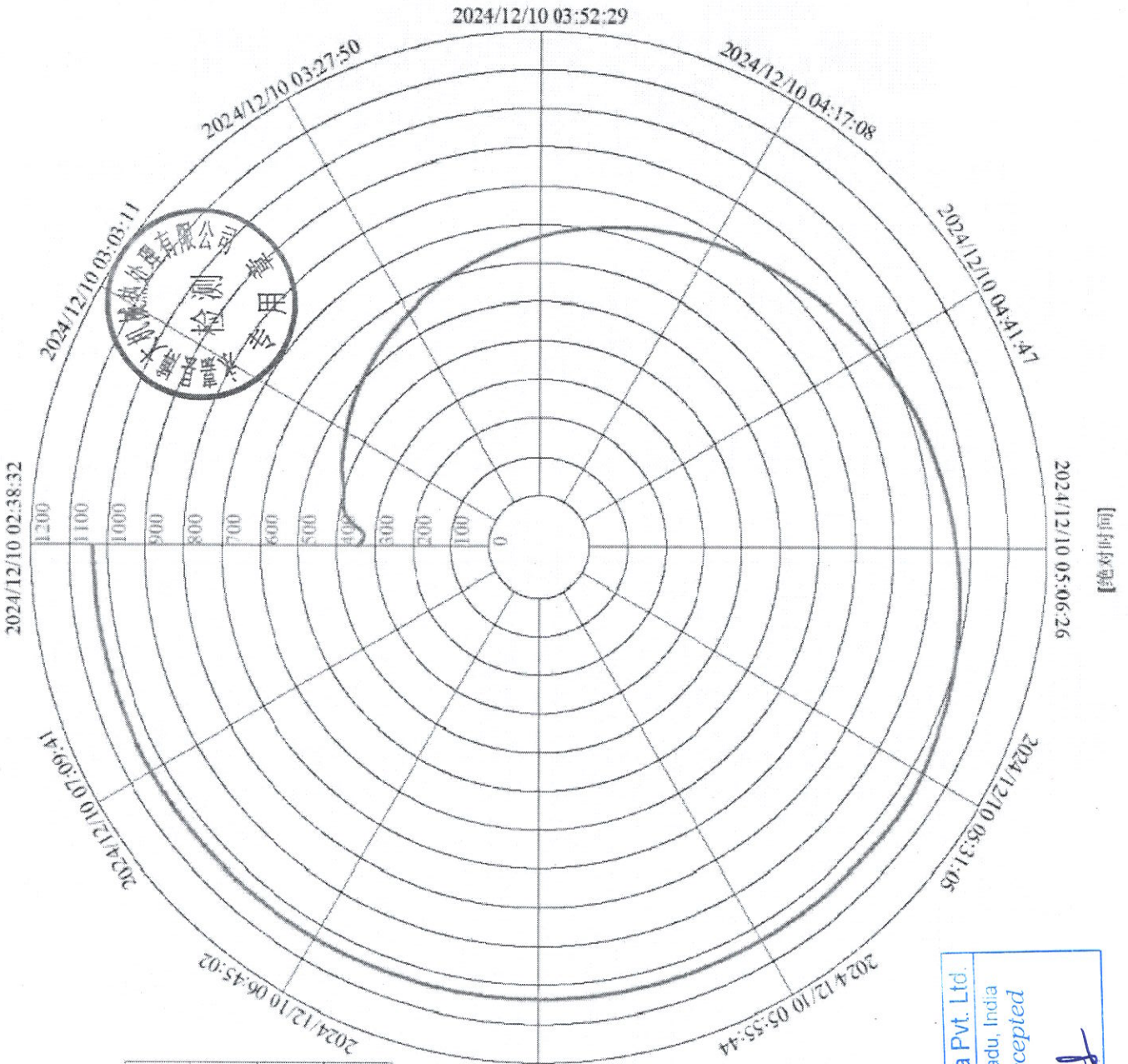
日期: 2024-12-10



<p>JC Valvias India Pvt. Ltd. Chennai, Tamil Nadu, India Verified &amp; Accepted</p>	<p>Q.A. <i>R. S. S. S.</i></p>
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# 圆图曲线打印

设备名称: 总貌  
 打印通道: 通道04 [ ]  
 记录间隔: 2 秒  
 开始时间: 2024/12/10 02:38:32  
 结束时间: 2024/12/10 07:34:20  
 数据数量: 8875



生产批次 Production Number	原料牌号 material trademark	描述 Description	产品名称 product name	规格 Size	批号 Order number	数量 Quantity	单位 Unit
F102412044	A1024100	美 4"X3" 2	圆盖	S30408	B0032412005	1	个
F102412044	A1024100	134 1"X100 11#	圆盖	S30408	B0032412005	1	个
F102412044	A1024100	30" 圆盖	圆盖	S30408	B0032412005	1	个

O.D. Head: zhangli hu

JC Valvulas India Pvt. Ltd.  
 Chennai, Tamil Nadu, India  
 Verified & Accepted  
 R. Dipak  
 Q.A.



## Test Report ✓

TC1472825000019865F

<b>Customer:</b> <b>M/s. JC Valvulas India Private Limited ✓</b> No: 143, 1st Main Road, Industrial Estate, Perungudi ,City:Chennai ,600096	Report No.:	<b>TR/24-25/7357-1 ✓</b>
	Report Date:	17-03-2025 ✓
	Customer Ref. No.:	DC2425002012
	Ref. Date	07-03-2025
	Sample Received Date:	10-03-2025
	Date Of Completion:	17-03-2025

Samples drawn by Customer ✓

**Sample Description:** Test Bar, Heat No: SF6649, Material: F316, SP-Code: SP-008, PO No: SC-2425002564 ✓

**Discipline : Chemical, Group : CORROSION TESTING ✓**

**INTERGRANULAR CORROSION TEST (PRACTICE-B) ✓**

**Test Method : ASTM A262:2015 (2021) ✓**

**Verified By: N THINESH KANNAN**

**Tested on : 12-03-2025 to 17-03-2025**

Test Parameters	Result ✓	Requirement
Test Solution	Ferric Sulfate –Sulfuric Acid Solution ✓	
Size (mm)	L:27.04 x W:20.09 x Thk:8.18 ✓	
Total Surface Area of the specimen (cm <sup>2</sup> )	18.5751 ✓	
Initial Weight of the specimen (g)	35.0084 ✓	
Start of Test	12.03.2025 (04.00 pm) ✓	
End of Test	17.03.2025 (04.00 pm) ✓	
Duration of Test	120 Hours ✓	
Final weight of the specimen (g)	34.7529 ✓	
Weight loss (g)	0.2555 ✓	
Corrosion Rate (mpy)	50.0281 ✓	60.0 max.



**For MICROLAB**



K. Mathan Kumar  
Head, Corrosion & Polymer Department

**Authorized Signatory**

----- **End of Test Report** -----

**NOTE :** This report relates only to the particular sample submitted for test \* Any correction is not attested shall invalidate this certificate \* Sample will be destroyed after 15 days from the date of testing unless instructed otherwise \* Any complaints about this report should be communicated in writing within 7 days of this report \* This report not to be produced wholly or in parts and cannot be used as an evidence in a court of law and shall not be used in advertising Media without prior permission in writing \* Sample description is not verified in all cases and is given as described by the customers \* Sample are not drawn by us unless otherwise stated \* Laboratory reports the statements of Conformity to material specification as per Decision Rule 1, Non Conformity as per Decision Rule 4 & For Rule 2 & 3 Customer provides feedback.

