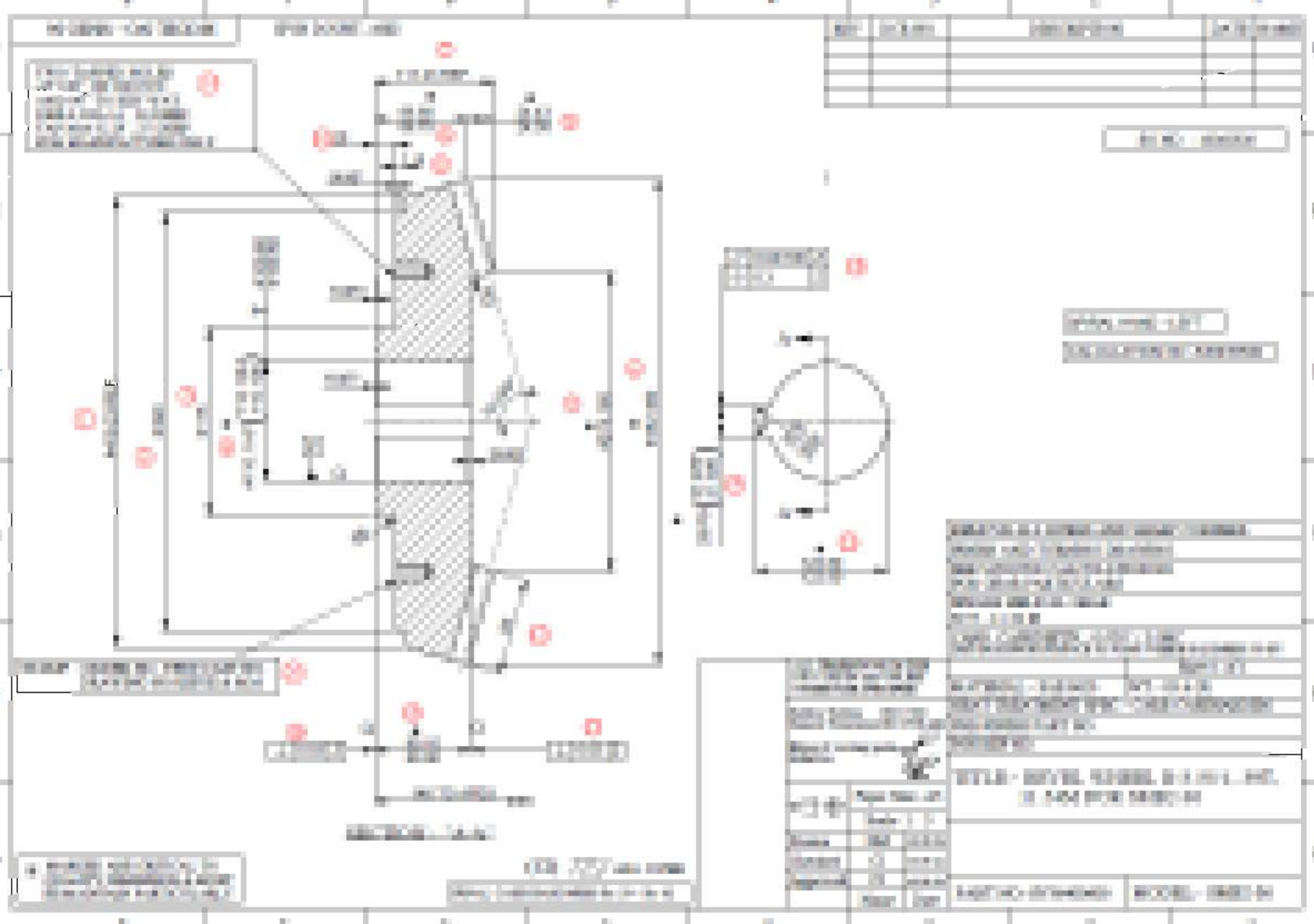


13	◆	φ105 n6	105.045-105.023			105.045	105.023	OD micrometer/外径千分尺	105.03	105.03								OK
14	◆	φ104	104.000	0.300	-0.300	104.300	103.700	Caliper/卡尺	104.00	104.03								OK
15	◆	φ105 n6	105.035-105.013			105.035	105.013	OD micrometer/外径千分尺	105.03	105.02								OK
16	◆	φ102	102.000	0.300	-0.300	102.300	101.700	Caliper/卡尺	102.00	102.00								OK
17	◆	φ104.960-104.680				104.960	104.680	OD micrometer/外径千分尺	104.86	104.86								OK
18	◆	φ89.950-89.870				89.950	89.870	OD micrometer/外径千分尺	89.93	89.93								OK
19	◆	φ84.500-84.470				84.500	84.470	OD micrometer/外径千分尺	84.49	84.48								OK
20	◆	φ80 m6	80.030-80.011			80.030	80.011	OD micrometer/外径千分尺	80.02	80.015								OK
21	◆	φ79.950-79.880				79.950	79.880	Caliper/卡尺	79.92	79.93								OK
22	◆	90.000	90.000	0.300	-0.300	90.300	89.700	Contour meter/轮廓仪	90.00	90.10								OK
23	◆	34.500	34.500	0.300	-0.300	34.800	34.200	Caliper/卡尺	34.50	34.50								OK
24	◆	45.000	45.000	0.300	-0.300	45.300	44.700	Caliper/卡尺	45.00	45.00								OK
25	◆	140.50-140.00				140.500	140.000	Caliper/卡尺	140.50	140.50								OK
26	◆	71.00-70.80				71.000	70.800	OD micrometer/外径千分尺	70.93	70.93								OK
27	◆	22 P9	21.978-21.926			21.978	21.926	ID micrometer/内径千分尺	21.94	21.95								OK
28	◆					0.030	0.000	CMM/三坐标	0.027	0.028								OK
29	◆					0.030	0.000	CMM/三坐标	0.029	0.03								OK
30	◆					0.030	0.000	CMM/三坐标	0.03	0.027								OK
31	◆					0.030	0.000	CMM/三坐标	0.028	0.029								OK
32	◆					0.030	0.000	CMM/三坐标	0.027	0.026								OK
33	◆					0.030	0.000	CMM/三坐标	0.029	0.028								OK
34	◆					0.040	0.000	CMM/三坐标	0.038	0.039								OK
						0.300	0.000	CMM/三坐标	0.29	0.28								
	◆	d1	M20					Thread gauge/螺纹规	M24	M24								
	◆	d2	17.500	0.200	-0.200	17.700	17.300	ID micrometer/内径千分尺	17.50	17.60								OK
	◆	d3	21.000	0.200	-0.200	21.200	20.800	Caliper/卡尺	21.15	21.10								OK

35	◆	d4	28.400	0.200	-0.200	28.600	28.200	Caliper/卡尺	28.40	28.50									OK
	◆	d5	31.300	0.300	-0.300	31.600	31.000	Caliper/卡尺	31.50	31.40									OK
	◆	t1	42.000	0.300	-0.300	42.300	41.700	Dephometer/深度尺	41.90	42.00									OK
	◆	t2	53.000	0.300	-0.300	53.300	52.700	Dephometer/深度尺	53.10	53.20									OK
	◆	t3	15.000	0.200	-0.200	15.200	14.800	Dephometer/深度尺	15.10	15.20									OK
	◆	t4	6.400	0.200	-0.200	6.600	6.200	Dephometer/深度尺	6.50	6.40									OK
	◆	60°						Protractor/角度仪	60°	60°									OK
	◆	120°						Protractor/角度仪	120°	120°									OK
	◆	Material	/					See material reports											
	◆	Heat treat	/					See heat treatment reports											
	◆	Marking						See photos											



Room No.	Room Name	Area (sq. m)	Volume (cu. m)

STRUCTURAL WALL

PARTITION WALL

GLASS WALL

1. ALL WALLS ARE TO BE CONSTRUCTED WITH 200mm THICK BRICKWORK WITH 10% CEMENT MORTAR AND FINISHED WITH PLASTER AND PAINT ON BOTH SIDES.

2. ALL DOORS AND WINDOWS ARE TO BE PROVIDED WITH ALUMINIUM FRAMES AND GLASS UNITS.

3. ALL FLOORS ARE TO BE CONSTRUCTED WITH 100mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

4. ALL ROOFS ARE TO BE CONSTRUCTED WITH 150mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

5. ALL CEILING ARE TO BE CONSTRUCTED WITH 100mm THICK GYPSUM BOARD ON REINFORCED BRICKWORK.

6. ALL LIGHTING FIXTURES ARE TO BE PROVIDED WITH PROTECTIVE GLASS AND BUSHES.

7. ALL ELECTRICAL WIRING IS TO BE CONCEALED IN WALLS OR UNDER FLOORS.

8. ALL TELEPHONE WIRING IS TO BE CONCEALED IN WALLS OR UNDER FLOORS.

9. ALL WATER SUPPLY AND DRAINAGE SYSTEMS ARE TO BE PROVIDED WITH 40mm DIA. PIPES AND FITTINGS.

10. ALL SANITARY FITTINGS ARE TO BE PROVIDED WITH 150mm THICK CERAMIC TILES ON WALLS AND 100mm THICK CERAMIC TILES ON FLOORS.

11. ALL ROOFING ARE TO BE CONSTRUCTED WITH 100mm THICK CORRUGATED GALVANIZED IRON SHEET ON 40mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

12. ALL ROOFING ARE TO BE CONSTRUCTED WITH 100mm THICK CORRUGATED GALVANIZED IRON SHEET ON 40mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

13. ALL ROOFING ARE TO BE CONSTRUCTED WITH 100mm THICK CORRUGATED GALVANIZED IRON SHEET ON 40mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

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19. ALL ROOFING ARE TO BE CONSTRUCTED WITH 100mm THICK CORRUGATED GALVANIZED IRON SHEET ON 40mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

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
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35. ALL ROOFING ARE TO BE CONSTRUCTED WITH 100mm THICK CORRUGATED GALVANIZED IRON SHEET ON 40mm THICK CONCRETE SLAB ON REINFORCED BRICKWORK.

13	◆◆	90.10-89.90				90.100	89.900	Highly ft/高度尺	90.04	90.03								OK
14	◆◆	28 P9	27.978-27.926			27.978	27.926	ID micrometer/内径千分尺	27.94	27.94								OK
15	◆◆	122.80-122.50				122.800	122.500	Caliper/卡尺	122.80	122.80								OK
16	◆	⊥ 0.03 Z				0.030	0.000	CMM/三坐标	0.028	0.029								OK
17	◆	⊥ 0.03 Z				0.030	0.000	CMM/三坐标	0.029	0.029								OK
18	◆	// 0.04/100 Z				0.040	0.000	CMM/三坐标	0.038	0.04								OK
		≡ 0.3 Z				0.300	0.000	CMM/三坐标	0.29	0.28								OK
19	◆	280 PCD	280.000	0.500	-0.500	280.500	279.500	Caliper/卡尺	280.40	280.20								OK
20	◆	M16						Thread gauge/螺纹规	M16	M16								OK
	◆	Material	/					See material reports										
	◆	Heat treat	/					See heat treatment reports										
	◆	Marking						See photos										

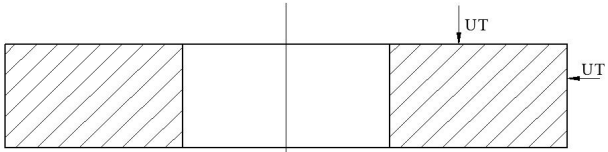
产品合格证

产品名称 Product name	A1827	数量 Quantity	4 件
规格型号 type	M11.54Z39/Z11	零件名称 Part name	齿轮 齿轮轴
规定材料及标准 Specified material and standard	SAE 8620	实用材料及标准 Actual material and standard	SAE 8620
图号 Drawing no.	SV36400600 SV363006F0	阶段标记 Phase mark	/
批次、顺序号 Batch and sequence no.	01.02		
<p>确认以下信息的符合性： Confirm the conformity of the information below:</p> <p>1. 代料单复印件已附带，代料单号为 (/)； The copy of material chart ,and its no. is(/)；</p> <p>2. 技术协议要求的各种试验报告已附带，附带有 (材质、尺寸、热处理、探伤报告) ； All testing report required in TS, including (material,dimension,HT, inspection report)</p> <p>3. 超差单已附带，超差单号为 (/)； Over tolerance report,and its no. is (/)；</p> <p>4. 证明书或微分测量表：(/)已附带 (/)不适用。 Certificate or Differential measurement (/)</p> <p>5. 更改单号 (/) 共 (/) 份已贯彻。 Change no. (/)</p>			
探 伤 Inspection	合格	表面处理 Surface teatment	合格
热处理 Heat teatment	合格	尺寸	合格
		Dimension	
检验员 Inspector		26.10.24	齿部 Tooth 合格
备 注 Remarks			
供方名称及印章 Supplier name		(有要求时)	

超声波检测报告

ULTRASONIC TEST REPORT UT

报告编号type:

工单号 Work order No.	2024092404	合同号 Contract No:	0	委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z39/Z11	零件图号 Drawing No.	SV36400600	零件名称 Description	齿轮
检测状态 Detection status	粗车	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
设备型号 Device model	TUD210	探头型号 Probe Type	单探头	灵敏度 sensitivity	φ 2
设备编号 Equipment No.	210	探头频率MHz Probes Frequency MHz	2.5MHZ	灵敏度校准方法 calibrating method	<input checked="" type="checkbox"/> DGS <input type="checkbox"/> DAC <input type="checkbox"/> 计算法
检测部位描述 Detection Area Description	加工面	探头尺寸 Probe size	φ 20	检测方法 Method	直接接触法
校准方法 Calibration	当量法 Equivalent method	表面状态 Surface states	<input type="checkbox"/> Ra3.2 <input checked="" type="checkbox"/> Ra6.3 <input type="checkbox"/> Ra12.6	耦合剂 Acoustic couplant	<input checked="" type="checkbox"/> 机油 Oil <input type="checkbox"/> 水 Water <input type="checkbox"/> 纤维素胶 Cellulose glue
检验标准 Inspection standard	ASTM A-388				
检测部位示意图: Sketch of inspection site:					
					
结论 Conclusion	对以上的锻件做探伤: Do flaw detection on the above forgings: 未发现超标缺陷, 符合ASTM A-388 No defects were found, in line with the standard of ASTM A-388, reaching level III 判定: 合格 Judgment: pass				
检验结果 Test results	<input checked="" type="checkbox"/> Acceptable 合格 <input type="checkbox"/> No Acceptable 不合格				
报告日期 Report Date	5.10.2024	检验: Inspector:	闫江伟	审核: Auditor:	廖彬

超声波检测报告

ULTRASONIC TEST REPORT UT

报告编号type:

工单号 Work order No.	2024092404	合同号 Contract No:	0	委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z39/Z11	零件图号 Drawing No.	SV363006F0	零件名称 Description	齿轮轴
检测状态 Detection status	粗车	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
设备型号 Device model	TUD210	探头型号 Probe Type	单探头	灵敏度 sensitivity	φ2
设备编号 Equipment No.	210	探头频率MHz Probes Frequency MHz	2.5MHZ	灵敏度校准方法 calibrating method	<input checked="" type="checkbox"/> DGS <input type="checkbox"/> DAC <input type="checkbox"/> 计算法
检测部位描述 Detection Area Description	加工面	探头尺寸 Probe size	φ20	检测方法 Method	直接接触法
校准方法 Calibration	当量法 Equivalent method	表面状态 Surface states	<input type="checkbox"/> Ra3.2 <input checked="" type="checkbox"/> Ra6.3 <input type="checkbox"/> Ra12.6	耦合剂 Acoustic couplant	<input checked="" type="checkbox"/> 机油 Oil <input type="checkbox"/> 水 Water <input type="checkbox"/> 纤维素胶 Cellulose glue
检验标准 Inspection standard	ASTM A-388				
检测部位示意图: Sketch of inspection site: <div style="text-align: center; margin-top: 20px;"> </div>					
结论 Conclusion	对以上的锻件做探伤: Do flaw detection on the above forgings: 未发现超标缺陷, 符合ASTM A-388 No defects were found, in line with the standard of ASTM A-388, reaching level II 判定: 合格 Judgment: pass				
检验结果 Test results	<input checked="" type="checkbox"/> Acceptable 合格 <input type="checkbox"/> No Acceptable 不合格				
报告日期 Report Date	5.10.2024	检验: Inspector:	闫江伟	审核: Auditor:	廖彬

渗碳淬火检验报告 Carburizing quenching test report

报告号/Report No: _____

工单号 Work order No.	2024092404	合同号 Contract No:		委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z11/39	零件图号 Drawing No.	SV36400600	零件名称 Description	齿轮
检测状态 Detection status	渗碳淬火	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
检验仪器 Insp. Apparatus	(1) HR-150A洛氏硬度计 (2) 三目倒置金相显微镜HS500E (3)HXD-1000TMG/LCD显微硬度计 (4)HTS-1000A 数显里氏硬度计		检验标准 Inspection standard	(1) JB/T6141.3-1992《重载齿轮渗碳金相试验》 (2) GB/T9450《钢件渗碳淬火有效硬化层深度的测定和校核》 (3) GB/T230.1《金属洛氏硬度试验方法》 (4) GB/T4340.1《金属维氏硬度试验第一部分:试验方法》	
检验结果 Test results					
检测方式 Detection mode	φ30试棒检测 φ30 test rod detection	试样编号 Sample No:	2024.10.19-5	热处理炉号 Heat Treatment No.:	2024.10.19-5
重量Kg Weight	/Kg		马氏体含量: Martensite content:	90%	
芯部硬度(图纸): Core hardness (drawing):	40HRC		残余奥氏体含量(≤25): Residual austenite content %	10%	
实测芯部硬度: The hardness of the core is measured:	40HRC		表面氧化层深度mm: Surface oxide depth:	0.01	
表面硬度(图纸): Surface hardness (drawing):	59-62HRC		表面脱碳层深度mm: Surface decarburization layer depth:	无	
实测表面硬度: Measured surface hardness:	59.1HRC、59.2HRC、59.4HRC		碳化物含量(不允许网状及骨骼状): carbide content % (not allowed to be reticulated and bone-like):	细颗粒状的碳化物。	
有效硬化层深(图纸): Effective hardening layer depth (drawings):	1.8mm		心部组织: Heart Tissue:	马氏体+贝氏体+铁素体	
有效硬化层深(实测): Effective hardening layer depth (measured):	1.84mm		表面硬度降HV1(≤40): Surface hardness reduction HV1 (≤40):	0HV	
硬度曲线(HV1)/Hardness curve					
0.3 0.5 0.7 0.9 1.1 1.3 1.5 1.7 1.9 2.1 2.3 2.5 2.7 2.9 3.1 3.3 3.5					
检验员 Inspector	徐建鹏	检验日期 Inspection date	21.10.2024	热处理工程师签字 Signature of HT	康松

渗碳淬火检验报告 Carburizing quenching test report

报告号/Report No: _____

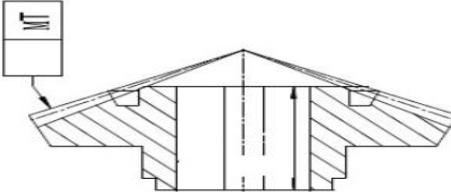
工单号 Work order No.	2024092404	合同号 Contract No:		委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z11/39	零件图号 Drawing No.	SV363006F0	零件名称 Description	齿轮轴
检测状态 Detection status	渗碳淬火	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
检验仪器 Insp. Apparatus	(1) HR-150A洛氏硬度计 (2) 三目倒置金相显微镜HS500E (3) HXD-1000TMC/LCD显微硬度计 (4) HTS-1000A 数显里氏硬度计	检验标准 Inspection standard	(1) JB/T6141.3-1992《重载齿轮渗碳金相试验》 (2) GB/T9450《钢件渗碳淬火有效硬化层深度的测定和校核》 (3) GB/T230.1《金属洛氏硬度试验方法》 (4) GB/T4340.1《金属维氏硬度试验第一部分:试验方法》		
检验结果 Test results					
检测方式 Detection mode	φ30试棒检测 φ30 test rod detection	试样编号 Sample No:	2024.10.19-2	热处理炉号 Heat Treatment No.:	2024.10.19-2
重量Kg Weight	/Kg		马氏体含量: Martensite content:	90%	
芯部硬度(图纸): Core hardness (drawing):	40HRC		残余奥氏体含量% (≤25): Residual austenite content %	10%	
实测芯部硬度: The hardness of the core is measured:	40HRC		表面氧化层深度mm: Surface oxide depth:	0.01	
表面硬度(图纸): Surface hardness (drawing):	59-62HRC		表面脱碳层深度mm: Surface decarburization layer depth:	无	
实测表面硬度: Measured surface hardness:	59.1HRC、59.3HRC、60HRC		碳化物含量% (不允许为网状及骨骼状): carbide content % (not allowed to be reticulated and bone-like):	细颗粒状的碳化物。	
有效硬化层深(图纸): Effective hardening layer depth (drawings):	1.8mm		心部组织: Heart Tissue:	马氏体+贝氏体+铁素体	
有效硬化层深(实测): Effective hardening layer depth (measured):	1.86mm		表面硬度降HV1 (≤40): Surface hardness reduction HV1 (≤40):	0HV	
硬度曲线 (HV1) /Hardness curve					
0.3 0.5 0.7 0.9 1.1 1.3 1.5 1.7 1.9 2.1 2.3 2.5 2.7 2.9 3.1 3.3 3.5					
检验员 Inspector	徐建鹏	检验日期 Inspection date	21.10.2024	热处理工程师签字 Signature of HT	康松

磁粉检测报告

MAGNETIC PARTICLE TEST REPORT MT

ULTRASONIC TEST REPORT UT

报告编号type:

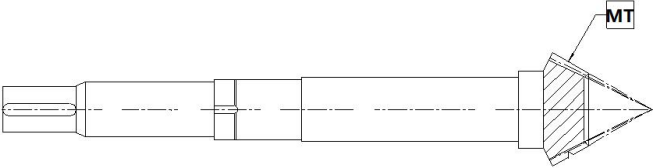
工单号 Work order No.	2024092404	合同号 Contract No:	0	委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z39/Z11	零件图号 Drawing No.	SV36400600	零件名称 Description	齿轮
检测状态 Detection status	磨齿后	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
设备型号 Device model	MY-2	磁粉类型 Type of magnetic particles	荧光粉	灵敏度 sensitivity	A1 30/100
设备编号 Equipment No.	203	媒介 Medium	煤油	电流类型 Type of current	交流
检测部位描述 Detection Area Description	齿顶、齿面、齿根	磁化方法 Magnetization method	纵向/周向	检测方法 Method	连续法
表面状态 Surface states	<input checked="" type="checkbox"/> Ra0.8 <input type="checkbox"/> Ra3.2 <input type="checkbox"/> Ra6.3	磁化时间 Time of magnetization	2m	退磁 Demagnetization	<input checked="" type="checkbox"/> 是/Yes <input type="checkbox"/> 否/No
检验标准 Inspection standard	JB/T5000.15-2007/II级				
检测部位示意图: Sketch of inspection site: <div style="text-align: center; margin-top: 10px;">  </div>					
结论 Conclusion	对以上的工件做探伤: Flaw detection of the above workpieces: 未发现超标缺陷, 符合JB/T5000.15-2007的标准, 达到II级 No defects were found, in line with the standard of JB/T5000.15-2007, reaching level II 判定: 合格 Judgment: pass				
检验结果 Test results	<input checked="" type="checkbox"/> Acceptable 合格 <input type="checkbox"/> No Acceptable 不合格				
报告日期 Report Date	5.9.2024	检验: Inspector:	张立房	审核: Auditor:	康彬

磁粉检测报告

MAGNETIC PARTICLE TEST REPORT MT

ULTRASONIC TEST REPORT UT

报告编号type:

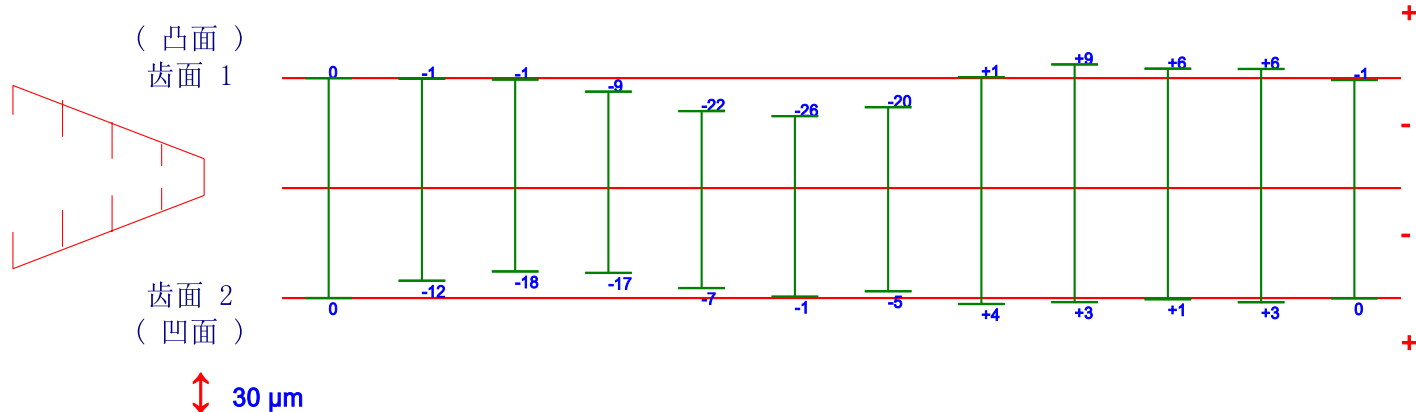
工单号 Work order No.	2024092404	合同号 Contract No:	0	委托单位 Entrusting unit	A1827
规格型号 type	M11.54Z39/Z11	零件图号 Drawing No.	SV363006F0	零件名称 Description	齿轮轴
检测状态 Detection status	磨齿后	工件材质 Part Material	SAE 8620	数量 Quantity	2
检验条件 Inspection conditions					
设备型号 Device model	MY-2	磁粉类型 Type of magnetic particles	荧光粉	灵敏度 sensitivity	A1 30/100
设备编号 Equipment No.	203	媒介 Medium	煤油	电流类型 Type of current	交流
检测部位描述 Detection Area Description	齿顶、齿面、齿根	磁化方法 Magnetization method	纵向/周向	检测方法 Method	连续法
表面状态 Surface states	<input checked="" type="checkbox"/> Ra0.8 <input type="checkbox"/> Ra3.2 <input type="checkbox"/> Ra6.3	磁化时间 Time of magnetization	2m	退磁 Demagnetization	<input checked="" type="checkbox"/> 是/Yes <input type="checkbox"/> 否/No
检验标准 Inspection standard	JB/T5000.15-2007/II级				
检测部位示意图: Sketch of inspection site					
					
结论 Conclusion	对以上的工件做探伤: Flaw detection of the above workpieces: 未发现超标缺陷,符合JB/T5000.15-2007的标准,达到II级 No defects were found, in line with the standard of JB/T5000.15-2007, reaching level II 判定:合格 Judgment: pass				
检验结果 Test results	<input checked="" type="checkbox"/> Acceptable 合格 <input type="checkbox"/> No Acceptable 不合格				
报告日期 Report Date	5.9.2024	检验: Inspector:	张立房	审核: Auditor:	康彬

任务号	齿数	工序	安装距	序列号码	零件号码
Revision	测量齿	分度位置	Gama/图表版本	测量方向	测量偏差
	Tooth One Only	5-3	3.2.259.0/2.0.149	逆时针	transverse

() Scan Pa, Index, 与齿面2垂直 (格里森), 齿厚 = -271 μm, Nom. Diff. Angle = -16.4495°, Act. Diff. Angle = -16.0589°

小轮标记

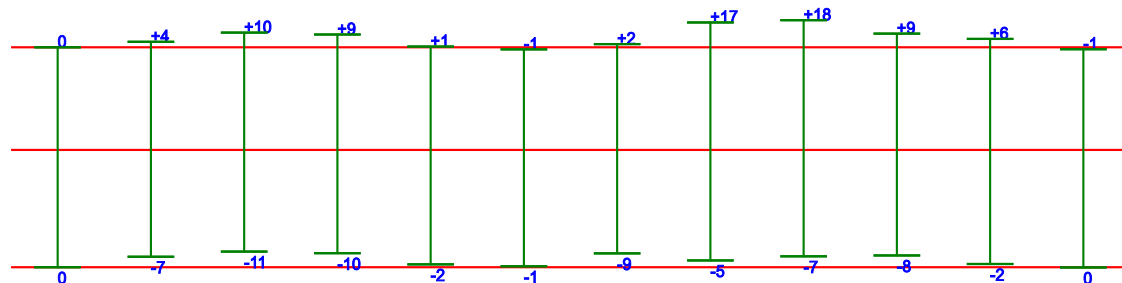
分度偏差标记



China GB(8)

齿面	偏差	Q	Q	公差
Fp	35.3	6	8	90
fp	20.5	8	8	28
fu	14.4	5	8	50
Frs	29.4			
Fr	35.3	*	8	*

分度偏差跳动消除标记



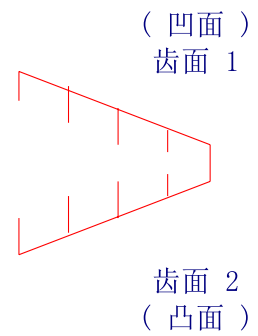
齿面	偏差	Q	Q	公差
Fp	22.2	5	8	90
fp	11.8	6	8	28
fu	12.5	5	8	50
Frs	19			

任务号	齿数 39	工序	安装距 146	序列号码 SV36400600-2024092404-2	零件号码 A1827-CM11.54Z39 L
Revision	测量齿 Tooth One Only	分度位置 5-3	Gama/图表版本 3.2.259.0/2.0.149	测量方向 逆时针	测量偏差 transverse

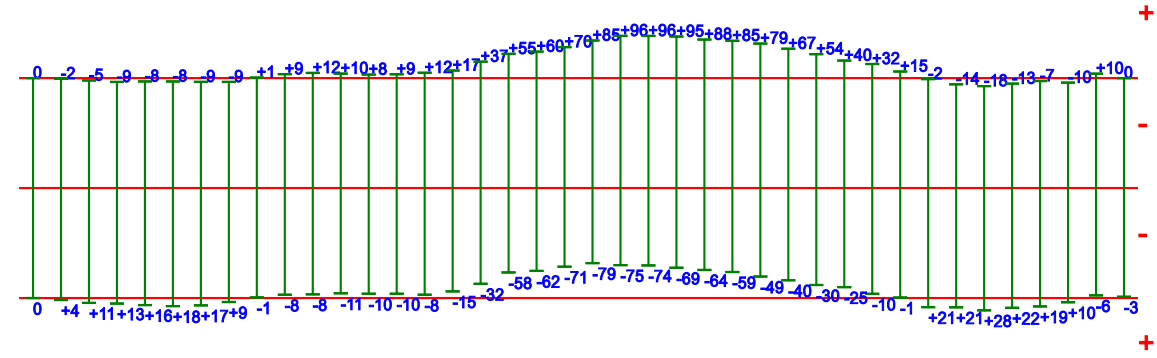
() Scan Pa, Index, 与齿面2垂直 (格里森), 齿厚 =408 μm, Nom. Diff. Angle =-3.6807°, Act. Diff. Angle =-3.8465°

齿轮标记

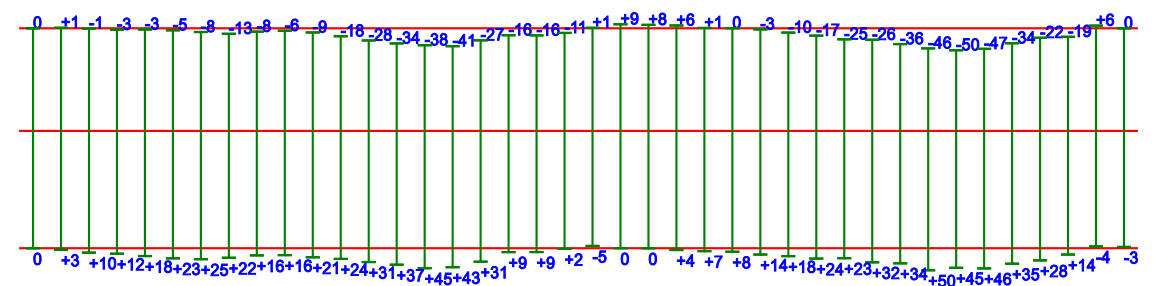
分度偏差标记



100 μm



分度偏差跳动消除标记



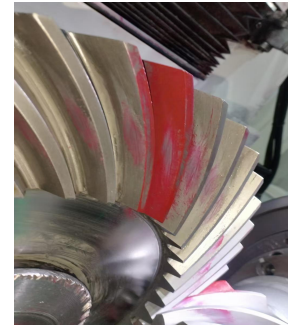
China GB(8)

齿面	偏差	=Q	=Q	公差
齿面 1	Fp = 114.2	8	8	125
	fp = 20.4	7	8	32
	fu = 30.5	6	8	90
	Frs = 94.7			
	Fr = 30.1	*	8	*
齿面 2	Fp = 107.3	8	8	125
	fp = 25.9	8	8	32
	fu = 22.5	5	8	90
	Frs = 82.8			

Meshing reports

对研报告

客户	A1827	Model	M11.54Z11/39	Drw	SV36400600 SV363006F0	No.	1	Check	Xiufeng
大轮	Act installation distance	146.00		Lash value	0.3	Noise	No	Appearance	No bumping or scratching
小轮	Act installation distance	245.00		Lash value					



日期 24.10.24

Material quality reports
南京源之全特种钢材有限公司
产品质量证明书

合格证编号 Certificate No.		2024-09-30-125							
钢种 Steel Grade	SAE 8620	产品规格	280*106+ 110*556						
冶炼炉号 Heat No.	X20048	技术条件 Specification	ASTM A29						
钢锭规格 Size	//	冶炼方法 Smelt Method	电炉+精炼+脱气+锻造						
交货状态 Delivery Condition	锻造+N+粗车	数量 Quantity	2						
锻造比	≥3.0	锻件编号	YZT20240927-26~27						
1 化学成分 Chemical composition %									
	C	Si	Mn	P	S	Cr	Ni	Mo	Cu
规定值	0.18~0.23	0.15~0.35	0.70~0.90	≤0.035	≤0.040	0.40~0.60	0.40~0.70	0.15~0.25	/
熔炼值	0.18	0.22	0.71	0.020	0.007	0.57	0.44	0.22	
	V	Al	Ti	N[ppm]	H[ppm]	O[ppm]			
规定值	/	/	/	70 Max	2 Max	20 Max			
熔炼值				60	1.5	15			
2 低倍组织 Macrostructure:									
一般疏松 Ordinary Porosity (≤2.0)		中心疏松 Center Porosity: (≤2.0)		锭型偏析 Ingot Segregation: (≤2.0)					
0.5		1		0.5					
3. 非金属夹杂物 Non-Metallic Inclusions:									
AT≤2.0	AH≤1.5	BT≤2.0	BH≤1.5	CT≤2.0	CH≤1.5	DT≤2.0	DH≤1.5	Ds≤2.0	
0	0.5	1	0.5	0	0	0.5	1	0.5	
4. 晶粒度及组织 Grain Size & Metallurgical Structure:									
晶粒度 Grain Size (5 or finer):		金相组织 Metallurgical Structure							
7.0		铁素体+珠光体 Ferrite and pearlite							
5. 试样热处理制度 Sample Heat-Treatment Method:									
淬火温度 Quenched Temperature: 850±10℃淬火, 200±20℃回火									
6. 机械性能 Mechanical Property:									
Rm Mpa: ≥850	Rp0.2 Mpa: ≥785	A%≥11%	Z%≥40%	Ku2 J≥47J					
1165	945	11.5	48	59、65、62					
7 淬透性 Hardenability:									
J3mm:44(40~47), J5mm:35(30~44), J7mm:30(25~40), J9mm:27(22~35), J11mm:24(20~32)									
8 交货硬度 Delivery Hardness: 184 (160-190 HB)									
9 超声波探伤 UT: 合格 (ASTM A-388)									
备注: YZT20240924 A1827									
尺寸: 合格		表面质量: 合格		综合评定: 合格					

日期: 2024年09月30日



Material quality reports
南京源之全特种钢材有限公司
产品质量证明书

		合格证编号 Certificate No.		2024-09-30-124					
钢种 Steel Grade	SAE 8620		产品规格		453/ 110*111				
冶炼炉号 Heat No.	X20048		技术条件 Specification		ASTM A29				
钢锭规格 Size	//		冶炼方法 Smelt Method		电炉+精炼+脱气+锻造				
交货状态 Delivery Condition	锻造+N+粗车		数量 Quantity		2				
锻造比	≥3.0		锻件编号		YZT20240927-24~25				
1 化学成分 Chemical composition %									
	C	Si	Mn	P	S	Cr	Ni	Mo	Cu
规定值	0.18~0.23	0.15~0.35	0.70~0.90	≤0.035	≤0.040	0.40~0.60	0.40~0.70	0.15~0.25	/
熔炼值	0.18	0.22	0.71	0.020	0.007	0.57	0.44	0.22	
	V	Al	Ti	N[ppm]	H[ppm]	O[ppm]			
规定值	/	/	/	70 Max	2 Max	20 Max			
熔炼值				60	1.5	15			
2 低倍组织 Macrostructure:									
一般疏松 Ordinary Porosity (≤2.0)		中心疏松 Center Porosity: (≤2.0)		锭型偏析 Ingot Segregation: (≤2.0)					
0.5		1		0.5					
3. 非金属夹杂物 Non-Metallic Inclusions:									
AT≤2.0	AH≤1.5	BT≤2.0	BH≤1.5	CT≤2.0	CH≤1.5	DT≤2.0	DH≤1.5	DS≤2.0	
0	0.5	1	0.5	0	0	0.5	1	0.5	
4. 晶粒度及组织 Grain Size & Metallurgical Structure:									
晶粒度 Grain Size (5 or finer):			金相组织 Metallurgical Structure						
7.0			铁素体+珠光体 Ferrite and pearlite						
5. 试样热处理制度 Sample Heat-Treatment Method:									
淬火温度 Quenched Temperature: 850±10℃淬火, 200±20℃回火									
6. 机械性能 Mechanical Property:									
Rm Mpa: ≥850	Rp0.2 Mpa: ≥785		A%≥11%		Z%≥40%		Ku2 J ≥47J		
1165	945		11.5		48		59、65、62		
7 淬透性 Hardenability:									
J3mm:44(40~47), J5mm:35(30~44), J7mm:30(25~40), J9mm:27(22~35), J11mm:24(20~32)									
8 交货硬度 Delivery Hardness: 184 (160-190 HB)									
9 超声波探伤 UT: 合格 (ASTM A-388)									
备注: YZT20240924 A1827									
尺寸: 合格		表面质量: 合格		综合评定: 合格					

日期: 2024年09月30日

