

CERTIFICATE

01 202 USA/Q-20 2792

Audit Report as per

STANDARD

PED 2014/68/EU Annex I § 4.3

for

Aluminum Castings Company LLC

340 S. Kellogg St., Galesburg, IL 61401 USA



Client	Standard(s)	Certification Number(s)	Audit Type
Aluminum Castings Company LLC	Directive 2014/68/EU: Annex I § 4.3	01 202 USA/Q-20 2792	Certification Audit

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Audit Leader : Stephen Norris

Audit Team : N/A

Client's representative : Scott Kelsey

Audit Date : 1st & 2nd December 2020

1 Audit result

Management system effectiveness was verified on site by means of random sampling by an appropriately selected audit team. This applies in particular to the compliance of workflows with standard requirements and the descriptions in management system documentation. The special features of the organization's business activities, the applicable statutory and regulatory requirements and the requirements set forth in other generally applicable documents were also taken into account. This was done by means of a sampling approach, by conducting interviews and reviewing the appropriate documentation. Audit findings and recommendations regarding opportunities for improvement have been set forth in Sections 4 of this report.

	The current audit revealed the following nonconformities:	
X	Standard(s): No. of nonconformity - 0 Directive 2014/68/EU Annex I § 4.3	
Х	The organization has established and maintains an effective system to ensure compliance with its policy and objectives. The audit team confirms in line with the audit targets that the organization's management system complies with, adequately maintains and implements the requirements of the stand-	

The auditor therefore recommends:

X	Award of New Certificate.

2 Scope

2.1 Description of the organization

Manufacture of Aluminum Sand Casting, as per Scope to certificate 01 202 USA/Q-20 2792, with a Headquarters and manufacturing facility in Galesburg, Illinois. Effective headcount, as per attached audit calculation.

2.2 Scope of certification

Scope of certification: (per standard):	Manufacture of Aluminum Sand Castings
Directive 2014/68/EU Material manufacturer	Annex I § 4.3



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The following sites and their scopes are included in the scope of certification:

	Sites included in cert. Name/address of site	No. of emp.	Scope and processes	Stand- ard(s)	Au- dited
01	340 S. Kellogg St. Gales- burg IL 61401	35	Headquarters and Production Facility	Annex I § 4.3	X

3 Changes in the management system / Contract review

This is a Certification Audit, so there are no changes required at this stage

The scope of the Certificate was drawn up during the course of this audit.

The audit plan was not updated during the audit.

4 Audit findings

The audit findings related to the audited standards are listed in the Annexes to this report.

All information gained during the audit will be treated with strict confidentiality by the auditor and the certification body. In view of the sampling approach applied to the audit, weaknesses and nonconformities may still exist which have not been identified during the audit.

The following recommendations and opportunities for improvement provided by the auditor are intended to contribute to the continuous improvement of the management system.

No.	Unit/Department Site	Recommendations and opportunities for improvement
1	Contract Review	Look at documenting contract review / feasibility studies formally
2	Org Chart	Revise Org. chart to include VP of Operations & line of communication to Vice President of the company
3	Job descriptions	Look at having employees acknowledge their job descriptions by signing them off and add the signed document to their Personnel files.
4	Standards & Regulations	Ensure that current editions of standards are available in-house e.g ASTM B26/26M – current edition is 2018
5	Subcontractors	Ensure that ACC maintain Heat Treat Furnace Surveys and calibration Records from their Heat Treat subcontractor
6	Calibration	Set up individual files for each equipment that is calibrated, and maintain history of each calibration in each file.
7	Quality Manual	Ensure Quality Manual is formally revised and approved, after additions/amendments made during this audit.
8	EN 10204 Certs	Ensure to include the Edition of the ASTM standard that the material is manufacture in accordance with, on the EN 10204 3.1 Certificate.



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			_		
5	5 Dates	<u> </u>			
Due Date for the next audit		for the next audit		2021-Dec-02 (\$	Surveillance FU1)
4	∖greed d	ate for the next audit		2021-Nov (earl	y)
	C	02-Dec-2020			
-		Date	Α	audit Leader / Auditor(s)	
F	- urther a	applicable documents:			
	х	Audit Plan			
		Nonconformity Report			



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Annex 1.1 - Directive 2014/68/EU Material manufacturer - Basis of the audit

Item	Audit content								
Audit basis:	l .								
Audit basis:	☐ Directive 2014/68/EU Annex I 4.3			EN 7	764-5		AD 2000) WO	
Processes:	Prozess								
	Herstellung:						Internal	Externa	INA
	Melting: Proces	ss:							
	Forging: Proces	ss:							\boxtimes
	Rolling								\boxtimes
	Pressing								\boxtimes
	Straightening								\boxtimes
	Heat treatment							\boxtimes	
	Welding								\boxtimes
	Shaping:								\boxtimes
	other:								\boxtimes
	other:								\boxtimes
	Non-destructiv	ve test	ting:						
		ISO	regulation: Standards	ASN	regulation	ırds	other St	gulation: andards	
		Inter	nal External	NAInter	nal Extern	al NA	Internal	External	NA
	ET					\boxtimes			\boxtimes
	MT			$\boxtimes \square$		\boxtimes			\boxtimes
	PT			$\boxtimes \square$		\boxtimes			\boxtimes
	RT			$\boxtimes \square$		\boxtimes			\boxtimes
	UT			$\boxtimes \square$		\boxtimes			\boxtimes
	other:					\boxtimes			\boxtimes
							Internal	Externa	INA
	Leak tightness	test							\boxtimes
	other:								\boxtimes
	other:								\boxtimes



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Item	Audit content									
	Destructive testing:									
		Test ro ISO St Internal	anda	ards	ASM	regulat E Stand I Externa	dards	othe	regula er Stand al Extern	ards
	Tensile testing			\boxtimes		\boxtimes				\boxtimes
	bend test			\boxtimes			\boxtimes			\boxtimes
	Flattening test			\boxtimes			\boxtimes			\boxtimes
	Ring tensile test			\boxtimes			\boxtimes			\boxtimes
	Drift expanding test			\boxtimes			\boxtimes			\boxtimes
	Ring expanding test			\boxtimes			\boxtimes			\boxtimes
	Impact test			\boxtimes			\boxtimes			\boxtimes
	Hardness test (Brinell)			\boxtimes		\boxtimes				
	Hardness test (Vickers)						\boxtimes			\boxtimes
	Hardness test			\boxtimes			\boxtimes			
	(Rockwell)			\boxtimes	\boxtimes	\boxtimes				\boxtimes
	Chemistry:									
	Corrosion:							<u> </u>		
	Structural examination	า						Intern	Exteri	
	Material identification	by								\boxtimes
	other:									\boxtimes
	other:									\boxtimes
Products:	✓ Valve housing			Strip				Sheet		
	Sheet, cladded			Wide flat	steel			wire		
	☐ Flange			Cylinder				Bar		
	□ Casting			Hollow s seamles				Semifin	ished pr	oducts
	☐ Plate			Pressed	part			Profile		
	☐ Finned tube			Tube, we	elded			Tube, s	eamless	3
	☐ Fitting			Sight gla	ss			Forging		
	Rod			Fastenei				Compos	site pipe	
	Details see annex to t	he cert	ificat	е						



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tem	Audit content				
Materials:	It is manufactured according	to th	e following technical spe	cifica	ations:
	□ 1.0460		1.4571		2K-Epxidharz, glaverst.
	Aluminium and aluminium alloys		Glas		Graphite, impregnated
	Cast iron, ferritic		Cast iron, austenitic		Hafnium
	☐ Cobalt		Cobalt alloys		Plastic, thermoplast
	Copper and Copper alloys		Copper-Nickel alloys		Non-Ferrous metal
	☐ Nickel and Nickel alloys		Niob		PE
	☐ PFA		PFA-Re-granulate		PP-H
	☐ PVDF		Steel, austferr.		Steel, austenitic
	Steel, ferraust.		Steel, ferritic		Steel casting, aust.
	☐ Steel casting, austferr.		Steel casting, ferritic		Tantal and Tantal alloys
	☐ Tital		Titan		Tital alloy code 12
	☐ VPE		Wolfram		Ziconium
Scope of certification:	The following changes have audit: None	been	n made to the Annex to th	e ce	ertificate since the last



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Annex 1.2 – Directive 2014/68/EU - Material Manufacturer – Audit results

Item		Rating*/ NCR	
Management processes/	quality assurance system	, tolt	
Quality management system: EN 764-5: 4.2 AD 2000 W0: 3.1.2	The company has a valid certification according ISO 9001 ☐ Yes ☐ No By whom: TRNA	Rating: 1 NCR: -	
	The company operates a documented quality management system and a factory production control system for the manufacturing of materials. The quality objectives have been set and the organisational structure, as well as management's responsibilities and competencies, are clearly defined. The implementation of the QM system complies with the requirements of the directive, regulation and standards both in terms of docu-	Rating: 1 NCR: -	
		Rating: 1 NCR: -	
	Responsible supervisor for non-destructive testing: The following supervisor(s) for non-destructive testing has(have) been named. The qualification requirements of the standards are fulfilled. NDT not required by Application Standard		
	Responsible Welding coordinator(s): The following welding coordinator(s) has(have) been named. The qualifi-	Rating: 4 NCR: -	
	Responsible supervisor for transfer of stamping:	Rating: 1 NCR: -	
Subcontracted processes: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2	The requirements of subcontractors for subcontracted processes are defined and appropriate supporting documents are available.	Rating: 1 NCR: -	
Process instructions / process description: EN 764-5: 4.2.1 AD 2000 W0 3.1.2	The company has implemented the requirements of the QM system and the Directive and regulation in the form of process instructions and process descriptions. The company's employees have access to the instructions and have received appropriate training. Process instructions and descriptions are available for the following areas of production: Design Manufacture Testing Final product inspection The following key changes have been introduced since the previous audit: None	Rating: 1 NCR: -	



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Item		Rating*/ NCR
Marketing / Sale		•
Feasibility: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2 Purchasing	The requirements of Directive 2014/68/EU and other standards are taken into account and implemented in the course of the contract review.	Rating: 2 NCR: -
<u> </u>	The control of the land of the	D.C. A
Steel making process: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2		Rating: 4 NCR: - Rating: 4
AD 2000 W7 2.1		NCR: -
Initial material.:	In the orders to the initial material manufacturers, the requirements of the	Rating: 1 NCR: -
2000 W0 3.1.2 Manufacturing:	standards are considered and implemented.	NCR
<u>-</u>	The formal 220 of the control of the	Ī
Tracking the materials during manufacturing: EN 764-5: 4.2.1 / 6.2 AD 2000 W0: 3.1.2	The traceability of the material during the manufacturing processes is defined and assure.	Rating: 1 NCR: -
Manufacturing: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2	The company possesses the manufacturing equipment required for manufacturing the materials / products. The quality assurance documents such as control reports, testing and calibration data have been reviewed. Changes to important equipment and processes to the previous inspection: No	Rating: 1 NCR: -
Permanent joinings: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2		Rating: 4 NCR: -
EN 764-5: 7.2 AD 2000 HP2/1		Rating: 4 NCR: -
Heat treatment: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2	Suitable heat treatment equipment is available for carrying out heat treatment either internally or externally.	Rating: 1 NCR: -
Testing		
Non-destructive testing: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2		Rating: 4 NCR: -
EN 764-5: 7.3 AD 2000 W0: 3.1.2	For material, which forms part of pressure equipment in categories III,	Rating: 4 NCR: -
AD 2000 W0: 3.1.2	The test equipment shall first be checked by qualified personnel of the	Rating: 4 NCR: -
Destructive testing: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2	The equipment for Destructive testing are available, externally Internal for Chemistry)	Rating: 1 NCR: -



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Item	Audit result				Rating*/ NCR
	The internal and ards:	external equipmen	t fulfil the following	calibration stand-	
		Test regulation: ISO Standards	Test regulation: ASME Standards	Test regulation: Other Standards	
	Tensile test:				
	Calibration of the equipment	☐ EN ISO 7500-1	⊠ ASTM E4 / ASTM E83		
	Testing acc.	□ EN ISO 6892-1 room temperature □ EN ISO 6892-2 hot tensile test □ EN ISO 898-1	(RTT)		
	Chemistry Ana	lysis	1 /		
	Testing acc.	⊠ E415	☐ A751 ☐ E350 ☑ E415	☐ MIL Std	
	Corrosion Test	ing			
	Testing acc.		ASTM A262		
	Bend test				
	Calibration of the equipment	□ □ Norm			
	Testing acc.	☐ EN ISO 5173	☐ ASTM E190 ☐ ASTM E290		
	Flattening test		l	1	
	Testing acc.	☐ EN ISO 8492 ☐	☐ ASTM A370 ☐	☐ MIL-T (if Rq'd)	
	Ring tensile tes	st		1	
	Testing acc.	☐ EN ISO 8496 ☐	☐ ASTM A370 ☐		
	Drift expanding	test		•	
	Testing acc.:	☐ EN ISO 8493 ☐			
	Ring expanding				
	Testing acc.	☐ EN ISO 8495 ☐			
	Impact test				
	Calibration of the equipment	☐ EN ISO 148-2 ☐	☐ E23 ☐		
	Testing acc.:	☐ EN ISO 148-1	ASTM A370		



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ltem	Audit result	Audit result				
			ASTM A67	' 3	NCR	
	Hardness test	(Brinell)	I			
		☐ EN ISO	6506-2 ASTM E74			
	Calibration of					
	the equipment		☐ ASTM E10			
	T	☐ EN ISO	6506-1 🛛 ASTM E10)		
	Testing acc.					
	Hardness test					
		EN ISO	6507-2 ASTM E38	R4		
	Calibration of		OSOT Z AOTHI ESC			
	the equipment					
		☐ EN ISO	6507-1 🔲 ASTM E92	2 🗆		
	Testing acc.		☐ ASTM E38	34 🔲		
	Hardness test	(Rockwell)				
		EN ISO	6508-2 ASTM E18			
	Calibration of	_	0300-2 ASTNILIO	, <u> </u>		
	the equipment					
		☐ EN ISO	6508-1 🔲 ASTM E18	3 🔲		
	Testing acc.					
	Micro Structu					
		ie				
	Calibration of					
	the equipment					
			⊠ E3			
	Testing acc.					
First production of a m	aterial					
First testing of the		a of the produ	iction fulfills the requir	ements of FN 764	-5	
production:	The first testing of the production fulfills the requirements of EN 764-5 chapter 4.3.1.					
EN 764-5: Anhang A	The following first testing of the production are performed by the manu-					
EN 764-4	facture during					
AD 2000 W0: 3.1.2	Material	Delivery	condition	Dimensions	Rating: 4	
	No	No		No	NCR: -	
	No	No		No		
	No	No		No		
	Details are sur	nmarized in th	ne annex of the report			
Product testing and ev	aluation:					
Product testing and	The manufactu	rer has estab	olish procedures to en	sure that the state	d val-	
evaluation:	ues of the char	Rating: 1				
EN 764-5: 4.2.3		NCR: -				
AD 2000 W0: 3.1.2	Details are summarized in the annex of the report.					
Verification acc.	Not applicable					
AD 2000 W0 Final inspection						
<u> </u>	The manufact	ror bac actab	liched procedures for	the final increases	n	
Final inspection: EN 764-5: 4.2.1	The manufacturer has established procedures for the final inspection. All requirements of the harmonized standard / national standards are				Rating: 1	
ΔD 2000 W0: 3 1 2	mi requirements of the natificilized standard / flational standards are				NCR: -	



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Item	Audit result	Rating*/ NCR
	considered. There is a documented visual inspection and control of di- mensions and tolerances, which are necessary to fulfill the required standards.	
Marking: EN 764-5: 4.3.3 AD 2000 W0: 3.1.2	 The Products shall be marked by ink marking, stamping, laser marking, bar code, permanent label, attached label with the following information: the manufacturer's name or trade mark (only if requested by customer) steel name (or number) incl. delivery condition the cast number or a code number the mark of the inspection representative (if required) Remarks: Lot codes if requested by Client 	Rating: 1 NCR: -
Documentation		l
Inspection Certificate 3.1 acc. EN 10204 EN 764-5: 4.3.3 AD 2000 W0: 3.1.2	All required information / test results are include of the 3.1 inspection certificate acc. EN 10204.	Rating: 1 NCR: -
Archiving of documents: EN 764-5: 4.2.4 AD 2000 W0: ???	The manufacturer retains all test reports of the determination of the product-type for at least 10 years after the last date of production of product. Further, the manufacturer keeps the technical documentation and the declaration of performance for a period of 10 years after the construction product has been placed on the market.	Rating: 2 NCR: -
Non-conformities: EN 764-5: 4.2.1 AD 2000 W0: 3.1.2	The manufacturer has written procedures, which specify how non-complying products shall be dealt with.	Rating: 1 NCR: -

* **Rating:** 1 = conforming

2 = conforming but opportunities for improvement

3 = failed/non-conformity (see non-conformity report)

4 = not applicable