

	Qualification Test Record (QTR) NORSOK M-650		<i>QTR.No.:</i> TR_4A_01
			<i>Rev. No.:</i> 0
<i>Manufacturer name/address/ Web page:</i>	ACEROS MOLDEADOS DE LACUNZA, SA LAKUNTZA / ARBIZU (SPAIN) www.amlsa.com		
<i>Reference standard</i>	NORSOK M-650, Edition 4		
<i>Material designation and MDS No.:</i>	<ul style="list-style-type: none"> ASTM A995 Gr. 4A (UNS J92205) NORSOK M-630 Ed. 6 (MDS D46, Rev. 5) 		
<i>Manufacturing Summary doc. No.:</i>	MS_4A_01		<i>Rev. No.:</i> 0
<i>Products and manufacturing process(es):</i>	CASTINGS (sacrificial component valve body DN450 (18") Cl. 600) Sand Molding with Furan Binder AOD route: remelting of 100% AOD refined charge material Production to follow the process of the approved QTR		
<i>Mandatory conditions and sub-contractors:</i>	<ul style="list-style-type: none"> - Castings heat treated in current furnaces (H-05 and/or H-06) - Raw material: AOD scrap material - Not destructive tests: radiographic (subcontracted to external qualified company S.C.I.) & dye penetrant - Destructive tests (subcontracted to external qualified laboratory AZTERLAN) : micrography, tensile test , impact test at -46°C, ferrite content, corrosion test, hardness test 		
<i>Other information:</i>	<ul style="list-style-type: none"> • PWHT to be carried out of all weld repairs • Verification of heat treatment procedure carried out for furnaces H-5 (Lakuntza) and H-6 (Arbizu), reports n° IN-8513 & IN-8512 respectively. 		
<i>Qualification expires:</i>	December 2018		



Tested and qualified thickness and weight

<i>Products and manufacturing process(es):</i>	<i>Test record No.</i>	<i>Tested thickness mm</i>	<i>Qualified thickness mm</i>	<i>Test piece weight kg</i>	<i>Qualified weight kg</i>
Sand casting	TR_4A_01	130	130	645	All

Qualification/acceptance signatures

<i>Manufacturer:</i>	<i>Prepared by/Date:</i>  I. Ibarrola	<i>Checked by/Date:</i>  Cristina Bolo 21.11.2013
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The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 for supply of the above listed products and materials.
This acceptance does not exempt any purchaser from his responsibility to ensure that this qualification is valid for his products within the essential variables of NORSOK M-650.

<i>Qualified/Accepted by (company name /address):</i>  AkerSolutions Aker Engineering & Technology AS Reg.nr. 879 817 552	<i>Signature/Date:</i> 21/11/2013 
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