

TTI TUBACEX <small>GROUP</small>	QTR Qualification Test Record NORSOK M-650 ED. 4	QTR. No.: 2
		Rev. No.: 5

<i>Manufacturer name/address/ Web page:</i>	TTI Tubacex Tubos Inoxidables, S.A.U. Tres Cruces, 8 01400 Llodio (Alava) Spain www.tubacex.com
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<i>Reference standards</i>	NORSOK M-650 EDITION 4 ASTM A790 ASTM A789
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<i>Material designation and MDS No.:</i>	SEAMLESS PIPES MDS D51 REV. 5 TUBES UNS S32760 MDS D58 REV. 4
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<i>Manufacturing summary doc. No.:</i>	1. MS 32760 HF1 2. MS 327650 HF2 3. MS 32760 CF3	<i>Rev. No.:</i> 4 4 4
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<i>Products and manufacturing process (es):</i>	1. SEAMLESS PIPES AND TUBES HOT FINISHED DIRECT WATER QUENCHING 2. SEAMLESS PIPES AND TUBES HOT FINISHED, HEAT TREATMENT IN CONTINUOUS FURNACE. 3. SEAMLESS PIPES AND TUBES COLD FINISHED, HEAT TREATMENT IN CONTINUOUS FURNACE.
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<i>Mandatory conditions and sub-contractors:</i>	Acería de Alava, S.A.U. (Sister Company to Tubacex Tubos Inoxidables, S.A.U.) is the main supplier of start material. Extruded hollows from Schoeller Bleckmann or trepanned hollows from IBF can also be used as raw material for cold rolling. Materials manufactured with processes HF2 and CF3 are to be mandatorily heat treated in Guinea furnace #3. TTI-ACERALAVA do have in house testing facilities to cover all the testing required by 22% and 25% Cr reference standards. These laboratories are included in the ISO 9001 QA system and work to procedures in compliance with international testing reference standards and following principles of ISO 17025 using qualified personnel, approved procedures and calibrated equipment. Materials manufactured with processes HF2 and CF3 to be mandatorily heat treated in Guinea furnace #3.
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<i>Other information:</i>	Issued for approval renewal. Verification of heat treatment as per instruction TX-INOX-42. Verification of heat treatment witnessed by Qualifying Company SFF: <ul style="list-style-type: none"> • TTI Amurrio Guinea continuous Furnace #3 (report VHT-001) • TTI Llodio Direct water quenching (report VHT-003) Verification of heat treatment for Umbilical tubing witnessed by Qualifying Company Nexans: <ul style="list-style-type: none"> • TTI Amurrio Guinea continuous Furnace #3 (report VHT-007)
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<i>Expiry date:</i>	November 2021
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Tested and Qualified Thickness and Weight						
Products & manuf. process(es)	Test record No.	Test date	Tested Thickness (mm)	Qualified thickness (mm)	Test piece weight (kg)	Qualified weight (kg)
1	340879	12/12/2002	18,26	22,83	NA	NA
2	368794	11/4/2005	11,13	13,91	NA	NA
2	376512	27/1/2006	6,02		NA	NA
3	575801	8/4/2013	2,11		NA	NA
3	585630	22/7/2013	10,97		NA	NA
3	21603-2	18/03/2016	17,00	21,25	NA	NA

Qualification/Acceptance signatures		
Manufacturer:	<i>Prepared by/Date:</i>  Carlos Arrieta December 2016	<i>Checked by/Date:</i>  Aitor González December 2016

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.

Qualified/Accepted by (company name/address):	<i>Signature/Date:</i>  Jarle Pollstad 21.12.2016
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