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**INSPECTION AND TEST PLAN-QUALITY PLAN FOR CLIENT'S APPROVAL JOB 42/2012**

QUALITY ACTIVITY	INTERVENTATION			REFERENCE DOCUMENTS INSTRUMENT/*EQUIPMENT	PROCEDURE TEST/METHOD	ACCEPTANCE CRITERIA	REMARKS
	M	T.P.I.	CLIENT				
Contract review and suppliers' orders compilation	H			General purchase –suppliers conditions-eventual DRW and rules <b>(UNS S32750)</b> Orders Confirmation by mail/fax to the customer/supplier with JOB NR.IDENTIFICATION PO	Items, dimensions,sched. q.ty,material,ASME REF.,prices,condition,	Conformity to the offer done and suppliers offer receipt.	Compilation trav.card that follows the production for traceability of material during manufacturing phases showing processes (cutting/forming/heat treatment ext)
Reception of pre-material from ISO 9001\2000 qualified Supplier	H			<b>ASTM A 240(weld.pipe &amp; disks)</b> <b>UNS S32750</b>  <b>*CALIBRATED INSTRUMENTS/AUTOMATIC &amp; MANUAL CUTTING LINES</b>	Quality as surfaces, ovality, /surface,,dimensions, thickness,marking (correlation with certs) Marking of q.ties and heat nr on trav.card	Conformity to the order and suitability to convert into the defined products.EN-10204 3.1 certificates included:.pre-material mill sheets WPS/PQR & N.DESTRUCTIVE PROCEDURE SUPPLIED ON REQUEST	Good results Inspection on incoming material are signed on internal quality document . All certs of raw material attached to the final WTC 3.1
Positive material Identification PMI	H		RW	Order requirement Chem. Elements=Cr/Ni/Mo/W Internal working PROCEDURE <b>*SPECTRO OPTICAL</b>	<b>CHECK 100%</b> Alloy verification Chem. elements=Cr/Ni/Mo/W As applicable	Major chemical elements within the permissible range of 12% both for raw material and weld metal	Satisfactory results releases manufacturing progress <b>(Declared on 3.1 cert )</b>
Sampling for tests	H			ASTM A 815 <b>*MANUAL CUTTING LINES</b>	Dimensions of specimen and identification(heat nr. White pickling or stamping on)	Dimensions and identification(heat nr. White pickling or stamping on)	List of tests sent by mail to outsource certified laboratory to identify job nr and all the information needed
Inspection on the forged first fittings	H			MSS SP 43/ASME B 16.9 -ASTM A 815 <b>*HYDR. PRESSES MAX 400TONS</b> <b>*CALIBR.INSTR. TO CONTROL</b>	Dimensions,shape thickness,surface	No injurious defects. Suitability for machining to the final shape and dimensions required.	If positive ,the production goes on. If negative, appropriate corrective actions applied to go on
Mechanical tests and certificate: Tensile on welded pieces Hardness test	H		RW	ASTM A370 <b>*EXTERNAL LABORATORY</b>	Tensile:Evaluation of finished material properties Hardness: <b>NACE MR-01-75 latest edition</b>	ASTM A 815 table 4 <b>UNS S32750</b> -N/mm2 Tensile YP 0.2% =>550Mpa Strenght UTS=>800 Mpa < 965 Mpa Long EL %2" >=15% 4D <b>HRC =&lt; 32</b>	Reports of mechanical tests signed by an outsource certified laboratory attached to 3.1 cert. <b>and declared on it with Hardness value due to internal test</b>

Machining	H			MSS SP43-ASME B 16.9 ASME B 16.25- <b>*LATHE MACHINES</b>	Dimensions , thickness surfaces ,bevel -External- surfaces roughness 125-250 RMS	Conformity to ASME/ASTM tolerances for Dimensions , thickness ,surfaces, bevel	Declared on 3.1 cert. Inspection on 100% of fittings after machining signed on an internal document
Quality control Visual and dimensional check	H			MSS SP 43/ASME B 16.9-ASME B 16.25- <b>*CALIBR.INTR.</b>	Visual apparence, dimensions,thk, bevel	MSS SP 43-ASME B 16.9(dimensions+tolerances) ASME B 16.25( welding ends )	<b>Declared on 3.1 cert.</b>
Marking	H			MSS SP 25/ ASTM A 960 <b>*ELECTROETCH INSTRUMENT</b>	Logo of manufacturer,sizes,schedule, material grade,heat nr	Full identification of the fittingsmss with the PO REQUIREMENTS	<b>Declared on 3.1 cert</b>
Certification and final documentation	H		FRW	En 10204 3.1	<b>3.1 Cert.</b> (Mat.properties,visual & dimensional inspection,heat treatment,processes,tests results,marking) <b>wih</b> <b>Mill Sheets &amp; reports of</b> <b>tests attached</b>	Compliance to PO/rules requirements	Final documentation is formed by: <b>3.1 Certificate enclosed:</b> <b>Mill Sheets (raw material certs),</b> <b>reports of tests</b> <b>Other documents shown in</b> <b>intervention</b>
Packaging,Marking and final check of documentation	H		RW*	PO requirements (FUMIGATED WOODEN CASE ,SHIPPING MARKS)	Protection, stability,Marking Packing list on cases	PO REQUIREMENTS	Copy of photos of package with Marking supplied by mail on request. Complete original documentation by priority post
<b>TPI =Insp.Agency / M= Manufacturer / H= Hold point / W= Witnessed RW=Review</b>				<b>FRW= Full Review</b>			