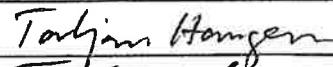
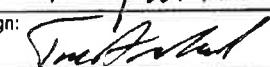
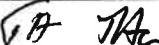


Equipment: <b>8" Induction Bends</b>		<b>MECHANICAL COMPLETION DOSSIER</b>			GE Oil & Gas Drilling & Production Vetco Gray Scandinavia AS
NOI no.: <b>14-034/1</b>	Project: <b>ENI BLOCK 15/06</b>				MCD No: <b>E300-MCD-0407</b>
Supplier: <b>NIRAS</b>	Client: <b>GE Oil&amp;Gas</b>				PO No: <b>PO4500117995 V02</b>
<b>VGS APPROVAL</b>					
Date: <b>12.03.2014</b>	Name: <b>Tore Ausland</b>			Sign: 	
<b>INDEX</b>					
1. Mechanical Completion Dossier Equipment List 2. Mechanical Completion Certificate 3. Mechanical Completion Check List 4. Mechanical Completion Punch List Material		5. Mat. Traceability List (MTL) + Mat. Certificates (MC-s) for weld-able parts – if applicable. 6. MRB's Front Page (with approval signatures) 7. Other attachments – if applicable			
<b>EQUIPMENT LIST</b>					
PO Item No.:	Serial No.: / Cert. No.: / Heat No.:	Part No.: / Dwg. No.:	Part Description	Qty. Ordered	Qty. Released
120	01 to 02	N453500-E300F	Induction bending 8"	2	2
<p>Important Notes:</p> <ol style="list-style-type: none"> <li>GE Inspectors are required to sign/stamp on the MRB's first (cover) page confirming that the MRB was reviewed and the result was marked on MCD no. [...], to document the MRB review.</li> <li>GE Inspectors shall obtain a similar signature/stamp on the MRB cover page, from the attending End Client Inspector as well, to document the MRB review.</li> <li>GE Inspectors shall ensure that the Supplier shall scan and send (to GEOG VGS Buyer and DCC) a copy of the MCD and MRB as soon as the inspection is (satisfactorily) finished.</li> <li>By MRB it is understood all documentation necessary to provide evidence that the delivered items comply with all the GEOG VGS PO Requirements – whether this means just a simple COC and Material Certificates for raw materials, or complex MRB Documents for fabricated equipment.</li> <li>Acceptance of this MCD and of the related MRB does not relieve in any way the Supplier from his contractual obligations, as specified in the applicable Purchase Order.</li> </ol>					

Equipment: <b>8" Induction Bends</b>		<b>MECHANICAL COMPLETION CERTIFICATE</b>			GE Oil & Gas Drilling & Production Vetco Gray Scandinavia AS		
NOI no.: <b>14-034/1</b>		Project: <b>ENI BLOCK 15/06</b>		MCD No:	<b>E300-MCD-0407</b>		
Supplier: <b>NIRAS</b>		Client: <b>GE Oil&amp;Gas</b>		PO No:	<b>PO4500117995 V02</b>		
<b>APPROVAL SIGNATURES</b>							
Supplier:	Name: <b>Torbjørn Haugen</b>	Sign: 	Date: <b>12.03.2014</b>				
GE Oil & Gas VetcoGray:	Name: <b>Tore Ausland</b>	Sign: 	Date: <b>12.03.2014</b>				
End Client:	Name:	Sign:	Date:				
<b>SHIPMENT RELEASE CHECK RECORD</b>							
MC Release Check Points			Yes	No	NA	PL	Sign.
1. Are all the applicable items in the Check Record (MCCR) closed ?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Is the equipment fabricated according to last revision drawings and specifications ? Verify with GEOG VGS PQE. If available, compare Supplier's Document Register vs. GEOG VGS's ePIMS / SIMON Systems !			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are all applicable technical issues answered and closed ? Verify with GEOG VGS PQE. If available, check the Supplier NCR Log and GEOG VGS's GRR & EPIC Systems !			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are all Inspection Activities completed as per the approved ITP ? Verify with GEOG VGS PQE. If available, check the ITP and all relevant Quality Records !			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Have the equipment been through all relevant FAT and Functional Tests and accepted ?			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6. Equipment's Manufacturing Records Book (MRB) have been reviewed and found acceptable ? MRB Acceptance Codes: Yes = Code 1 / PL = Code 2 / No = Code 3 / NA = Code 4			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Are there any other documents – besides the Certificate of Conformity – which need to follow the shipment ? Ex.: Material Traceability List and Material Certificates for items to be welded / Lifting Certificates / FAT / Test Reports ? Check the SDRL ! Verify with GEOG VGS PQE.			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Has the equipment been finally inspected and accepted / released for shipment ?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>COMMENTS</b>							
7. Material certificate have to follow the shipment unless copy of the MRB is included.							

Equipment: <b>8" Induction Bends</b>	<b>MECHANICAL COMPLETION CHECK RECORD</b>	 GE Oil & Gas Drilling & Production Vetco Gray Scandinavia AS
NOI no.: <b>14-034/1</b>	Project: <b>ENI BLOCK 15/06</b>	MCD No: <b>E300-MCD-0407</b>
Supplier: <b>NIRAS</b>	Client: <b>GE Oil&amp;Gas</b>	PO No: <b>PO4500117995 V02</b>

MCD      K POINTS |

This is a General Check List. The MC Inspector should mark by an X all the relevant checks points.

/ S |

no

1	Perform a Visual Inspection. Ensure that all components are free from damage (scratches, dents, etc.).	X	Thru	✓	✓	✓
2.	Check that all markings (tag plates where required) have been included / applied according to Purchase Order Requirements.	X	Thru	✓	✓	
3.	Ensure that Sealing Surfaces are adequately greased, where applicable.	NA	—	—	—	
4.	Ensure that Heat Numbers (Batch Nos. / Serial Nos.) are correctly marked both on the items and on the documentation	X	Thru	✓	✓	
5.	Perform a random Visual Inspection of the welds.	NA	—	—	—	
6.	Ensure that the accessible welds are visually acceptable.	X	Thru	✓	✓	
7.	Ensure that an acceptable Certificate of Conformity is available for this equipment.	X	Thru	✓	✓	
8.	Ensure that all Material Certificates are available and full Material Traceability verified.	X	Thru	✓	✓	
	Ensure that Material Certificates for all Consumables (inlay / are available.	NA	—	—	—	
	Ensure that Dimensional Inspection / Check has been satisfactorily carried out and documented.	X	Thru			
10.	Ensure that all the relevant WPS-s / WPQR-s were reviewed and pre-approved by GE and included in the MRB, as per SDRL.	NA	—	—	—	
11	Ensure that the Welding Log and all required NDE (including PMI) is completed and recorded.	X	NDE	Thru	✓	
12.	Ensure that all inspection & testing activities required by the approved ITP are fully documented and recorded in the MRB.	X	Thru	✓	✓	
13.	Ensure that Surface Treatment / is complete, to specification	NA	—	—	—	
14.	Ensure that all Electrical Continuity Checks have been satisfactorily carried out and recorded.	NA	—	—	—	
15	Ensure that Lifting Certificate is available and accepted	NA	—	—	—	
16.	Ensure that Weight Report / Certificate is available at least for one unit.	NA	—	—	—	
17.	Ensure that Assembly has been performed according to correct revision of the drawings.	NA	—	—	—	
18.	Ensure that the MCD is fully documented by photos of the /	X	Thru	✓	✓	
	Check that the applicable Manufacturing Records Book sections are E000-SQG-0001 /		Thru	✓	✓	
	Check that correct thermal insulation material is used					
21	traceability to GEOG VGS tag no. and that batch & tag on match	NA				
22	match traceability records; visual inspection, and hardness checks.	NA				

Equipment: <b>8" Induction Bends</b>		<b>MECHANICAL COMPLETION CHECK RECORD</b>				GE Oil & Gas Drilling & Production Vetco Gray Scandinavia AS		
NOI no.: <b>14-034/1</b>		Project: <b>ENI BLOCK 15/06</b>			MCD No: <b>E300-MCD-0407</b>			
Supplier: <b>NIRAS</b>		Client: <b>GE Oil&amp;Gas</b>			PO No: <b>PO4500117995 V02</b>			
<b>MCD CHECK POINTS II</b>								
This is a Product Specific Check List. The MC Inspector should mark by an X all the relevant checks points.								
No.	Check Point description		X	PL no	Checked by / Sign. Date			
					Supplier	VGS	Client	
23.	Check records for weekly testing, density, thermal conductivity, specific heat capacity and hardness checks.		NA					↗
24.	Inspect thermal insulation on products for visual defects.		NA					
25.	Verify that minimum thicknesses of thermal insulation are achieved.		NA				NA	
26.	Check by measurements the length of pipes for verification of up-facing fabricator measurements.		NA		↗			
<b>Clamp Connector Check Points</b>								
27.	Ensure that the Torque Tool (TT) interface is installed.		NA					↗
28.	Ensure rubber springs correctly mounted on one side (only for clamps with casing)		NA					
29.	Ensure that surface roughness on the segments is according to the drawing requirements.		NA					
30.	Ensure that entering chamfers are grinded on the segments as specified in the drawing.		NA					
31.	Ensure that cable strapping has the right length and that it is welded / brazed to cable shoe.		NA			NA		
32.	Ensure the correct type of grease is applied on uncoated load shoulders of the segments (as specified on drawing).		NA					
33.	Ensure tool lifting mandrel correctly mounted (only for clamps with casing)		NA					
34.	Ensure holes for lifting points included and marked correctly (only for clamps with casing)		NA		↗			
<b>Seals Check Points</b>								
35.	Inspect all sealing areas for damage, contamination and protection.		NA					↗
36.	Check that Silver coating (Xylan on test seals) is according to specification [N041051-000SS1 / E000-SMS-2035].		NA					
37.	Separate seal area control measurements have been done on both sides after machining, according to drawing / specification (min. 8 measuring points on diameter).		NA					
38.	Seal area surface roughness has been recorded and is within drawing / specification requirements.		NA			NA		
39.	Retainer locking tabs are bent out to specified position within tolerances according to drawing / specification. (5 mm +1/-0).		NA		↗			
<b>Hubs / Pressure Caps / Pressure Caps Assemblies Check</b>								
40.	Inspect all sealing areas for damage, contamination and protection.		NA					↗
41.	Ensure that dimensional control has been carried out and documented.		NA					
42.	Ensure that each separate seal area has been controlled, measured and recorded after machining.		NA					
43.	Ensure that the seal area surface roughness has been recorded and is within tolerances.		NA			NA		
44.	Ensure that bolt holes are protected with Tectyl 506 WD.		NA		↗			

Equipment: <b>8" Induction Bends</b>		<b>MECHANICAL COMPLETION CHECK RECORD</b>			GE Oil & Gas Drilling & Production Vetco Gray Scandinavia AS		
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Supplier: <b>NIRAS</b>		Client: <b>GE Oil&amp;Gas</b>		PO No: <b>PO4500117995 V02</b>			
<b>MCD CHECK POINTS III</b>							
This is a Product Specific Check List. The MC Inspector should mark by an X all the relevant checks points.							
No.	Check Point description	X	PL no	Checked by / Sign. Date			
				Supplier	VGS	Client	
<b>Valves Check Points</b>							
45.	Ensure end-to-end Valve length is recorded and correct.	NA					
46.	Ensure top-to-bottom Valve height is recorded and correct.	NA					
47.	Ensure correct position of Compensator Tank, as per drawings.	NA					
48.	Ensure Actuator / Gearbox is filled with the adequate oil (HW540), as per drawings.	NA					
49.	Ensure Valve body plug is welded if present.	NA					
50.	Ensure fittings are mounted on Actuator.	NA					
51.	Ensure the ROV bucket was satisfactorily fit-tested against a Dummy Torque Tool.	NA					
52.	Ensure Valve tag plates are fastened on ROV bucket and / or upper part of Valve.	NA					
53.	Ensure Serial Number and VGS Tag Number are correct.	NA					
54.	Ensure Valve position markings are taped.	NA					
55.	Ensure that the Valve is in open position including Fail-Close design.	NA					
56.	Ensure weld prepared bevels are covered with protective caps.	NA					
57.	Ensure availability of Material Certificates and NDT Reports for all weld prepared bevels.	NA					
58.	Ensure Actuators have Cleanliness Certificates attached if required.	NA					
<b>Other Check Points</b>							
59.	Ensure that all machined surfaces that are not painted, are protected with Tectyl 506 WD.	NA					
60.	Ensure that material certificates of the weldable parts are included with the shipment.	X					
61.							
62.							
63.							
64.							
65.							

