

Constructor 5



Sea Acceptance Test

Doc ref:

W:\Tegninger\2014\AF57-Constructor-05-06\Admin\FAT-SAT\AF57 SAT Constructor 5 rev02.doc

Strandgaten 202
5525 Haugesund
Tel: 52 70 62 50
Fax: 52 70 62 01
Email: post@kystdesign.no
Web: www.kystdesign.no

Rev.	Date	Description	Internal			External	
			Originator	Checked	Accepted	Checked	Approved
02	13/04/2016	Reissued For Approval	EKB	TBH	EKB		
01	02/03/2015	Issued For Approval	EKB	TBH	EKB		

	Name	Initials	Position
Originator	Erik Kold Bakkevig	EKB	Manager
Checker	Torbjørn Bredland Hansen	TBH	Engineering Manager Electronics
Int. approver	Erik Kold Bakkevig	EKB	Manager
Client approver			

Distribution Information THIS copy

Copy No.	Distributed to:	Distribution Date:	Classification:
1	Kystdesign	13/04/2016	Restricted
2	DeepOcean	13/04/2016	Restricted

**Table of contents:**

	Page
1 GENERAL.....	3
1.1 Purpose and Scope	3
1.2 Drawing References	3
2 Test Set-up and Preparations	3
3 Power Distribution System	4
3.1 Preparation and General Inspection	4
3.2 System Longline Checks	4
3.3 High Voltage Ground Fault Test	5
3.4 Breaker Status Check.....	5
3.5 Power Readings	5
3.5.1 Preparations.....	5
3.5.2 Instrument Voltages	6
3.5.3 HPU Voltages	6
4 ROV Hydraulic System	7
4.1 Preparations	7
4.2 Main System Pressure settings	7
4.3 Aux System Pressure Reading & Regulation.....	8
4.4 Hydraulic Shut Down	8
4.5 Full Flow Functions.....	9
4.6 Pressure Regulation of GFVP's.....	9
4.7 Pressure Regulation of High Flow Valves (VP3).....	10
4.8 Flow Regulation of High Flow Valves (VP3).....	11
4.9 Flow Regulation of GFVP Valves.....	12
5 Wet Test	13
5.1 Test Of Basic Rov & TMS Functions	13
5.1.1 Test of Auto Functions	13
5.1.2 Tick of if any water ingress is detected during the test dive.....	13
5.1.3 Record GFD levels during the test dive	13
5.1.4 Record Temperatures during the test dive	14
5.1.5 Record Compensator Volumes PRE & POST dive.....	14
5.1.6 Record Current consumption	14
5.2 Test Of ROV Subsystems	15
5.3 Performance Of TMS.....	15

 KYSTDESIGN SUB-SEA TECHNOLOGY	<i>Document Title</i>	<i>Date of issue</i>	<i>Page</i>
	Constructor 5	13/04/2016	3 of 16
	<i>Doc. No.</i>	<i>Rev.</i>	
	AF57 SAT	02	

1 GENERAL

1.1 PURPOSE AND SCOPE

Sea Acceptance Test is performed with the objective to verify the functional capabilities of the ROV against the contractual specifications.

This report describes the testing activities and acceptance criteria for each critical function. One signed copy of this document will also be used to log and file the testing activities.

1.2 DRAWING REFERENCES

- | | |
|-------------------|--------------------------|
| 1. AF57-1-1000E01 | ROV External Cabling |
| 2. AF25-1000H01 | Main Hydraulic Schematic |
| 3. AF57-1-1000H02 | Aux Hydraulic Schematic |

2 TEST SET-UP AND PREPARATIONS

The SAT will be carried out after the entire ROV system has been mobilised onboard Edda Freya.

The test will be performed in two phases:

Phase 1: On deck test of PDU, control system and hydraulic functions.

Phase 2: In-water trials. This test is performed with the ROV and TMS system deployed to a suitable depth for performing functional tests. The purpose is to verify performance of ROV flotation, trim and performance of auto functions, and to verify performance of TMS system.



3 POWER DISTRIBUTION SYSTEM

3.1 PREPARATION AND GENERAL INSPECTION

The first step is to turn the Grounding Wheel to ground all power lines. Now all transformers and junction boxes can be opened for visual inspection and verification.

No.	Tasks	Done
1.	Verify the ROV power system is properly assembled and cabled	<input checked="" type="checkbox"/>
2.	Verify system longline HV connections are properly terminated	<input checked="" type="checkbox"/>
3.	Verify TMS cabling and terminations are properly assembled	<input checked="" type="checkbox"/>
4.	Verify ROV tether is properly terminated	<input checked="" type="checkbox"/>
5.	Verify ROV cabling and terminations are properly assembled	<input checked="" type="checkbox"/>
6.	Verify Transformer tappings	<input checked="" type="checkbox"/>
7.	Verify that the supply voltage of 440 VAC is correct	<input checked="" type="checkbox"/>

690

3.2 SYSTEM LONGLINE CHECKS

CAUTION

AT THIS TIME, ISOLATE AND LOCK OUT ALL BREAKERS TO ROV AND TMS

No.	Tasks	Done
1.	Verify that all cabinets and transformers are grounded	<input checked="" type="checkbox"/>
2.	Ground all power lines using the supplied ground straps	<input type="checkbox"/>

Test continuity between phases on each circuit and at each location in the table below. Disconnect ROV HPU and ROV instrument transformer in the ROV termination box. Disconnect TMS HPU and TMS instrument transformer in the TMS termination box. Then measure DC resistance between each phase and fill in the table below.

No.	Circuit \ Location	TMS termination Box	ROV termination box
3.	ROV HPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	ROV Inst	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.	TMS HPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	TMS Inst	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: The meter will fluctuate under normal conditions.

No.	Tasks	Done
7.	Ensure Longline cabling is complete, including Deck cable, LARS and Umbilical if present.	<input checked="" type="checkbox"/>
8.	Ensure sub-sea cabling is complete, including ROV, TMS, and Tether	<input checked="" type="checkbox"/>
9.	Verify High Voltage connections are correct per PDU-HVP Single line diagram AF58-6011E02 (Volume 5)	<input checked="" type="checkbox"/>
10.	Reconnect HPUs and transformers	<input checked="" type="checkbox"/>
11.	Remove the ground straps in the High Voltage Panel	<input checked="" type="checkbox"/>



3.3 HIGH VOLTAGE GROUND FAULT TEST

CAUTION

AT THIS TIME, ISOLATE AND LOCK OUT ALL BREAKERS TO ROV AND TMS

Prior to powering up the ROV HV system, ground 1 conductor of each HV circuit to verify that the Megacon Ground fault interlock is operational. Also check the monitoring program status. The interlock shall be checked with the PDU in both local and remote operation. For verifying correct reading of ground fault value, use a 500 kΩ or similar resistor.

No.	HV ground fault system	Local Interlock	Remote Interlock	Monitoring Program status	Monitoring Program Value
1.	ROV Instrumentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(500 kΩ)
2.	ROV HPU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(500 kΩ)
3.	TMS Instrumentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(500 kΩ)
4.	TMS HPU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(500 kΩ)

Ikke testet. Vi har ikke 500kohm Resistor tilgjengelig.

3.4 BREAKER STATUS CHECK

CAUTION

DO NOT OPERATE ANY CONTACTORS IN LOCAL OR REMOTE OPERATION

No.	Tasks	Done
1.	Engage all breakers and check for OK status in the monitoring program	<input checked="" type="checkbox"/>
2.	Push the test button on each breaker and check for TRIPPED status in the monitoring program	<input checked="" type="checkbox"/>
3.	Turn breakers off and check for OFF status in the monitoring program	<input checked="" type="checkbox"/>

3.5 POWER READINGS

3.5.1 Preparations

CAUTION

No.	Tasks	Done
1.	Close High Voltage Panel Door, Winch stationary & Rotary box,	<input checked="" type="checkbox"/>
2.	Close TMS rotary and stationary junction box, high voltage compartment	<input checked="" type="checkbox"/>
3.	Close ROV junction box	<input checked="" type="checkbox"/>



3.5.2 Instrument Voltages

No.	Tasks	Reading value	Value OK
1.	Disconnect cable from J3 in the ROV termination Box. Turn on the ROV instrumentation and verify the Supply voltage at pin 5&6 at J3. (115VAC)	110v	<input checked="" type="checkbox"/>
2.	Verify ROV instrument high voltage reading in monitoring program. The reading shall be 30times the voltage obtained at X6-13 and X6-14.	3300	<input checked="" type="checkbox"/>
3.	Turn off the system, reconnect cable to J3 and turn the instrumentation back on. Establish telemetry and verify supply voltage in monitoring program.	3300	<input checked="" type="checkbox"/>
4.	Turn on the TMS instrumentation voltage and verify the supply voltage at the 10A breaker in the TMS junction box. (115VAC)	3368	<input checked="" type="checkbox"/>
5.	Verify TMS instrument high voltage reading in monitoring program. The reading shall be 30times the voltage obtained at X6-25 and X6-26.	3300	<input checked="" type="checkbox"/>

3.5.3 HPU Voltages

This section cannot be performed before both hydraulic systems are oil filled and ready for operation.

No.	Tasks	Reading value	Value OK
1.	Verify ROV HPU high voltage reading in monitoring program. The reading shall be 30times the voltage obtained at X6-7, X6-8 and X6-9	4417	<input checked="" type="checkbox"/>
2.	Verify TMS HPU high voltage reading in monitoring program. The reading shall be 30times the voltage obtained at X6-19, X6-20 and X6-21	3030	<input checked="" type="checkbox"/>

COMMENTS

TMS - 100,9 / 101 / 100,7

ROV - 108 / 108,1 / 107,5

Customer representative

Fred Fausa Date 27/4-16

Kystdesign representative

E12345 Date 24/2-16

 KYSTDESIGN <small>SUB-SEA TECHNOLOGY</small>	<i>Document Title</i> Constructor 5 <i>Sea Acceptance Test</i>	<i>Date of issue</i> 13/04/2016	<i>Page</i> 7 of 16
		<i>Doc. No.</i> AF57 SAT	<i>Rev.</i> 02

4 ROV HYDRAULIC SYSTEM

4.1 PREPARATIONS

The following equipment to be present:

- Hydraulic Measuring instrument with the following sensors:
 - Pressure sensor 0-60Bar
 - Pressure sensor 0-250Bar
 - Flow sensor 2-75 l/min
- Hydraulic hoses and fittings necessary to connect sensors to Rov Hydraulic system

4.2 MAIN SYSTEM PRESSURE SETTINGS

- Connect the 250 BAR sensor to the main system.
- Start the HPU with main system in IDLE.
- The pressure should now read 18-22 Bar on the operator screen. Verify the pressure on the test manometer and record the pressure.
- Switch off the idle function.
- The pressure should now read approx. 220 Bar on the operator screen. Verify the pressure on the test manometer and record the pressure.

	Function	Acceptance Criteria	Pressure	Accepted
1.	Pump idle operation	18-22Bar	21	<input checked="" type="checkbox"/>
2.	System pressure	215-225 Bar	223	<input checked="" type="checkbox"/>

 KYSTDESIGN <small>SUB - SEA TECHNOLOGY</small>	Document Title Constructor 5 Sea Acceptance Test	Date of issue 13/04/2016	Page 8 of 16
		Doc. No. AF57 SAT	Rev. 02

4.3 AUX SYSTEM PRESSURE READING & REGULATION

- Connect the 250 BAR sensor to the aux system.
- Start the HPU with x-port disconnected
- Adjust idle pressure to 18-22Bar
- Reconnect x-port and set pump remote regulator to 100%
- Adjust cut off pressure to approximately 200Bar
- Verify that the pump can be regulated from min to max both with increasing and decreasing commands.
- Record minimum adjustable pressure (typically 10-15bar above idle pressure)
- Record cut off pressure (remote regulator set to 100%)

	Item	Acceptance Criteria	Pressure	Accepted
1.	Idle pressure	18-22 Bar	18	<input checked="" type="checkbox"/>
2.	Cut off pressure	195-205 Bar	198,9	<input checked="" type="checkbox"/>
3.	Minimum adjustable pressure	Typ 10-15bar above idle	27,5	<input checked="" type="checkbox"/>
4.	Remote regulation of pump	Smooth regulation between 0 and 100% both with increasing and decreasing input.		<input checked="" type="checkbox"/>

4.4 HYDRAULIC SHUT DOWN

- All shut down functions shall be physically tested and verified.
- **Temperature** generated shutdowns shall be tested by temporarily setting the shutdown value to a few degrees above present value, and then running the system until shut down. This value shall then immediately be reset to the recommended value.
- **Oil level** generated shut downs shall be tested by draining the oil until shut down occurs.

	Shut down	Acceptance Criteria	Accepted
1.	EI motor temp	90° (reduce setting for test)	<input checked="" type="checkbox"/>
2.	EI Motor leak	Shut Down	<input checked="" type="checkbox"/>
3.	Main system oil temp.	75° (reduce setting for test)	<input checked="" type="checkbox"/>
4.	Main system oil volume.	40%	<input checked="" type="checkbox"/>
5.	Aux system oil temp.	75° (reduce setting for test)	<input checked="" type="checkbox"/>
6.	Aux system oil volume.	20%	<input checked="" type="checkbox"/>

 KYSTDESIGN <small>SUB-SEA TECHNOLOGY</small>	Document Title Constructor 5 Sea Acceptance Test	Date of issue	Page
		13/04/2016	9 of 16
	Doc. No.	AF57 SAT	Rev. 02

4.5 FULL FLOW FUNCTIONS

System	Description	Acceptance Criteria	Accepted
Main	Attach flowmeter with $\frac{3}{4}$ " hose between high flow output in TCU filter manifold and Quick Connector on the return filter manifold. The valve operates on and off by activating S9 in TCU	The valve operates on and off.	<input checked="" type="checkbox"/>
Aux.	Attach $\frac{3}{4}$ " hose between high flow output in Aux system pressure manifold and aux return manifold. Connect the pilot inlet to starboard A10. Verify that the valve operates on and off.	The valve operates on and off.	<input checked="" type="checkbox"/>

Mangler deler for test

4.6 PRESSURE REGULATION OF GFVP'S

- Regulate pressure from 0 to 100%, and monitor the pressure on the operators screen.
- Acceptance criteria: smooth regulation both increasing and decreasing.
- Record min regulated pressure
- Record max regulated pressure

System	Function	Acceptance Criteria	Recorded value	Accepted
GFVP 1	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	10,3	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	199,8	<input checked="" type="checkbox"/>
GFVP 2	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	11	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	199,8	<input type="checkbox"/>

 KYSTDESIGN <small>SUB-SEA TECHNOLOGY</small>	Document Title Constructor 5 Sea Acceptance Test	Date of issue	Page
		13/04/2016	10 of 16
		Doc. No. AF57 SAT	Rev. 02

4.7 PRESSURE REGULATION OF HIGH FLOW VALVES (VP3)

- Regulate pressure from 0 to 100%, and monitor the pressure on the operators screen.
- Acceptance criteria: smooth regulation both increasing and decreasing.
- Record min regulated pressure
- Record max regulated pressure

Valve	Function	Acceptance Criteria	Recorded value	Accepted
Valve 1	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	8	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	188	<input checked="" type="checkbox"/>
Valve 2	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	9	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	206	<input checked="" type="checkbox"/>
Valve 3	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	10	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	207	<input checked="" type="checkbox"/>
Valve 4	Regulation	0-100%		<input checked="" type="checkbox"/>
	Min pressure	Less than 14Bar	10	<input checked="" type="checkbox"/>
	Max pressure	System pressure +0 – 2,5Bar	207	<input checked="" type="checkbox"/>

4.8 FLOW REGULATION OF HIGH FLOW VALVES (VP3)

- Connect one end of the flow meter and test hose to the return manifold and the other end to the function that is being tested.
- Verify that the flow can be controlled smoothly from 0 to 100%
- Record the minimum controllable flow (Accept if less than 5 l/min)
- Record the max flow (Accept if more than 140 l/min)
- Repeat this step for all 4 functions in both directions.

Valve	Minimum flow	Max flow	Accepted
A1	2,1	157,0	<input checked="" type="checkbox"/>
B1	2,1	157,8	<input checked="" type="checkbox"/>
A2	2,029	157,8	<input checked="" type="checkbox"/>
B2	2,5	157,8	<input checked="" type="checkbox"/>
A3	2,1	157,2	<input type="checkbox"/>
B3	2,2	156,8	<input checked="" type="checkbox"/>
A4	2,4	156,2	<input checked="" type="checkbox"/>
B4	WATERJET		<input type="checkbox"/>



4.9 FLOW REGULATION OF GFVP VALVES

Verify that each valve can be controlled in both directions, and that the flow can be adjusted. This can be done either by operating the connected actuators or by connecting a hydraulic cylinder.

GFVP1	A	B	GFVP2	A	B
1	V	V	1	V	V
2	V	V	2	V	V
3	V	V	3	V	V
4	V	V	4	V	V
5	N	V	5	V	V
6	V	V	6	V	V
7	V	V	7	V	V
8	V	V	8	V	V
9	V	V	9	V	V
10	V	V	10	V	V

COMMENTS

Det ble testet mot Cylinder, dock camera og Rov Stoffe
Cylinder

Customer representative

Fred Jansen

Date

27/4 -16

Kystdesign representative

Erl 774

Date

27/4 -16

 KYSTDESIGN <small>SUB-SEA TECHNOLOGY</small>	<i>Document Title</i> Constructor 5 <i>Sea Acceptance Test</i>	<i>Date of issue</i>	<i>Page</i>
		13/04/2016	13 of 16
		Doc. No. AF57 SAT	Rev. 02

5 WET TEST

Deploy the ROV and test that all the Auto functions are working properly. Also log the current consumption, temperatures, GFD levels and compensator volumes to provide a baseline for future reference. Let the ROV stabilize for at least 10 min before recording any sensor data.

5.1 TEST OF BASIC ROV & TMS FUNCTIONS

5.1.1 Test of Auto Functions

Function	Acceptance Criteria	Recorded Value	Comment	Accepted
Auto Heading	+/- 2deg	Set 230,1 +/- 2deg	OK	<input checked="" type="checkbox"/>
Auto Altitude	+/- 100mm	Set 3,35 +/- 90mm	OK	<input checked="" type="checkbox"/>
Auto Depth	+/- 100mm	Set 79,3 +/- 90mm	OK	<input checked="" type="checkbox"/>

5.1.2 Tick of if any water ingress is detected during the test dive

Part	Comment	Water ingress detected
ROV Pod	—	<input type="checkbox"/>
TermBox	—	<input type="checkbox"/>
Electric Motor	—	<input type="checkbox"/>
TCU	—	<input type="checkbox"/>
ACU	—	<input type="checkbox"/>
GFVP1	—	<input type="checkbox"/>
GFVP2	—	<input type="checkbox"/>
Light Box	—	<input type="checkbox"/>
TMS Electric motor	—	<input type="checkbox"/>
TMS Termination	—	<input type="checkbox"/>

5.1.3 Record GFD levels during the test dive

GFD Levels	GFD levels	Accepted
115VAC instruments	—	<input checked="" type="checkbox"/>
12VDC instrument (Mux)	—	<input checked="" type="checkbox"/>
24VDC Sensors	—	<input checked="" type="checkbox"/>
TCU	—	<input checked="" type="checkbox"/>
ACU	—	<input checked="" type="checkbox"/>
GFVP1	—	<input checked="" type="checkbox"/>
GFVP2	—	<input checked="" type="checkbox"/>
115VAC Lights	76	<input checked="" type="checkbox"/>
TMS 24VDC	78	<input checked="" type="checkbox"/>
TMS 115VAC	72	<input checked="" type="checkbox"/>

 KYSTDESIGN SUB - SEA TECHNOLOGY	Document Title	Date of issue	Page
	Constructor 5	13/04/2016	14 of 16
	Sea Acceptance Test	Doc. No. AF57 SAT	Rev. 02

5.1.4 Record Temperatures during the test dive

Part	Temperatures	Accepted
Main Hydraulics	27 26	<input checked="" type="checkbox"/>
Aux Hydraulics	14 14	<input checked="" type="checkbox"/>
Electro Motor	38 36	<input checked="" type="checkbox"/>
Instrument Transformer	14 14	<input checked="" type="checkbox"/>
Electronic POD	21 21	<input checked="" type="checkbox"/>
TMS Hydraulics	18 <i>cttu 400m spal 30:</i>	<input checked="" type="checkbox"/>
TMS El Motor	26 — 11 — 30 2	<input checked="" type="checkbox"/>

5.1.5 Record Compensator Volumes PRE & POST dive

Compensator Volumes	Predive	Postdive	Accepted
Main Hydraulic System	87	89	<input checked="" type="checkbox"/>
Aux Hydraulics	81	80	<input checked="" type="checkbox"/>
Valve pack	96	81	<input checked="" type="checkbox"/>
Electric motor	54	52	<input checked="" type="checkbox"/>
Shaft Seal	91	66	<input checked="" type="checkbox"/>
Junction Boxes	86	58	<input checked="" type="checkbox"/>
TMS Motor	77	76	<input checked="" type="checkbox"/>
TMS Electronics	69	62	<input checked="" type="checkbox"/>

5.1.6 Record Current consumption

System	Status	Current consumption	Accepted
TMS instrument	Both lamps on	0,4	<input checked="" type="checkbox"/>
TMS instrument	Lamps off	0,3	<input checked="" type="checkbox"/>
TMS HPU	No operation	0,9 0,7 0,9	<input checked="" type="checkbox"/>
TMS HPU	Tether out	2,6 2,4 2,6	<input checked="" type="checkbox"/>
TMS HPU	Tether in	1,8 1,7 1,9	<input checked="" type="checkbox"/>
ROV Instrument	All lamps off	0,5	<input checked="" type="checkbox"/>
ROV Instrument	10 lamps on	0,8	<input checked="" type="checkbox"/>
ROV HPU	Main in Idle and aux at min pressure	5,6 5,2 5,8	<input checked="" type="checkbox"/>
ROV HPU	Thrusting down 100%	13,6 13,7 14,0	<input checked="" type="checkbox"/>



5.2 TEST OF ROV SUBSYSTEMS

Test that the following systems is functioning, and for moving systems like Pan & Tilt units, that they can operate freely within their operational envelope.

Part	Comment	Accepted
Lamps	OK	<input checked="" type="checkbox"/>
Cameras	OK	<input checked="" type="checkbox"/>
Sonar	Sonar tested OK	<input checked="" type="checkbox"/>
Responder	Not tested	<input type="checkbox"/>
Altimeter	Altimeter is tested	<input checked="" type="checkbox"/>
Depth Sensor	Depth sensor needs offset	<input checked="" type="checkbox"/>
Gyro	Working	<input checked="" type="checkbox"/>
Pan and Tilt Units	Working	<input checked="" type="checkbox"/>
Tilt Unit	OK	<input checked="" type="checkbox"/>
Hydraulic Drawer	Drawer is tested	<input checked="" type="checkbox"/>
5 function Manipulator	7F	<input checked="" type="checkbox"/>
7 function manipulator	7F is tested	<input checked="" type="checkbox"/>

5.3 PERFORMANCE OF TMS

No.	Task	Accepted
1.	Launch TMS/ROV to approximately 50m depth.	<input checked="" type="checkbox"/>
2.	Unlatch ROV and move approximately 10 meters out from the TMS. Turn around and approach the TMS for visual inspection.	<input checked="" type="checkbox"/>
3.	Inspect the electrical and hydraulic compensation system for any leaks	<input checked="" type="checkbox"/>
4.	Cycle the tether in/out function and inspect the chains, sheaves and tether	<input checked="" type="checkbox"/>
5.	Cycle the latch system and verify latched sensor	<input checked="" type="checkbox"/>
6.	Verify TMS camera, lights and Pan and Tilt are functioning correctly	<input checked="" type="checkbox"/>
7.	Manoeuvre ROV down to a depth of minimum 500m below the TMS while paying out tether accordingly. Note the maximum excursion length.	<input checked="" type="checkbox"/>
8.	Recover ROV back to TMS while spooling in on tether accordingly. Pay particular attention to the tether spooling and electrical comp level.	<input checked="" type="checkbox"/>
9.	Latch ROV to TMS and verify latched sensor.	<input checked="" type="checkbox"/>
10.	Recover TMS/ROV back on deck.	<input checked="" type="checkbox"/>

Dnom IDCR 49 BAR ~ 18° - 19° deg Clutch

KYSTDESIGN SUB-SEA TECHNOLOGY	Document Title	Date of issue	Page
	Constructor 5	13/04/2016	16 of 16
	Sea Acceptance Test	Doc. No.	Rev.
		AF57 SAT	02

COMMENTS

33 - (0.1 · Gav - 100)
 GFP verdiene blir løst mellom hvert dykk. Skyttes
 løse kabler og presison sensor som måtte byttes

Customer representative

Trond Faus

Date

27/4-16

Kystdesign representative

Erl 27.4.16

Date

27/4-16