

		PRESSU	3-06-049	-18W5 r	Date: 2013-03-06	SAP Equipment	ID 66	177219			
			000.5	VESSEL STAT		- I I I I I I I I I I I I I I I I I I I					
lant:	MINEHEAD			OP Unit:	FH01	Syste	n:				
rov. Insp . #:				CRN:			Tag#:	6617	7219		
quipment Des	scription: FL	ARE STACK				Serial	#:	1117	0		
anufacturer:	Tornado Te	chnologies				Vesse	Class:	vesse	el		
ternal Acces	s: No			Description:		Year I	Built:	2011	[
AWP:	0	kpa		At Temp	38 C	МДМТ	:		С		
ode:				RT: None		PWHT	:	No			
iameter: 32	!4 mm Le	ength: 28956	mm	(T/T): mm	OAL: mm	Orient	ation:	Verti	cal		
SHE	LL Mat'l:	SA-106 B	1	Thickness:	0 mm	Corr A	llowance:	() mm		
HEA	D Mat'l:	Unknown		Thickness:	0 mm	Corr A	llowance:	() mm		
	Nozzle Mat'l:		1	Thickness:		Corr A	llowance:				
iternal Coatii	Ne			Internal Clad:	No	Capac	itv:		m3		
anway:	No			Inspection Port:	No	Skirt		Legs	Saddle		
ozzle Rating:		lb ANSI		Painted:	No	Insula	ited:	No			
				PROCESS D		1 2					
roduction De	scription:		Т	Sweet Yes	Sour:						
perating Pres	sure	kpa		Operating Temp:		С					
		<u> </u>		PSV STATIC I	DATA						
					Capacity				İ		
Serial No.	Location	Size(r	nm)	Set Press	Imperial	Manufacturer		Model	Last		
		Inlet	Outlet	: (kPa)	SCFM				Service		
		0.00	0.00	0	SCFM						
	•			•							
				RECOMME	ENDATIONS						
			NON	CONFORMANCES	:/INSPECTION I	DEFICIENCES					
				INSPECTIO	N PLANNING						
				11151 20110	ITT LAITITING				ection Interval		
Inspection Stra	regy			Availability	III LAINILING	Inspection Inte	rval				
		01/22		Availability			-				
Inspection Strat		01/22				Inspection Inte	-				
		01/22		Availability Date of Last Inspect	RTIFICATION		-				
nspection Date	2013/4	spections/tests ha	ave been co	Availability Date of Last Inspect REPORT CEF completed in accordance	RTIFICATION		sp -				
Inspection Date	2013/l	spections/tests ha	ave been co	Availability Date of Last Inspect REPORT CEF completed in accordance	RTIFICATION	Date of Next Ir	sp -	2013/01/2	22		
The Signature specified equip	2013/i	spections/tests ha	ave been co	Availability Date of Last Inspect REPORT CEF completed in accordance	RTIFICATION	Date of Next In	he Date	2013/01/2	22		
The Signature specified equip	2013/s 5 below certify that insument is considered fit Approved by	spections/tests ha	ave been co	Availability Date of Last Inspect REPORT CEF completed in accordance	RTIFICATION	Date of Next In	isp _	2013/01/2	22		
The Signature specified equipular Inspected by Reviewed and	2013/i	spections/tests ha	ave been co	Availability Date of Last Inspect REPORT CEF completed in accordance	RTIFICATION with the identified ins	Date of Next In	he Date	2013/01/2	22		



Husky Energy PRESSURE VESSEL & COLUMN INSPECTION REPORT SAP Equipment ID

LSD: 03-06-049-18W5 Date: 2013-03-06 SAP Equipment ID 66177219

DETAILED INSPECTION VISUAL EXTERNAL

Do Secretish Condition Location NiCk Comments						
V2 Seriera Corrosion	ID	Description	Condition	Location	NCR	Comments
Second Lewis	V1	General Other (Please Explain)	Accept			VERY GOOD CONDITION
Vicinition	V2	General Corrosion	Accept			NO EXT CORROSION
V5	V3	General Leaks	Accept			NO LEAKS/WEEPS
V6	V4	Vibration	N/A			
V7	V5	Dissimilar Flange Rating	N/A			
V8 Guy Wires Accept VELL MARKED, SECURE FLARE V9 Electrical Ground N/A N/A V10 Painted Tractive Corrosion N/A BLACK, VERY GOOD CONDITION V11 Coeting/Painting Accept BLACK, VERY GOOD CONDITION V12 Expansion Joint or Bellows N/A N/A V13 Gauge/Site Glass N/A N/A V14 Shell Accept N/D DAMAGE, PAINT GOOD V15 Jacket N/A N/D DAMAGE, PAINT GOOD V15 Support Other (Please explain) Accept BASE IN GOOD CONDITION V12 Support Other (Please explain) Accept GOOD CONDITION V22 Foundation N/A GOOD CONDITION V23 Anchor Bolts Accept GOOD CONDITION V24 Sacial Solid-Skirt Accept GOOD CONDITION V32 Devit Accept GOOD CONDITION V32 Smill Branches N/A FLANGED CONNECTIONS TO FIRE/SMIGHTER V32 Smill Branches	V6	Ladder/Stairway	N/A			
V9 Electrical Ground N/A V10 Painted Tractive Corrosion N/A V11 Costing/Painting Accept V12 Expansion Joint or Bellows N/A V12 Expansion Joint or Bellows N/A V13 Gauge/Site Glass N/A V14 Shell Accept NO DAMAGE, PAINT GOOD V13 Jacket N/A V21 Support Other (Mease explain) Accept BASE IN GOOD CONDITION V22 Foundation N/A SCUARC/SUPPORT STACK V24 Saddle/Shirt Accept GOOD CONDITION V25 Dankt Accept GOOD CONDITION V35 Frequency (Ing.) N/A FLANGED CONNECTIONS TO FREQUENCED V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FREQUENCED V33 Rozales N/A FLANGED CONNECTIONS, RULY ENGAGED, NO SHORTBOLING V33 Rozales N/A FLANGED CONNECTIONS, RULY ENGAGED, NO SHORTBOLING V33 Reinforcing Pads N/A	V7	Heads	N/A			
VII	V8	Guy Wires	Accept			VELL MARKED, SECURE FLARE
V11 Coating/Painting Accept BLACK, VERY GOOD CONDITION V12 Expansion Joint or Bellows N/A V33 Gauge/Ste Glass N/A V44 Shell Accept No DAMAGE, PAINT GOOD V15 Jacket N/A BASE IN GOOD CONDITION V21 Support Other (Please explain) Accept BASE IN GOOD CONDITION V22 Foundation N/A SECURE/SUPPORT STACK V23 Anchor Boils Accept GOOD CONDITION V24 Saddily/Skirt Accept GOOD CONDITION V25 Davit Accept GOOD CONDITION V32 Davit Accept GOOD CONDITION V32 Small Branches N/A FLANGED CONNECTIONS TO FIRE/GNIGHTER V33 Mozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V33 Bolting Accept FULLY ENGAGED V33 Bolting Accept NO SHORTBOLTI	V9	Electrical Ground	N/A			
V12 Expansion Joint or Bellows N/A V13 Gauge/Site Glass N/A V14 Shell Accept NO DAMAGE, PAINT GOOD V15 Jacket N/A BASE IN GOOD CONDITION V21 Support Other (Please explain) Accept BASE IN GOOD CONDITION V22 Foundation N/A Sectles/support STACK V23 Anchor Boits Accept GOOD CONDITION V23 Andro Boits Accept GOOD CONDITION V23 Davit Accept GOOD CONDITION V24 Saddley-Skirt Accept GOOD CONDITION V32 Davit Accept GOOD CONDITION V31 Connections Other (Please explain) Accept FLANCED CONNECTIONS TO FIRE/IGNIGHTER V32 Small Branches N/A FLANCED CONNECTIONS, FULLY ENGAGED, NO SHORTBULING V33 Monzides Accept FLANCED CONNECTIONS, FULLY ENGAGED, NO SHORTBULING V34 Manways N/A FLANCED CONNECTIONS, FULLY ENGAGED, NO SHORTBULING V35 Reinforcing	V10	Painted Inactive Corrosion	N/A			
V13 Gauge/Site Glass	V11	Coating/Painting	Accept			BLACK, VERY GOOD CONDITION
V14 Shell	V12	Expansion Joint or Bellows	N/A			
V15	V13	Gauge/Site Glass	N/A			
V21 Support Other (Please explain) Accept BASE IN GOOD CONDITION V22 Foundation N/A V23 Anchor Bolts Accept SECURE/SUPPORT STACK V24 Saddle/Skirt Accept GOOD CONDITION V25 Davit Accept GOOD CONDITION V25 Davit Accept GOOD CONDITION V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FIRE/IGNIGHTER V32 Small Branches N/A FLANGED CONNECTIONS TO FIRE/IGNIGHTER V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A V35 Reinforcing Pads N/A V37 Bolting Accept PULLY ENGAGED, NO SHORTBOLING V38 Flanges Accept NO SHORTBOLITING V39 Leak Clamps	V14	Shell	Accept			NO DAMAGE, PAINT GOOD
V22 Foundation N/A V23 Anchor Bolts Accept SECURE/SUPPORT STACK V24 Saddle/Skirt Accept GOOD CONDITION V25 Davit Accept GOOD CONDITION V26 Fireproofing N/A Interproof Connections Other (Please explain) Accept V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FIRE/JONIGHTER V32 Small Branches N/A Interproof Fire/JONIGHTER V33 Nozzles Accept FLANGED CONNECTIONS, FILLY ENGAGED, NO SHORTBOLING V34 Manways N/A Interproof Fire/JONIGHTER V33 Reinforcing Pads N/A Interproof Fire/JONIGHTER V34 Manways N/A Interproof Fire/JONIGHTER V35 Reinforcing Pads N/A Interproof Fire/JONIGHTER V35 Reinforcing Pads N/A N/A V35 Bolting Accept NO SHORTBOLING V39 Leak Clamps N/A N/A V41 Insulation O	V15	Jacket	N/A			
V23 Anchor Bolts Accept SECURE/SUPPORT STACK V24 Saddle/Skirt Accept GOOD CONDITION V25 Davit Accept GOOD CONDITION V26 Fireproofing N/A FLANCED CONNECTIONS TO FIRE/GNIGHTER V31 Connections Other (Please explain) Accept FLANCED CONNECTIONS TO FIRE/GNIGHTER V32 Small Branches N/A FLANCED CONNECTIONS TO FIRE/GNIGHTER V33 Nozzles Accept FLANCED CONNECTIONS TO FIRE/GNIGHTER V33 Nozzles Accept FLANCED CONNECTIONS TO FIRE/GNIGHTER V33 Nozzles Accept FLANCED CONNECTIONS TO FIRE/GNIGHTER V34 Manways N/A N/A V35 Reinforcing Pads N/A N/A V36 Inadequate Thread Engagement Accept FULLY ENGAGED V37 Bolting Accept NO BAMAGE V39 Leak Clamps N/A N/A V41 Insulation Other (Please explain) N/A N/A V42 Damage <td>V21</td> <td>Support Other (Please explain)</td> <td>Accept</td> <td></td> <td></td> <td>BASE IN GOOD CONDITION</td>	V21	Support Other (Please explain)	Accept			BASE IN GOOD CONDITION
V24 Saddle/Skirt	V22	Foundation	N/A			
V25 Davit Accept GOOD CONDITION V26 Fireproofing N/A FLANGED CONNECTIONS TO FIRE/IGNIGHTER V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FIRE/IGNIGHTER V32 Small Branches N/A FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A V35 Reinforcing Pads N/A V36 Inadequate Thread Engagement Accept V37 Bolting Accept V38 Flanges Accept V39 Leak Clamps N/A V31 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Reli	V23	Anchor Bolts	Accept			SECURE/SUPPORT STACK
V26 Fireproofing N/A V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FIRE/IGNIGHTER V32 Small Branches N/A FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A FULLY ENGAGED V35 Reinforcing Pads N/A FULLY ENGAGED V36 Inadequate Thread Engagement Accept NO SHORTBOLITING V37 Bolting Accept NO DAMAGE V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A N/A V41 Insulation Other (Please explain) N/A N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A N/A V44 Insulation Jacket N/A N/A V45 Banding N/A OPEN TO ATM V51 Relief Devices Other (Please explain) N/A OPEN TO ATM	V24	Saddle/Skirt	Accept			GOOD CONDITION
V31 Connections Other (Please explain) Accept FLANGED CONNECTIONS TO FIRE/IGNIGHTER V32 Small Branches N/A FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A FULLY ENGAGED V35 Reinforcing Pads N/A FULLY ENGAGED V36 Inadequate Thread Engagement Accept NO SHORTBOLTING V37 Bolting Accept NO DAMAGE V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A N/A V41 Insulation Other (Please explain) N/A N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A N/A V44 Insulation Jacket N/A N/A V45 Banding N/A OPEN TO ATM V51 Relief Devices Other (Please explain) N/A OPEN TO ATM V52 Corrosion Accept	V25	Davit	Accept			GOOD CONDITION
V32 Small Branches N/A V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A V35 Reinforcing Pads N/A V36 Inadequate Thread Engagement Accept FULLY ENGAGED V37 Bolting Accept NO SHORTBOLTING V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A N/A V41 Insulation Other (Please explain) N/A NO EXT DAMAGE V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A N/A V44 Insulation Jacket N/A N/A V45 Banding N/A N/A V46 Seals/Joints N/A OPEN TO ATM V51 Relief Devices Other (Please explain) N/A NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V26	Fireproofing	N/A			
V33 Nozzles Accept FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING V34 Manways N/A V35 Reinforcing Pads N/A V36 Inadequate Thread Engagement Accept FULLY ENGAGED V37 Bolting Accept NO SHORTBOLTING V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO EXT CORROSION NO EXT CORROSION NO EXT CORROSION NO EXT CORROSION	V31	Connections Other (Please explain)	Accept			FLANGED CONNECTIONS TO FIRE/IGNIGHTER
V34 Manways N/A V35 Reinforcing Pads N/A V36 Inadequate Thread Engagement Accept V37 Bolting Accept V38 Flanges Accept V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V32	Small Branches	N/A			
V35 Reinforcing Pads N/A V36 Inadequate Thread Engagement Accept V37 Bolting Accept NO SHORTBOLTING V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V33	Nozzles	Accept			FLANGED CONNECTIONS, FULLY ENGAGED, NO SHORTBOLING
V36 Inadequate Thread Engagement Accept FULLY ENGAGED V37 Bolting Accept NO SHORTBOLTING V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION NO EXT CORROSION NO EXT CORROSION NO EXT CORROSION NO LEAKS/WEEPS	V34	Manways	N/A			
V37 Bolting Accept NO SHORTBOLTING V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO SHORTBOLTING NO SHORTBOLTING NO EXT DAMAGE NO EXT CORROSION	V35	Reinforcing Pads	N/A			
V38 Flanges Accept NO DAMAGE V39 Leak Clamps N/A	V36	Inadequate Thread Engagement	Accept			FULLY ENGAGED
V39 Leak Clamps N/A V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V37	Bolting	Accept			NO SHORTBOLTING
V41 Insulation Other (Please explain) N/A V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept V53 Leaks Accept	V38	Flanges	Accept			NO DAMAGE
V42 Damage Accept NO EXT DAMAGE V43 Penetrations N/A V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V39	Leak Clamps	N/A			
V43 Penetrations N/A	V41	Insulation Other (Please explain)	N/A			
V44 Insulation Jacket N/A V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept V53 Leaks Accept	V42	Damage	Accept			NO EXT DAMAGE
V45 Banding N/A V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept V53 Leaks Accept NO LEAKS/WEEPS	V43	Penetrations	N/A			
V46 Seals/Joints N/A V51 Relief Devices Other (Please explain) N/A V52 Corrosion Accept V53 Leaks Accept NO LEAKS/WEEPS	V44	Insulation Jacket	N/A			
V51 Relief Devices Other (Please explain) N/A OPEN TO ATM V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V45	Banding	N/A			
V52 Corrosion Accept NO EXT CORROSION V53 Leaks Accept NO LEAKS/WEEPS	V46	Seals/Joints	N/A			
V53 Leaks Accept NO LEAKS/WEEPS	V51	Relief Devices Other (Please explain)	N/A			OPEN TO ATM
	V52	Corrosion	Accept			NO EXT CORROSION
	V53	Leaks	Accept			NO LEAKS/WEEPS
V54 Restricted Inlet/Outlet N/A	V54	Restricted Inlet/Outlet	N/A			



3 H	usky Energy	PRES	SURE V	/ESSEL &	COLUM	I INSPE	CTION REPORT	
		LSD:	03-06-04	9-18W5	Date:	2013-03-06	SAP Equipment ID	66177219
V55	Manual Operation Lever		N/A					

DETAILED INSPECTION OTHER TECHNIQUES

ID	Location	Observation/Measurement	Acceptance Criteria	NCR	Comments

DETAILED INSPECTION UT THICKNESS

CML	Nom. Thickness	CURRENT READINGS	short term corr rate	long term corr rate	remaining half life	Survey Date	Comments
10 (Shell)	0.00	9.40	0.0000	0.0000	99.0	2013/01/22	
O5 (Shell)	0.00	9.73	0.0000	0.0000	99.0	2013/01/22	



TOTAL INTEGRITY MANAGEMENT SOLUTIONS



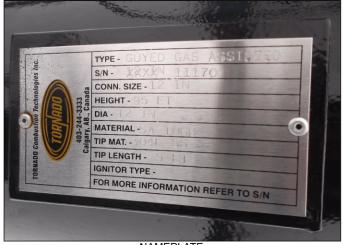


OWNER: HUSKY	SER AL # 11170	NOTES
EQUIPMENT NAME: FLARE STACK	NB#	
REGISTRATION #	OWNER ID	

EQUIPMENT # 66177219



TOTAL INTEGRITY MANAGEMENT SOLUTIONS





NAMEPLATE

OVERALL	

OWNER: HUSKY	SERIAL # 11170	NOTES
EQUIPMENT NAME: FLARE STACK	NB#	
REGISTRATION #	OWNER ID	
EQUIPMENT # 66177219		