



April 27, 2012

ENGINEERING LABORATORY TEST REPORT

Send to:	Goslyn LP 1904 University Business Drive McKinney, TX 75071 Attn: Mr. John C. Sowerby	Plant:	Shanghai Solio Stainless Steel Products 938 Nanguo Road Mian Chuang Shuyuan Town, Nanhui District Shanghai, China
Client #:	3C870	Plant #:	3C871

NSF Job#: J-00108014

Description of Test Sample: Model GOS 80 Grease Removal Device (25 gpm)

Sample Received: January 13, 2012 – Submitted in good condition by client

Date of Test: February 7-23, 2012

Location of Test: NSF International, Ann Arbor, MI

Test Protocol: PDI G101-2010 Grease Interceptors, ASME A112.14.3 Grease Interceptors, ASME A112.14.4 Grease Removal Devices, and CSA B481.1 Grease Interceptors

Results:	PDI G101-2010	PASS
	ASME A112.14.3	PASS
	ASME A112.14.4	PASS
	CSA B481.1	PASS

Report Authorization: _____
Senior Engineer, Engineering Laboratory

This is a re-issue of report serial # FI20120223000010. The report is being re-issued as a PASS after the client updated their markings and instructions.

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PDI G101 Section 5.1 Media Analysis

COMPLETE

pH value	n/a
Lard specific gravity	0.874
Viscosity	6.83 cP

PDI G101 Section 5.4 Flow Rate Verification

COMPLETE

Type of Grease Interceptor	Type A	
Size of Flow Controller	1.238	inches
Flow Time 1 Sink 1+2	109.6	sec
Flow Time 2 Sink 1+2	110.1	sec
Flow Time 3 Sink 1+2	109.8	sec
Flow Time Average Sink 1+2	109.8	sec
Flow Rate Average Sink 1+2	26.0	gpm
Deviation from Req Average Sink 1+2	3.8	%
Flow Time 1 Sink 2+1	113.3	sec
Flow Time 2 Sink 2+ 1	110.8	sec
Flow Time 3 Sink 2+ 1	111.7	sec
Flow Time Average Sink 2+1	111.9	sec
Flow Rate Average Sink 2+1 (gpm)	25.5	gpm
Deviation from Req Average Sink 2+1	1.9	%
Max allowable deviation from average	5	%
Max allowable deviation between runs	5.0	%
Max deviation between runs	1.9	%
Flow rate acceptable?	Yes	

Note: Flow rates verified using NSF's laboratory flow controller.

PDI G101 Section 7 Certification Rating Test (Grease Retention Capacity)

PASS

Model	GOS 80	
Flow	25	GPM
Flow Restrictor ID	1.238	inches
Breakdown Increment Number	13	
Pounds Grease Retained at Breakdown	58.77	lbs.
Incremental Efficiency	83.0	%
Average Efficiency	90.4	%
Required Total Amount of Grease Retained	56.25	lbs.
Actual Total Amount of Grease Retained	58.77	lbs.



ASME A112.14.3 Section 2 General Requirements

PASS

Design	PASS
Rating	PASS
Inlet and Outlet Connections	PASS
Flow Controls and Vents	PASS

ASME A112.14.3 Section 3.5 Rating Test (Grease Retention Capacity)

PASS

Model	GOS 80	
Flow	25	GPM
Flow Restrictor Type	A	
Flow Restrictor ID	1.238	inches
Breakdown Increment Number	13	
Pounds Grease Retained	58.77	lbs.
Incremental Efficiency	83.0	%
Average Efficiency	90.4	%
Efficiency A	90.4	%
Efficiency B	na	%
Required Amount of Grease Retained	50	lbs.
Actual Amount of Grease Retained	58.77	lbs.

ASME A112.14.3 Section 4.1 Labelling

PASS

Manufacturer's name or trademark	Yes
Model number	Yes
Rated Flow (see paragraph 2.2)	Yes
Inlet and Outlet	Yes
ASME A112.14.3	Yes
Product Type by Rating	N/A
Efficiency at the rated capacity	N/A



ASME A112.14.3 Section 4.2 Installation Instructions

PASS

Flow Control and / or vent requirements	Yes
Separate trapping requirements	Yes
Elevation and accessibility requirements	Yes
Safety and health related instructions	Yes
Cleanout Locations	Yes
Instructions that show the clearances required for maintenance, cleaning, and hazard prevention.	Yes
Cautions against installation in any manor except as tested and rated.	Yes*

ASME A112.14.3 Section 4.2 Maintenance Instructions

PASS

Maintenance Instructions	Yes
Safety and Health provisions	Yes
Each grease interceptor shall be provided with service instructions, which include a trouble shooting guide as well as instruction for performing necessary servicing or for obtaining servicing	Yes*

ASME A112.14.4 Section 2.1.3 Inlet and Outlet Connections

PASS

Tapered threads shall comply with ASME B1.20.1.	Yes
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ASME A112.14.4 Section 2.2 Installation Instructions

PASS

Flow Control and / or vent requirements	Yes
Separate trapping requirements	Yes
Elevation and accessibility requirements	Yes
Safety and health related instructions	Yes
Wiring instructions to reference national or local codes	Yes*
Cleanout Locations	Yes
Instructions that show the clearances required for maintenance, cleaning, and hazard prevention.	Yes

* Drafts of updated instructions have been provided.



ASME A112.14.4 Section 2.3 Maintenance and Operating Instructions

PASS

Maintenance Instructions	Yes
Each grease interceptor shall be provided with service instructions, which include a trouble shooting guide as well as instruction for performing necessary servicing or for obtaining outside servicing.	Yes*

* Drafts of updated instructions have been provided.

ASME A112.14.4 Section 2.4 Electrical Requirements

PASS

All electrical components used in the GRD shall conform to the appropriate standards listed in para. 1.3.	Yes*
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* GOS 80 is listed by UL under file KNGT.E300483.

ASME A112.14.4 Section 3.4 Grease Removal Test

PASS

Required conditioning water temperature	60-80	deg F
Actual conditioning water temperature	80	deg F
Required test water temperature	105-115	deg F
Actual test water temperature	115	deg F
Rated service flow	25	gpm
Grease Retention Rating	58.77	lbs
Pounds Grease Added	88.20	lbs
Flow Rate Through Unit	2.20	gpm
Interval Between Grease Introduction	23	min
Test Duration	6:02	hrs
Required Amount of Grease Recovered	29.40	lbs
Actual Amount of Grease Recovered	75.80	lbs
Maximum Grease Water Content	<5	%
Actual Grease Water Content	<1	%

NOTES: The product was retested under job J-00111441 according to the manufacturer's updated operating instruction. Using the bottle brush, the ball in oil valve was submerged prior to grease introduction and after the first dose of grease. The thermostat was also adjusted per manufacturer's instructions for use with animal lard. Light illuminated on heater throughout the test. Average temperature = 128 degrees F measured inside breather tube.



ASME A112.14.4 Section 4.1 Marking on the Unit

PASS

Manufacturer's name or trademark	Yes
Model number	Yes
Rated Flow (see paragraph 2.2)	Yes
Inlet and Outlet	Yes
ASME A112.14.3 and ASME A112.14.4	Yes

ASME A112.14.4 Section 4.1 Other Marking

PASS

Electrical requirements	Yes
Daily maintenance procedure	Yes*
Operating Instructions	Yes*

* Drafts of updated instructions have been provided.



CSA B481.0 Section 4.2 Stainless Steel

PASS

Stainless steel alloys shall be Series 300 and shall have a minimum thickness of 14 ga (1.98 mm [0.078 in]) for external shells and 16 ga (1.58 mm [0.062 in]) for internal components.	Yes
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CSA B481.0 Section 5.1 General Construction Requirements

PASS

a	Constructed to perform at the maximum flow rate for which they are designed;	Yes
b	Has a minimum FOG containment volume capacity of 25% of the flow rating of the interceptor;	Yes
	Required volumetric capacity = 25% x 94.63 L =	23.66 L
	Actual volumetric capacity = 58.8 lbs x 0.45 kg/lb x 1.1 L/kg =	29.09 L
c	Has a minimum solids containment capacity of 25% of the flow rating	N/A
d	Constructed to withstand, without leaking, a hydrostatic pressure of 0.35 kPa (0.05 psi) applied for 15 min;	N/A*
e	Has inlet and outlet connections as follows:	
	(i) threaded connections shall comply with ASME B1.20.1;	Yes
	(ii) hub or hubless connections shall comply with the dimensional requirements of an applicable Standard for the material used; or	N/A
	(iii) other connections shall comply with the National Plumbing Code of Canada or applicable provincial plumbing code requirements;	N/A
f	Has a means to prevent siphoning;	Yes
g	Protected against galvanic corrosion if dissimilar metallic materials	Yes
h	Has a removable cover;	Yes
i	Has adequate access	Yes
	(i) for proper cleaning and removal of FOG and sediments, allowing,	Yes
	(ii) for personnel to reach removable internal components; and	Yes
j	Free of defects that could affect appearance, serviceability, containment, and performance.	Yes

* GRD is open to atmosphere and therefore exempt from hydrostatic test

CSA B481.0 Section 5.7 and 6.1 Loading Test for Covers

NOT RATED

Not designed for burial.

CSA B481.0 Section 6.2 Corrosion Test

NOT RATED

Does not qualify for outdoor use.



CSA B481.0 Section 7.1 Required Markings

PASS

a	Name, trademark, or other known mark of the manufacturer	Yes
b	Applicable CSA Standard designation (i.e., "CSA B481.1" or "CSA B481.2")	Yes
c	Flow rating	Yes
d	Removal efficiency, expressed as a percentage	Yes*
e	Effluent grease concentration, expressed in mg/L, when tested in accordance with CSA B481.2	NA
f	Grease containment capacity	Yes*
g	Access cover load classification, determined in accordance with Clause 6.1.1 (i.e., L, M, H, X, or S)	Not rated*
h	Nominal inlet size	Yes*
i	A mark indicating whether an external flow control device is required (i.e., "Required (part number)" or "Not required").	Yes*
j	Inlets and outlets of the grease interceptors shall be clearly identified to indicate the direction of flow.	Yes

* Drafts of updated markings have been provided.

CSA B481.0 Section 7.2 Marking Quality

PASS

Markings shall be:

a	Permanent or indelible; and	Yes
b	Legible	Yes

STANDARD PDI-G101 / ASME A112.14.3 GREASE INTERCEPTOR RATING TEST FORM #1

Interceptor ID Goslyn 25 gpm Model GOS80										Report No.: J-00108014					
Capacity No. 1		25		Test Vehicle:				***** Flow Control Data *****				Page 9 of 9			
Capacity No. 2		25		Spec. Gravity: 0.874				Observers:		Jon McGaugh		Test Date: 2/7/12			
Separate No. 1		na		Viscosity: 6.83 cP				Trey Allen		Notes: Drainage gauged on clear compartment. Tabulated "amounts retained" is a calculation of Added minus "Skimmed." Tabulated "skim amounts" includes pro-rata addition for reclaimed from skim tank after chilling. All weights taken after de-watering by Separatory funnel chilling. Summary & Adjusted Results based on the totals at the increment when Grease retained equals 2 1/4 times rated capacity = 56.25 Increment No. 13 1) Total Skimmed: 6.23 2) Total Retained : 58.77 3) Total Added: 65.00 Eff. = (line 3 - line1) / line 3 Efficiency % = 90.4					
Separate No. 2		na		Test Temperature: 150-160 ° F											
Simultaneous		26.0		Water : 150 degrees F				Orifice Size: 1.238"							
Simultaneous		25.5		Test Temperature: 150-160 ° F				Air Intake: 1" Max: Height 28.125"							
					***** INCREMENTAL *****				***** ACCUMULATED *****						
					(drop-skim)/ drop x 100 = efficiency				(drop-skim) / drop x 100 = efficiency						
No.	Test	Clear	Sec.	Rate:GPM	lb. Added	lb. Skimmed	lb. Retained	Efficiency	lb. Added	lb. Skimmed	lb. Retained	Efficiency			
1	1	2	111.69	25.5	5	0.00	5.00	100.0	5.00	0.00	5.00	100			
2	2	1	110.45	25.8	5	0.29	4.71	94.2	10.00	0.29	9.71	97.1			
3	1	2	113.70	25.1	5	0.67	4.33	86.6	15.00	0.96	14.04	93.6			
4	2	1	111.64	25.5	5	0.47	4.53	90.6	20.00	1.43	18.57	92.9			
5	1	2	111.68	25.5	5	0.44	4.56	91.2	25.00	1.87	23.13	92.5			
6	2	1	110.70	25.7	5	0.40	4.60	92.0	30.00	2.27	27.73	92.4			
7	1	2	111.46	25.6	5	0.40	4.60	92.0	35.00	2.67	32.33	92.4			
8	2	1	111.37	25.6	5	0.40	4.60	92.0	40.00	3.07	36.93	92.3			
9	1	2	111.20	25.6	5	0.38	4.62	92.4	45.00	3.45	41.55	92.3			
10	2	1	111.40	25.6	5	0.41	4.59	91.8	50.00	3.86	46.14	92.3			
11	1	2	113.25	25.2	5	0.67	4.33	86.6	55.00	4.53	50.47	91.8			
12	2	1	111.58	25.5	5	0.85	4.15	83.0	60.00	5.38	54.62	91			
13	1	2	112.56	25.3	5	0.85	4.15	83.0	65.00	6.23	58.77	90.4			
14	2	1	111.52	25.6	5	0.95	4.05	81.0	70.00	7.18	62.82	89.7			
15	1	2	111.76	25.5	5	1.10	3.90	78.0	75.00	8.28	66.72	89			
16	2	1	112.47	25.3	5	1.25	3.75	75.0	80.00	9.53	70.47	88.1			
17	1	2	112.19	25.4	5	1.18	3.82	76.4	85.00	10.71	74.29	87.4			
18	2	1													
19	1	2													
20	2	1													
21	1	2													
22	2	1													
23	1	2													
24	2	1													
25	1	2													
26	2	1													
27	1	2													
28	2	1													
29	1	2													
30	2	1													
31	1	2													
Average Or Total		111.80		25.5		85		10.71		74.29		GPM: 25			
												PASS			