J-615

SP-039 GDU

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS PO# 56603-P-13-86

(Alternative Form for Single Chamber, Completely Shop or Factory Assembled Vessels) Tag #AGS-039 (Oil Hopper Purge Filter)

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by FAMCO ENTERPRISES, INC. 3444 FAMCO ROAD BRUSLY LOUISIANA 70719 USA
(Name and address of manufacturer)

2. Manufactured for PALL ADVANCED SEPARATIONS SYSTEMS CORTLAND , NEW YORK
(Name and address of purchaser)

3. Location of installation GIANT INDUSTRIES GRAFTON , VA
(Name and address)

4. Type					
Vertical	V485	NONE	10000014150	922	2007
(Horiz. or vert. tank)	(Mfr's serial No.)	(CRN)	(Drawing no.)	(Natl. Bd. No.)	(Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2004 Edition (Year)

to 2006 Addenda (Addenda (Date)) NONE (Code Case Nos.) NONE (Special Service per UG-120(d))

6. Shell:							
SA-312-TP304L	.237	.063	0' - 4 1/32" ID	1' - 0 1/4" LG.			
Matl. (Spec. No., Grade)	Nom. Thk. (in.)	Corr. Allow. (in.)	Diam. I. D. (ft. & in.)	Length (overall) (ft. & in.)			
7. Seams:							
SEAMLESS	Seamless	1.0	N/R	N/A	1	Full	1.0	1
Long. (Welded, Dbl., Sngl., Lap, Butt)	R. T. (Spot or Full)	Eff. (%)	H. T. Temp (°F)	Time (hr)	Girth (Welded, Dbl., Sngl., Lap, Butt)	R. T. (Spot or Full)	Eff. (%)	No. of Courses

8. Heads: (a) Matl. SA-240 - 304 L (Spec. No., Grade) (b) Matl. SA-403- WP 304 L (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side To Pressure (Convex or Concave)
(a)	TOP (*)	1.875	.063	-	-	-	-	-	10 : 750	N/A
(b)	BOTTOM	.237	.063	-	-	2:1	-	-	-	CONCAVE

If removable, bolts used (describe other fastenings) (*) (8) 7/8" 9 UNC - 2A X 6-3/8" LG. SA-193-B8 CL2 STUDS / (16) 7/8" 9 UNC SA-194 - B HEX NUTS.
(Matl., Spec. No., Gr., Size, No.)

9. MAWP 654 (internal) 15 (external) psi. at max. temp. 800 (internal) 366 (external) °F.

Min. design metal temp. - 20 °F at 654 psi. Hydro., pneum. or comb. test pressure 1466 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Misc.	4	1" / 600#	RFLWN	SA-182-F 304L	.5600	INHERENT	UW16.1(e)	SHELL / HEAD
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

11. Supports: Skirt NO (Yes or no) Lugs 0 (No.) Legs 0 (No.) Other NONE (Describe) Attached N/A (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: IMPACT TEST NOT REQ'D PER UG-20(f), UCS-66(c), FIG UCS-66 NOTE (e)
(Name of part, item number, Mfr.'s name and identifying stamp)

VESSEL HYDROTESTED IN THE HORZ. POSITION.

CERTIFICATE OF SHOP / FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 24187

expires 6/2/2010

Date 9/7/2007 Co. Name FAMCO ENTERPRISES, INC. (Manufacturer) Signed (Representative)

CERTIFICATE OF SHOP / FIELD INSPECTION

Vessel constructed by FAMCO ENTERPRISES, INC. at 3444 FAMCO ROAD BRUSLY, LOUISIANA 70719 USA

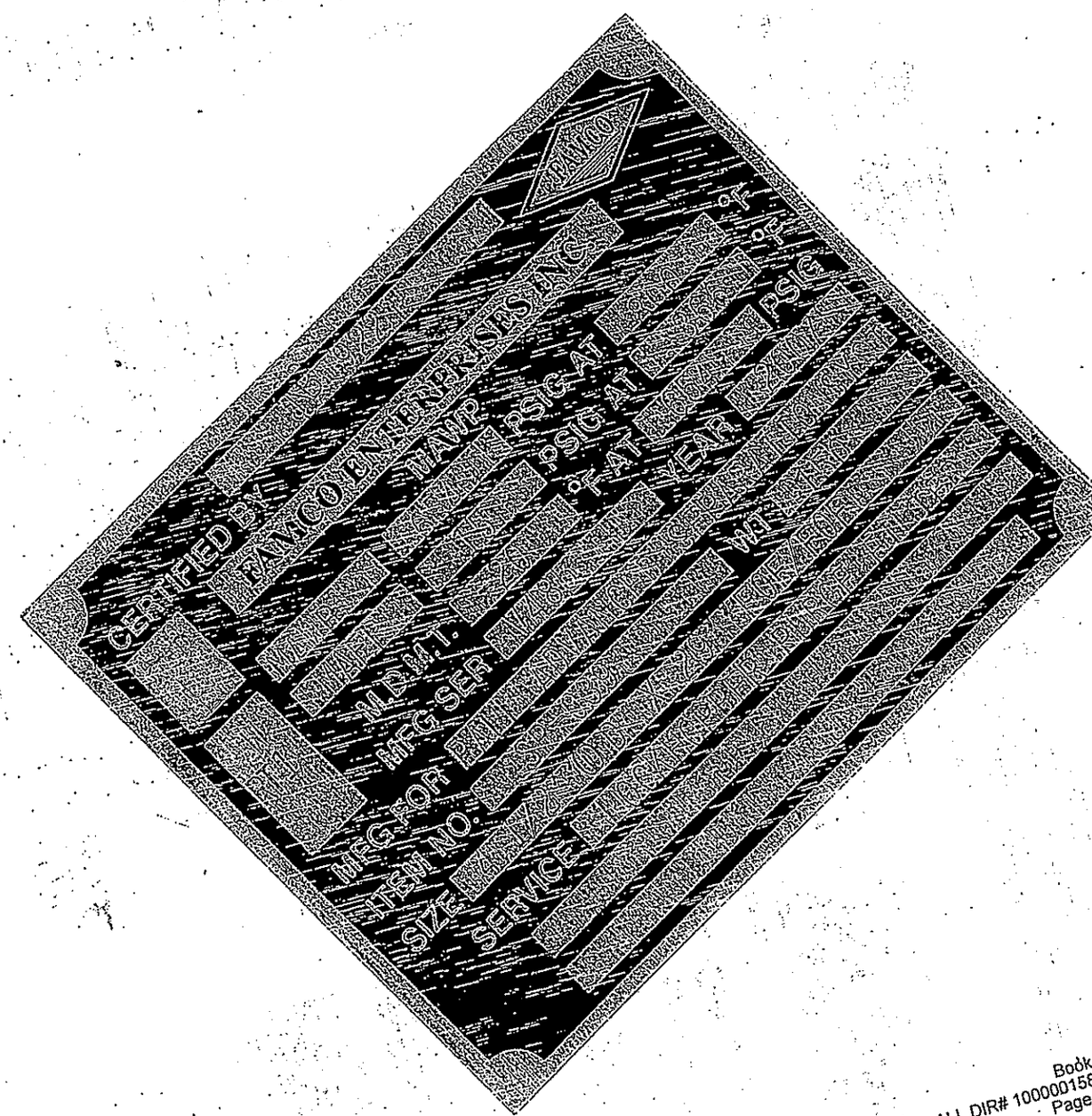
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of LA and employed by HSB CT have inspected the component described in this Manufacturer's Data Report on 9/7/2007, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By Signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 9/7/2007 Signed (Authorized Inspector) Commissions NB 13215A LA1536 (Natl Board (incl. endorsements), State, Prov. and No.)

#/05783

PO# 56603-P-13-86
Tag# SP-039 (Lockhopper Purge Filter)

SP-039
GDU



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SP-039, GDU

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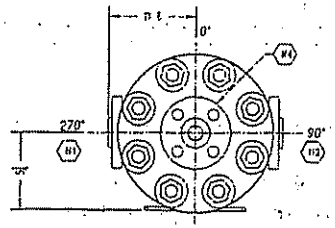

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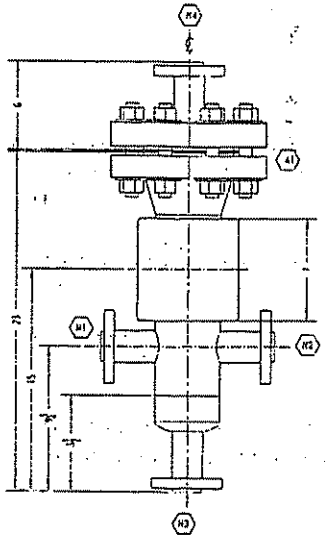

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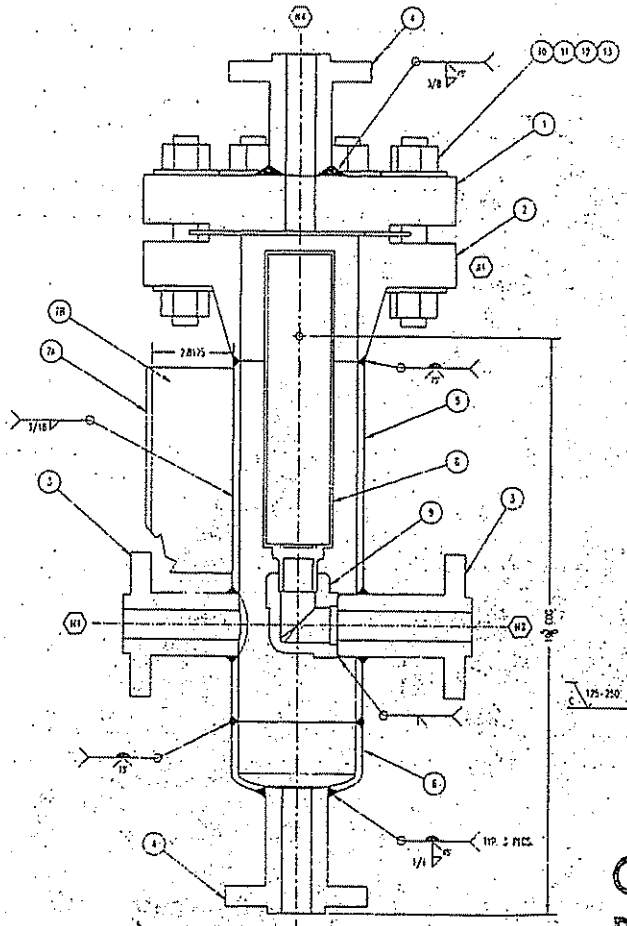

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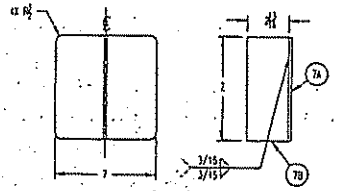

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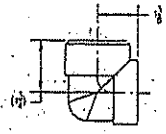
(ITEMS 7A & 7B) SCALE: 4/4



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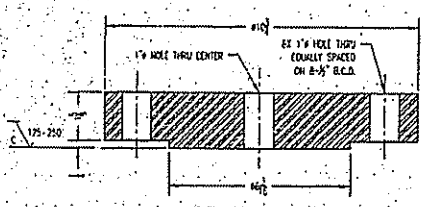

-DETAIL ITEM 1-
SCALE: 1:2

CERTIFIED AS BUILT
BY Daryl McLean
DATE 1-16-08

DESIGN CONDITIONS (VESSEL):
DESIGN CODE: 2004 ASME CODE, SECTION VIII DIVISION 1 W/2006 ADDENDA
CODE STAMP: YES
NATIONAL BOARD REGISTRATION: YES
TYPE OF SERVICE: NON-LETHAL
DESIGN PRESSURE: 675 PSIG (INTERNAL) / 15 PSIG (EXTERNAL)
DESIGN TEMPERATURE: 800°F (INTERNAL) / 350°F (EXTERNAL).
MINIMUM DESIGN METAL TEMPERATURE: -20°F
CORROSION ALLOWANCE: 0.063 IN.
DESIGN DIFFERENTIAL PRESSURE ACROSS TUBESHEET: 100 PSID MAX.
MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP): 854.8 PSIG @ 800°F, LIMITED BY BLIND FLANGE / BOLTED COVER
MAXIMUM ALLOWABLE PRESSURE, NEW & COLD (MAPNC): 1,558 PSIG, LIMITED BY BODY SHELL
HYDROSTATIC TEST PRESSURE: 1,466 PSIG @ 60°F (SHOP) WITH 50 PPM (MAXIMUM) CHLORIDE CONTENT WATER (1.3 x MAWP x Steel/Soles)
RADIOGRAPHY: RT1, FULL
ULTRASONIC INSPECTION (UT): NONE
LIQUID PENETRANT INSPECTION (PT): NOZZLE TO VESSEL WELDS.
MAGNETIC PARTICLE INSPECTION (MT): NONE
HARDNESS TESTS: NONE
PWHT: 100% REQUIRED ON ALL PRESSURE BOUNDRY MATERIAL, INCLUDING WELDS (SEE GENERAL NOTE #3).
IMPACT TEST: NONE
POST WELD HEAT TREATMENT: NONE
FIELD INSULATION (BY OTHERS): 1-1/2" FOR HEAT CONSERVATION AND PERSONAL PROTECTION. ALL FLANGES ARE NOT INSULATED.
EMPTY VESSEL VOLUME: 15 FT³

MATERIALS OF CONSTRUCTION:
PIPE: SA312 TP304L
CAP: SA403 WP304L
PLATES: SA240 GR304L
FORGINGS & FLANGES: SA182 F304L
GASKETS (BODY FLANGES): 1/8" THK 304L SST SPIRAL WOUND, GRAPHITE FILLED WITH CARBON STEEL OUTER RING-SEE GENERAL NOTE #2
BOLTS & NUTS: SA193 GR B8 CL 2 / SA194 GR 8-SEE GENERAL NOTE #3
ELEMENT: 316L SST POROUS MEDIA AND HARDWARE

PAINTING:
EXTERIOR SURFACES: NO SURFACE PREPARATION OR PAINTING IS REQUIRED.
INTERIOR SURFACES: DEGREASED AND NON-SCALING SURFACES, SOLVENT CLEAN PER SSPC SP-1. MACHINED AND SEALING SURFACES, NONE.

ESTIMATED WEIGHTS:
1. FILTER HOUSING (AS FABRICATED): 150 LBS.
2. FILTER HOUSING DURING HYDROTEST (WEIGHT #1 + FULL OF WATER): 160 LBS.

GENERAL NOTES:
1. ALL NOZZLE FLANGE BOLT HOLES STRADDLE NORMAL VESSEL CENTERLINES OR THEIR PARALLELS.
2. MAJOR MATERIALS OF FABRICATION SHALL ORIGINATE ONLY FROM USA, CANADA, WESTERN EUROPE, OR JAPAN
3. ALL NDE PERSONNEL (INCLUDING THOSE INTERPRETING AND REPORTING RESULTS) SHALL BE QUALIFIED IN ACCORDANCE WITH ASNT RECOMMENDED PRACTICE NO. SNT-TC-1A.
4. MATERIAL INSPECTION REQUIREMENTS (CERTIFIED MILL TEST REPORTS, CERTIFICATE OF COMPLIANCE, ETC.) SHALL FOLLOW THE REQUIREMENTS OF SECTION 1.5 OF SPECIFICATION PS-11-A003.
5. ALL FLANGE SEALING SURFACES SHALL HAVE 125-250 MICRO-INCH SURFACE FINISH.
6. FLUSHED OPENINGS SHALL BE COVERED WITH FULL SIZE 1/2" THICK BLIND WITH RUBBER GASKETS AND MINIMUM OF 4 BOLTS. ALL PREPARATION OF SHIPMENT REQUIREMENTS PER PARAGRAPH 7 OF SPEC PS-M-A003 SHALL BE FOLLOWED
7. MACHINED SURFACES SUCH AS FLANGE FACES, BOLTS, NUTS, STUDS, AND THREADED COUPLINGS SHALL BE COATED WITH RUST PREVENTIVE, EQUAL TO RUST-BAN 335.
8. GASKET AND BOLTING FOR BLIND FLANGE / BOLTED COVER ONLY ARE IN PALL'S SCOPE OF SUPPLY. ONE GASKET EACH FOR INSULATION SPARE. SHOP HYDROTEST AND 10% SPARE BOLTING SHALL BE PROVIDED BY PALL'S FABRICATOR.
9. POSSIBLE MATERIAL IDENTIFICATION (PMI) REQUIREMENTS SHALL MEET ALL REQUIREMENTS OF SPECIFICATION PS-A-005

TMLS cover 1
Shell 4
nozz 4 TTL 9

* COMPLETE INCLUDE HYDROTEST AND SPARES REQUIREMENTS. SEE GENERAL NOTE # 8.

ITEM	QTY	NAME	SIZE / DESCRIPTION	MATERIAL
13	14+4#	GASKET, FLANGE	4"-600# x 1/8" THK, SPIRAL WOUND, TYPE CG	304L SST/GRAPHITE FILL
12	16+2	WASHER, PLATE	7/8", SEMI-FINISHED	304L SST
11	16+2	NUT, HEAVY HEX	7/8-9UNC-2B, SEMI-FINISHED	SA194 GR 8
10	8+2	BOLT, STUD	7/8-9UNC-2A x 6-3/8 TG, FULL THREADS CHAMFERED ENDS	SA193 GR B8 CL 2
9	1	ELBOW, 90°	1" - 3000# SWAGED FITTING, BEVELED (SEE DETAIL)	SA182 F304L
8	1	ELEMENT, FILTER	42-3/8" x 10" MEDIA LENGTH, 1" DIA, RECESS-152/in	316L SST
7B	1	SHEET, STOCK	7" x 2-13/16" x 3/16" THK (SEE DETAIL)	SA240 GR304L
7A	1	SHEET, STOCK	7" x 7" x 3/16" THK (SEE DETAIL)	SA240 GR304L
6	1	CAP, PIPE	4"-SCH WT, BUTT WELD	SA403 WP304L
5	1	PIPE, SEAMLESS	4"-SCH WT x 13-1/4" LG, PBE	SA312 TP304L
4	2	FLANGE, LONG WELDNECK	1" - 600# RF, 1WN FLANGE, 125-250 MICRO-INCH FINISH	SA182 F304L
3	2	FLANGE, LONG WELDNECK	3/4" - 600# RF, 1WN FLANGE, 125-250 MICRO-INCH FINISH	SA182 F304L
2	1	FLANGE, WELDNECK	4" - 600# RF, 1WN FLANGE, SCH WT, 125-250 MICRO-INCH FINISH	SA182 F304L
1	1	PLATE, STOCK	#15-3/4" x 1-1/2"THK, (REMARKS) (SEE DETAIL)	SA182 F304L/SA240 GR304L

NOZZLE SCHEDULE:

TAG	SERVICE	SIZE-RATING
A1	ACCESS	4"- ASME CLASS 600 LB. RF 1WN FLANGE W/ BLIND
N1	INLET GAS	1"- ASME CLASS 600 LB. RF 1WN FLANGE
N2	OUTLET GAS	1"- ASME CLASS 600 LB. RF 1WN FLANGE
N3	DRAIN	1"- ASME CLASS 600 LB. RF 1WN FLANGE
N4	VENT	1"- ASME CLASS 600 LB. RF 1WN FLANGE

IMPORTANT: BEFORE ATTEMPTING TO OPERATE OR MAKE ANY REPAIR TO THIS EQUIPMENT, BE SURE YOU HAVE READ AND UNDERSTAND THIS PRODUCT'S OPERATION AND MAINTENANCE MANUAL (SUPPLIED UNDER SEPARATE COVER). FAILURE TO READ AND UNDERSTAND THIS INSTRUCTION MANUAL BEFORE ATTEMPTING TO OPERATE OR PERFORM EQUIPMENT MAINTENANCE MAY RESULT IN SERIOUS PERSONAL INJURY, PRODUCT DAMAGE, AND MAY VOID ANY AND ALL WARRANTIES.

Purchase Order Number: 56603-P-13-86

CODE STAMP: NO. 17128	ISSUE	DATE	--> DO NOT SCALE DRAWING <--
DESIGN BY			UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AND ARE IN THE NOMINAL AS BUILT CONDITION
PROJECT ENGINEER			
ENGINEER			NOTES ONLY
ENGINEER			
CHECKER			

PALL Pall Corporation
Pall Advanced Separation Systems
Cortland, New York

1000001415D 00 0

03.00143, LOCKHOPPER PURGE FILTER
TAG # SP-039 D-COK/CUAN1 YORKTOWN PROJECT

SCALE	SHEET	DRAWING NUMBER
1/4	1 of 1	42857

J-695