

## Container Record Check Form

Container Number: BOBU 000019-7Date: 10/16/13WO#: 500056042

Records Attached	Complete	Tech
Bromine Vessel Purging Record	✓	TH
Vessel Hydro Report	✓	TH
Container Dimension Record	✓	TH
Frame Inspection Record	✓	TH
Liner Inspection Record		
Initial Inspection	✓	TH
Final Inspection	✓	TH
Liner Thickness Reading	✓	TH
Valve Certifications	✓	TH
Relief Valve Certification	✓	TH
Leak Test Report	✓	TH
Vessel Dry-Out Report	✓	TH
Cleaning Certification	✓	TH
BV Report (Field Copy)	✓	TH
Equipment Release Certificate	✓	TL
BV Report (Final)	✓	TL

## BROMINE VESSEL PURGING RECORD

EQUIPMENT ID: *BOBU 000019-7*

DATE STARTED: *10/16/13*

OPERATION	DATA	TIME/DATE	TECH
Caustic Tank Level	<i>30 %</i>	<i>10/16/13 7:00/A</i>	<i>TH</i>
Caustic Flow	<i>156 gpm</i>	<i>10/16/13 7:00/A</i>	<i>TH</i>
Caustic Strength	<i>2.5-26 %w/w</i>	<i>" "</i>	<i>TH</i>
Air Dewpoint	<i>- 40 °C</i>	<i>" "</i>	<i>TH</i>
Valves Connected & Set		<i>" "</i>	<i>TH</i>
Air Pressure	<i>8 psig</i>	<i>" "</i>	<i>TH</i>
Air Temperature	<i>138 °F</i>	<i>" "</i>	<i>TH</i>
Venting Started		<i>10/16/13 7:15/A</i>	<i>TH</i>
Thiosulphate Wash Started	<i>NA</i>		
Thiosulphate Wash Completed	<i>NA</i>	<i>10/16/13 2:00/P</i>	<i>TH</i>
Vessel Clean		<i>10/17/13 2:00/P</i>	<i>TH</i>
Vessel Hydro	<i>150 psig</i>	<i>10/18/13 8:00/A</i>	<i>TH</i>
Vessel Disassembled		<i>10/18/13 2:00/P</i>	<i>TH</i>
Confined Space Permit		<i>10/19/13 8:00/A</i>	<i>TH</i>
<b>VESSEL READY FOR INSPECTION</b>		<i>10/19/13 10:00/A</i>	<i>TH</i>

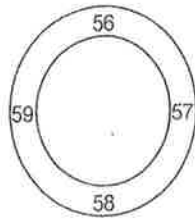
### COMMENTS:

*VALVES ARE WASHED OUT AND READY FOR  
PICKUP.*

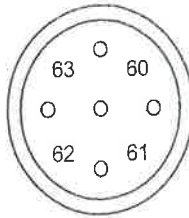
14/18T ISO Container Inspection Record

Vessel ID: BOBU 000 019-7

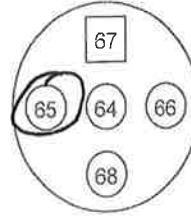
MANWAY



MANLID (FACE)



MANLID (TOP)

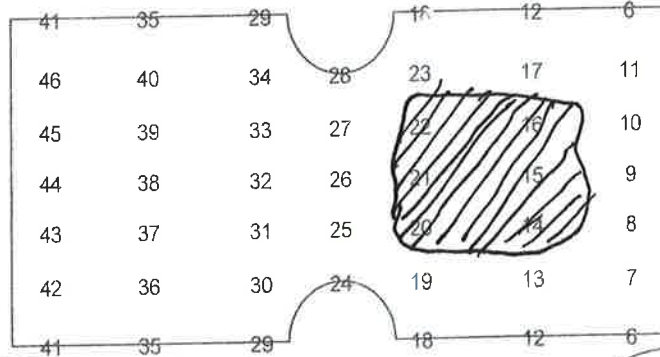


Front  $\phi$  of  
Vessel Neck

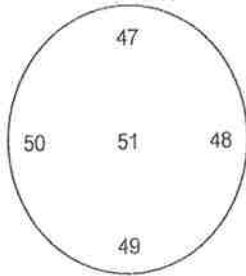


- 64 Fill Valve Flange
- 65 Air/N<sub>2</sub> Valve Flange
- 66 Vent Valve Flange
- 67 Relief Valve Flange
- 68 Blank Flange

FRONT

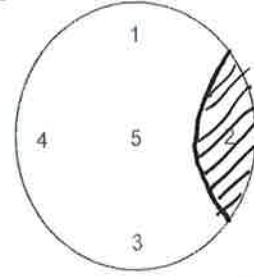


REAR




BLANK FLANGES

Fill	
Vent	
Air/N <sub>2</sub>	
Fusible	



Initial Inspection Batch No.

Repairs Marked  above:

Resurface nozzle - 45  
Low area in both - of container  
Low area in Rear end

Repairs complete  
& Vessel Clean:


yes

Date:

11/2/13

BOBU ISO Container	Page 2 of 2	Issue: F02.23	Revision
ITEM	REPAIRS/REPLACEMENT	CERT No. REPAIR	
Fill Valve	Replaced	Attached	
Vent Valve	Replaced	"	
Air/N Valve	Replaced	"	
Relief Valve	Replaced	"	
Bursting Disc	Replaced	"	
Tell - Tale Assembly - Gauge	Reused	"	
Needle Valve	Reused		
Valve Spacer	Reused		
Dip - Pipe	Reused		
Special Studs	NA		
Manlid Bolts	Replaced		
Remarks			
<p>Hydraulic Test: The vessel was satisfactorily tested to 150 psig in the presence of:</p> <p>Robert McHenry of GLS on 10/18/2013</p> <p>Timothy Hudson for GLS</p>			
<p>Leakproofness Test: The vessel was satisfactorily tested to 86 psig in the presence of:</p> <p>Robert McHenry of GLS on 11/19/2013</p> <p>Timothy Hudson for GLS</p>			
<p>Dryness: The internal atmosphere of the vessel was tested for dryness with the following results:</p> <p>Date: 11/19/13 Time: 9:30/Am Pressure: 10 psig Dryness: -40.3 °C</p> <p>Date: Time: Pressure: psig Dryness: °C</p>			
<p>The vessel is certified fit for Bromine service:</p> <p>Date: 11/27/2013 Time: 10:05/Am By: Tim Hudson for GLS</p>			

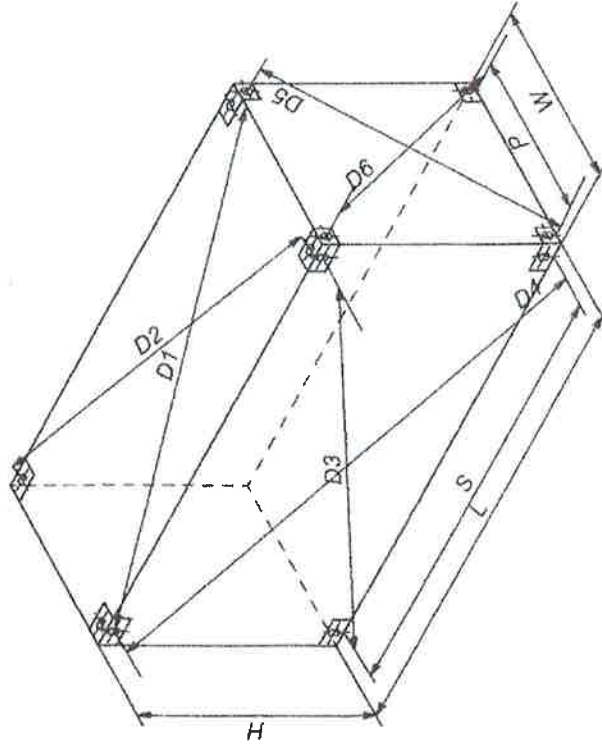
Great Lakes For a Better Tomorrow		Issue: F02.07	Page 1 of 2	Revision
14T ISO Frame Inspection Record			Frame ID: B064 000 019-7	
REAR	1 Long Diagonal	OK		
	2 Short Diagonal	OK		
	3 Bottom Rail	OK		
	4 Corner Casting	OK		
	5 Corner Post	OK		
	6 Centre Gusset	OK		
	7 Corner Gusset	OK		
RIGHT HAND SIDE	8 Front Diagonal	OK		
	9 Front Side Post	OK		
	10 Front Saddle	OK		
	11 Bottom Rail	OK		
	12 Saddle Gusset	OK		
	13 Rear Saddle	OK		
	14 Rear Side Post	OK		
	15 Rear Diagonal	OK		
	16 Diagonal Gusset	OK		
	17 Corner Gusset	OK		
FRONT	18 Long Diagonal	OK		
	19 Short Diagonal	OK		
	20 Bottom Rail	OK		
	21 Corner Casting	OK		
	22 Corner Post	OK		
	23 Centre Gusset	OK		
	24 Corner Gusset	OK		
LEFT HAND SIDE	25 Front Diagonal	OK		
	26 Front Side Post	OK		
	27 Front Saddle	OK		
	28 Bottom Rail	OK		
	29 Saddle Gusset	OK		
	30 Ladder/Handrail	OK		
	31 Rear Saddle	OK		
	32 Rear Side Post	OK		
	33 Rear Diagonal	OK		
	34 Diagonal Gusset	OK		
TOP	35 Corner Gusset	OK		
	36 platform	clips missing		
	37 Rear Top Rail	OK		
	38 LH top Rail	OK		
	39 RH Top Rail	OK		
	40 Front Top Rail	OK		
	41 Removable Rail	OK		
42 Removable Rail Bracke	OK			
BOTTOM	43 Longitudes	OK		
	44 Diagonals	OK		
	45 Saddle Beams	OK		
	46 Centre Beam	OK		
Inspected by: Tim Hudson			Date: 10/22/2013	

	Issue	Page 2 of 2	Ref:
14T ISO Frame Inspection Record		Frame ID: <i>BOBY 000 019-7</i>	
<p>Section 1</p> <p>Frame repairs as specified on page 1 complete</p> <p style="text-align: center;"><i>Replaced clips on platform</i></p> <p>Signature: <i>Tim Hudson</i> Date: <i>11/15/13</i></p>			
<p>Section 2</p> <p>Manlid Cover assembly - Repairs required:</p>   <p>Repairs Complete: <i>NO Repairs Required</i></p> <p>Signature: <i>Tim Hudson</i> Date: <i>11/15/13</i></p>			
<p>Section 3</p> <p>Other Repairs required:</p>   <p>Repairs complete: <i>NO other Repairs Required</i></p> <p>Signature: <i>Tim Hudson</i> Date: <i>11/15/13</i></p>			
<p>Section 4</p> <p>Paintwork &amp; Labels/Lettering - Repairs required:</p> <p style="text-align: center;"><i>Change GBV 20T6 to GBV 20K6</i>  <i>add China telephone number to container</i></p> <p>Repairs complete: <i>yes</i></p> <p>Signature: <i>Tim Hudson</i> Date: <i>11/15/13</i></p>			
<p>Frame fit for Service:</p> <p>Signature: <i>Tim Hudson</i> Date: <i>11/15/13</i></p>			



Equipment ID: *Bobu 000019-7*

Date Started: *11/18/13*



All dimensions in millimetres

L = External length of ISO Container

S = Length between centers of corner casting apertures

W = External width of ISO Container

P = Width between centers of corner casting apertures

H = Overall height of ISO Container

D = Distance between centers of diagonally opposite corner casting centers

K1 = Difference between D1 and D2

K2 = Difference between D3 and D4

K3 = Distance between D5 and D6

Tolerance on external dimensions (L, H and W) = +/- 5

Dimension	L	S	W	P	H	D1	D2	D3	D4	D5	D6	K3
Nominal	6058	5853	2438	2259	2438							10
Actual - Initial	<i>6058</i>	<i>5854</i>	<i>2436</i>	<i>2257</i>	<i>2436</i>	<i>6280</i>	<i>6287</i>	<i>6285</i>	<i>6298</i>	<i>3225</i>	<i>3225</i>	<i>0</i>
Actual - Final												

Frame conforms to the dimensional requirements of ISO 668-1979(E)

*Tim Hudson*  
Technician

Date

**Great Lakes**  
FOR A BETTER TOMORROW

Title:

**20 ft ISO Container Dimension Record**

Issue:

**F02.04**

Revision:

## Equipment Release Certificate

Date Issued: 11/19/2013 Issue: F02.53 Revision

Equipment No: B08V 000 019-7

The following tests were carried out on the above vessel prior to release:

### Manlid/Equipment Torque Settings (ft-lbs)

Item	Initial Torque Setting	Final Torque Setting	Tightening required	Tech
Manlid	<u>460</u>	<u>460</u>	YES/ <u>NO</u>	<u>TH</u>
Fill Valve - Yellow	<u>39</u>	<u>39</u>	YES/ <u>NO</u>	<u>TH</u>
Pressure Valve - Green	<u>39</u>	<u>39</u>	YES/ <u>NO</u>	<u>TH</u>
Vent valve - Red	<u>39</u>	<u>39</u>	YES/ <u>NO</u>	<u>TH</u>
Relief Valve	<u>79</u>	<u>79</u>	YES/ <u>NO</u>	<u>TH</u>
Fusible Element/Blank	<u>NA</u>		YES/NO	<u>TH</u>

### Valve Bonnet Torque Settings (ft-lbs)

Valve	Initial Torque	Final Torque	Tightening required	Spring Washers	Tech
Fill Valve - Yellow	<u>Vender set</u>		YES/ <u>NO</u>	YES/ <u>NO</u>	<u>TH</u>
Pressure Valve - Green	<u>Vender set</u>		YES/ <u>NO</u>	YES/ <u>NO</u>	<u>TH</u>
Vent Valve - Red	<u>Vender set</u>		YES/ <u>NO</u>	YES/ <u>NO</u>	<u>TH</u>

### Leakproofness test @ 86 psig

Manlid	Fill Valve	Pressure Valve	Vent Valve	Relief Valve	Fusible/Blank	Fill Bonnet	Pressure Bonnet	Vent Bonnet
<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>	<u>OK</u>

Record Sheets checked

Yes/No YES Initials TH

Dome Cover Secured

YES

Seal Number

GLS 000012

Hazard Signs covered:

NO

Initials

TH

The vessel contains dry air/nitrogen @ -4.31°C Dew point at a pressure of 10 psig

Released to

GLS

(Haulier)

Suttles

Vehicle Reg. No.

NA

Date: 12/2/2013

for GLS

Tim Hudson

Time:

8:00/A



# CHEMTURA CORPORATION

## LEAK TEST REPORT

Date: 11/19/2013

Reporting Marks and Number: BOBU 000019-7

Surface Preparation Acceptable: Yes ☒ No ☐

Purpose of Test: Verify leakproofness

Test Conditions: Pneumatic pressure of 86 psig at ambient temperature applied for 15 min.

Leak Test Solution used: BIG BLUE

Surface Temperature of Component(s) being tested: AMBIENT ° F ° C

Pressure Gauge #1: TRANSCAT  
Identification Number: SN#WO00027295.3 Range: 0-200 psig  
Calibration Due Date: 10/16/2014

Pressure Gauge #2:  
Identification Number: \_\_\_\_\_ Range: \_\_\_\_\_ psig  
Calibration Due Date: \_\_\_\_\_

Gas or Medium Used:  
☒ Air ☐ Nitrogen ☐ Other: \_\_\_\_\_ Test Pressure Used: 86

Test Results: 

NO LEAKAGE OR DEFORMATION WAS NOTED DURING PERFORMANCE OF TEST

Performed by, Date: <u>11/19/2013</u> D. BOLDING	Witnessed by, Date: <u>11/19/2013</u> Robert McHenry
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# CHEMTURA CORPORATION

## HYDROSTATIC TEST REPORT

Date: 10/17/2013

Reporting Marks and Numbers BOBU 000019-7

Surface Preparation Acceptable: Yes ☒ No ☐

Purpose of Test: Verify 1 1/2 x MAWP

Test Conditions: Hydrostatic Pressure of 150 psig at ambient temperature applied for 20 min.

Surface Temperature of Component(s) being tested: YES AMBIENT ° F ° C

**Pressure Gauge #1:**

Identification Number: SN#1302560 Range: 0-300 psig

Calibration Due Date: Dec-13

**Pressure Gauge #2:**

Identification Number: \_\_\_\_\_ Range: \_\_\_\_\_ psig

Calibration Due Date: \_\_\_\_\_

**Gas or Medium Used:**

☐ Air

☒ OTHER

Test Pressure Used: 150

**Test Results:**

NO LEAKAGE OR DEFORMATION WAS NOTED DURING PERFORMANCE OF TEST

Performed by, Date: 10/17/2013  
Tim Hudson

Witnessed by, Date: 10/17/2013  
ROBERT MCHENRY