



Joel Norton  
API 510/570

# API 510 REPORT

95845 Gallon Stainless Steel 4800 Gallon Drum Internal/ External  
Report



Acuren Inspection  
101 Old Underwood Rd  
La Porte, TX 77571  
(281) 228-0000  
WWW.ACUREN.COM

## API 510 Report

Item: 95845 4800 Gallon Stainless Steel Drum

Client:	Louisiana Chemical Equipment Co. LLC.
Contact:	Dennis Vaughn
Equipment Location	Louisiana Chemical 10111 Fostoria Road Cleveland, Tx
Equipment#	95845
Inspector:	Joel Norton API 510# 57112

### EXTERNAL CHECKLIST

COMPONENT	DESCRIPTION	CONDITION	REPAIR RECOMENDATION	COMMENTS
Manway 1 top head	16" Manway	Acceptable	NA	SS Nozzle/ CS repad
Manway 2 Shell	24" Manway	Acceptable	NA	Cleanliness issues prevented PT Testing
Manway Cover 1	16" Manway	Acceptable	NA	Cleanliness issues prevented PT Testing
Manway Cover 2	16" Manway	Acceptable	NA	Cleanliness issues prevented PT Testing
Heads	SS Head	Acceptable	NA	Cleanliness of external heads prevented PT testing
Shell	SS Shell	Acceptable	NA	Cleanliness of external shell prevented PT testing
Flanges		Acceptable	NA	
N1	14" SS nozzle	Acceptable	NA	CS Gussets and Repad
N2	8" SS Nozzle	Acceptable	NA	CS Steel repad
N3	6" SS Nozzle	Mechanical damage to gasket surface	Recommend to skim cut to restore finish	Damaged GSS, Cleanliness issues prevented PT Testing
N4	4" SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N5	3" SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N6	3/4" SS nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N7	3/4 SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N8	1 1/2 SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N9	6" SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing



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N10	3" SS Nozzle	Mechanical damage to gasket surface	Recommend to skim cut to restore finish	Damaged GSS
N11	¾ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N12	¾ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N13	1 ½ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N14	1 ½ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N15	1 ½ SS Nozzle	Damaged	Replace nozzle	Cut off before flange
N16	1 ½ SS nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N17	Top 4" SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N18	¾ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N19	¾ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N20	¾ SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N21	4" SS Nozzle	Acceptable	NA	Cleanliness issues prevented PT Testing
N22		Acceptable	NA	Cleanliness issues prevented PT Testing
N23		Acceptable	NA	Cleanliness issues prevented PT Testing
N24		Acceptable	NA	Cleanliness issues prevented PT Testing
N25		Acceptable	NA	Cleanliness issues prevented PT Testing
N26			NA	Cleanliness issues prevented PT Testing
N27			NA	Cleanliness issues prevented PT Testing
Support Legs	4 Carbon steel support legs	External corrosion	Blast and recoat	
Stiffening Rings	Carbon steel rings	External corrosion	Excavate crack, weld out defect	Long crack like indication between middle (2 <sup>nd</sup> from bottom head) stiffening ring and shell. (Seen in Pictures)
Dataplate	Secure	N/A	N/A	Secure and Legible
Seat supports		N/A	N/A	No issues



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## **INTERNAL SUMMARY:**

An API 510 internal and external inspection of the 4800 gallon stainless steel vessel 95845 was conducted on June 26th 2020. This inspection was made to collect data in order to evaluate the mechanical integrity of this 4800 gallon tank. This inspection consisted of external, limited Internal, ultrasonic thickness testing exams by qualified Level II technician. The third-party inspector was not provided with the vessels past inspection history or repair records, no information for future process service was given; without this information the remaining life and pressure limits of this vessel are unknown at the time of inspection. Vessel 95845 was inspected in the main inventory yard and limited internal access was gained through the available top and bottom nozzles. Two long linear crack like indication were noted along the vessels mid stiffening ring. This vessel had no removable internal components and had areas where internal brackets had been cut and removed at some point in the vessel's history. During this inspection, no Liquid Dye Penetrant Testing was performed because of external cleanliness issues. No material verification was performed during this inspection. No radiography was performed during this inspection.

(See attached UT report for ultrasonic thickness evaluation)

All major issues with are listed below in this report's details.

## **CLEANING CONDITION:**

Unknown

## **SHELL:**

The internal shell was discolored and dirty but generally smooth with no signs of pitting or cracking. No bulges, breaks, or buckles were observed.

## **HEADS:**

The internal top and bottom heads were smooth with no signs of pitting or cracking. No bulges, breaks, or buckles were observed.

## **NOZZLES:**

Nozzles on this vessel were seen with no plugging, distortion. Though all nozzles were stainless steel, some had carbon steel repads, and gussets.

\*Nozzle N15 has been cut off making it non-functional and in need of repair



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### WELDS:

\*Limited inspection, all welds viewed from Nozzle N1 and through other available nozzles.

- Internal circ welds between the heads and shell were full profile with no visible damage.
- Internal horizontal seam weld was seen with full profile with no visible damage.

### GASKET SURFACES:

Raised face gasket surfaces on available nozzles were seen to be in good condition with full serrations and acceptable face height with the exception of nozzles- N3, and N10 ( Both flange face were mechanically damaged and in need of surface restoration) Most slip flanges have been damaged by arc gouger, consider replacement if used.

### PHOTOS



General view of 4800 gallon vessel 95845



Dataplate secure and legible

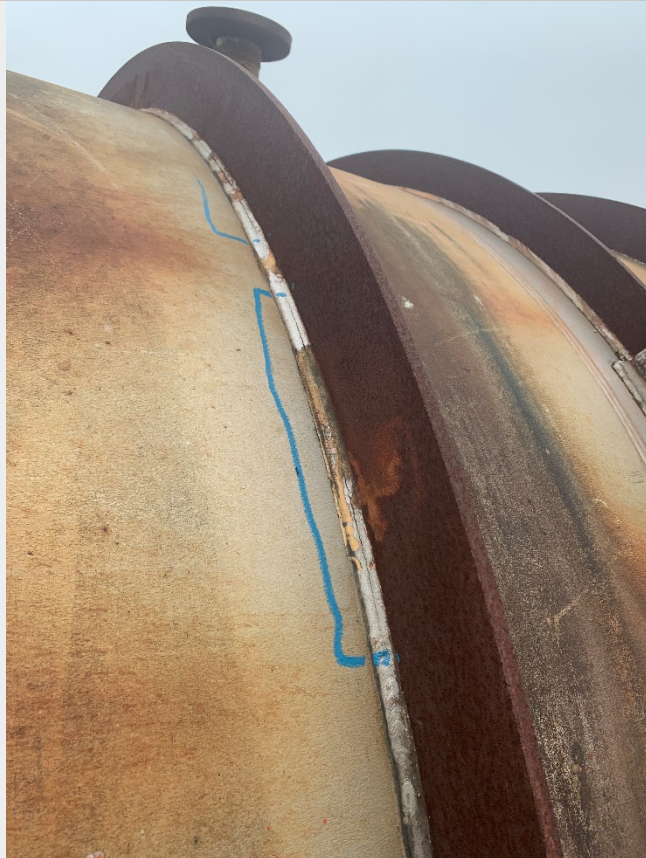




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General view of bottom head and drain nozzles



General view bottom support legs



Overview of crack like indication between shell and stiffening ring



Looking down, vessel top

Close up view of crack like indication between the shell and stiffening ring



Side view of top head



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Damaged nozzle N16



SS Nozzle with carbon steel support gussets



SS nozzle with CS Repad



SS nozzle with CS Repad



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Damaged Slip Flange



SS Nozzle with CS gussets

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Mechanical damage to gasket surface, recommend to skim cut to restore finish



Mechanical damage to gasket surface, recommend to skim cut to restore finish



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General view of internal vessel



Alternate general view of internal vessel. (Weld full profile)

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Internal view of manway (No Damage)



Sample view of shell to head weld

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Comprehensive view of internal shell looking at the top head



Sample view of unused brackets



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Sample view of vessel floor



Sample view of vessel shell wall looking up



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Sample of manway to shell weld condition



Alternate view of manway to shell weld

Inspector	API Certification	Date of Inspection
Joel Norton	57112	06/26/2020