



**International Quality Consultants, Inc.
106 Freeport Road
Butler, PA 16002**

Nondestructive Examination and
API 510 Inspection of
Pressure Vessel No. T-50 #3 Stripper Column
September 16, 2003
Neville Island Plant
Sunoco Chemical Company
Pittsburgh, Pennsylvania

John Winter
API 510 Certification No. 1620

Report No. 1255 - 24 -03

TABLE OF CONTENTS

Executive Summary

Appendix A – API Visual Inspection Report

Appendix B – Ultrasonic Thickness Test Report

Appendix C – Manufacturer's Drawing

Appendix D – U-1A Form for Vessel No. T-50 #3 Stripper Column

Appendix E – Photographs

EXECUTIVE SUMMARY

On September 16, 2003 International Quality Consultants, Inc. personnel performed a visual and UT thickness inspection of Equipment No. T-50 #3 Stripper Column at the Neville Island Plant of the Sunoco Chemical Company of Pittsburgh, Pennsylvania. This represented the first evaluation of this vessel performed by International Quality Consultants, Inc. The inspection was performed in accordance with API 510 Standard, Eighth Edition June 1997 – Addendum 1 – December 1998, Addendum 2 – December 2000, Addendum 3 – December 2001.

Based upon the results of the evaluation, recommendations are made in Appendix A – API Visual Inspection Report.

Nondestructive Examination

The nondestructive examinations included ultrasonic thickness examinations only. Previous report data was not available at the time of this inspection. Each NDE examination was performed in accordance with the applicable requirements of API-510, ASME Section V and IQC Procedure UT-TM-1 Rev. 2.

SEPTEMBER 16, 2003 INSPECTION

An API inspection report is provided in Appendix A. An NDE report of the vessel is provided in Appendix B, which shows the locations where ultrasonic thickness measurements were taken. The inspection of this vessel commenced with a visual examination of each designated inspection area. This was followed by an ultrasonic evaluation.

Visual Inspection

See Appendix A for results of the visual inspection.

Wall Thickness Measurements

Wall thickness measurements were recorded at several areas along the length of the vessel. The results of the wall thickness measurements are provided on the tabulated form which coincides with drawing nozzle designations and/or attached sketches in the UT report.

The manufacturer's drawing has been provided in Appendix C and the U-1A Form is provided in Appendix D.

CONCLUSIONS

Recommended Repairs

Install ground wire.

Recommendation for Next Inspection

Per API-510 and State requirements.

APPENDIX A

API VISUAL INSPECTION REPORT SEPTEMBER 2003



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Date: 09/16/03

API 510 Visual Inspection Report

Equipment # T-50

Description: #3 Stripper Column.

API Inspector: John Winter

API 510 Registration #: 1620.

External Inspection:

Visual inspection performed on column nozzles, and insulation. No ground wire attached from support lug to structural steel was not found. Column is in good condition. Insulation is in good condition. See attached photograph.

Internal Surface
Shell Inspection:

Internal inspection of column top section, through the 16" DIA blanked outlet was performed. The welds and surfaces are in good condition. See attached photo.

Internal Components
Inspection:

The demister pad in the top section of the column is in good condition. Look at attached photograph .

Channel Head
Inspection:

N/A.

Recommended Repairs:


Install ground wire.

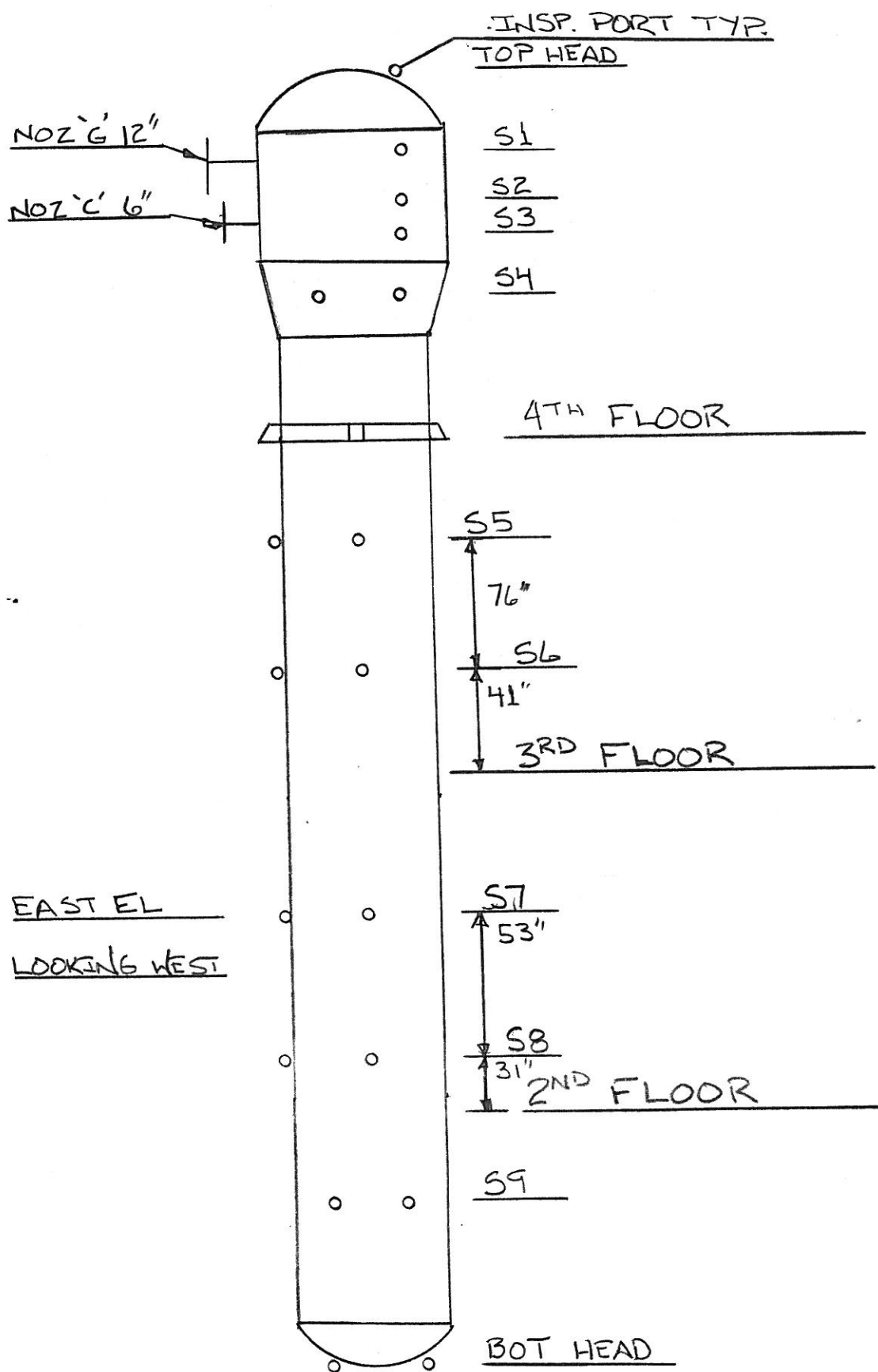
Recommendation for
Next Inspection:

Reinspect per API-510 and State regulation requirements.

APPENDIX B

ULTRASONIC THICKNESS INSPECTION REPORT

ULTRASONIC THICKNESS TEST REPORT			
	TECHNICIAN Paul Brinks/Bob Chittister		DATE 9/17/03
			PAGE 1 OF 3
	CUSTOMER Sunoco		LOCATION Neville Island
	ITEM IDENTIFICATION T-50 Stripper Column		CLIENT REP. Mike Sonnet
P.O. No./DWG No.		UNIT # PX 2 & 3 Train	JOB No. 1255
COMPONENT DATA: <input checked="" type="checkbox"/> PIPE <input type="checkbox"/> TANK <input type="checkbox"/> CASTING <input type="checkbox"/> WELD <input type="checkbox"/> PLATE <input type="checkbox"/> FITTING <input type="checkbox"/> Exchanger Vessel NOMINAL THICKNESS: <u>See Below</u> PER REF. U1 Data Report MATERIAL TYPE: <u>CS</u> SPEC: *CLADDING: <u>None</u> SURFACE CONDITION: <input type="checkbox"/> SAND BLASTED <input type="checkbox"/> GRIT BLASTED <input type="checkbox"/> GROUND <input checked="" type="checkbox"/> OTHER: <u>Stainless</u> SURFACE TEMP: <u>70 Degrees</u>		TRANSDUCER Mfr: MODEL #: <u>FH2E</u> TYPE: <u>Std. Probe</u> SER #: <u>H18463</u> FREQ: <u>8 MHz.</u> DIAM: <u>0.380</u> CALIBRATION FREQ: <input type="checkbox"/> 1 HR <input checked="" type="checkbox"/> 2 HR CAL STD.: <input checked="" type="checkbox"/> STEPWEDGE <input type="checkbox"/> INSTRUMENT <input checked="" type="checkbox"/> <u>Serial No. A05335</u> CALIBRATION SHT. ATTACHED: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
INSTRUMENT MFG: <u>Krautkramer</u> MODEL #: <u>DM4DL</u> SERIAL #: <u>440586</u> TEI CONTROL #: <u>N/A</u> CALIBRATION DUE: <u>7/21/04</u>		SKETCH: <u>See Attached</u> <u>SHELL PER U1</u> MAT'L: SA-312 TYPE 304 NOMINAL THICKNESS: .250"	
COUPLANT <u>Sonotech</u> BATCH #: <u>UG25004</u> P.O. #: _____		<u>HEADS PER U1</u> MAT'L: SA-240 TYPE 304 NOMINAL THICKNESS: .250"	
TEST PARAMETER GRID PATTERN: _____ PER SKETCH		<u>NOZZLE DATA PER U1</u> NOZ "C", 304 SS SCH. 40 (.280" THCK.) NOZ "G", SA240 TYPE 304 (.312" THCK.)	
REFERENCE PTS:		*ALL THICKNESS VERIFICATION WAS DONE AT CLIENT SUPPLIED INSPECTION REPORTS.	
NOTES: High Sensitivity Fingertip Standard Probe			
TOTAL # OF READINGS TAKEN: <u>See Attached</u> LOWEST READING OBTAINED: <u>See Attached</u>			

T-50 STRIPPER COL.

UT Thickness Reading Data Sheet

Equipment ID # T-50

Date: 9/17/03

Equipment Description: Stripper Column

Shell

.250

S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9
NE-.270	NE-.269	NE-.269	NE-.278	NE- ----	NE- ----	NE- ----	NE- ----	NE-.289
SE- ----	SE- ----	SE- ----	SE-.287	S-.272	S-.265	S-.270	S-.278	SE-.274
E- ----	E- ----	E- ----	E- ----	E-.274	E-.278	E-.295	E-.273	E- ----
W- ----	W- ----	W- ----	W- ----	W- ----	W- ----	W- ----	W- ----	W- ----

Heads

.250

H-
* As shown on sketch @ NE Corner - .259"

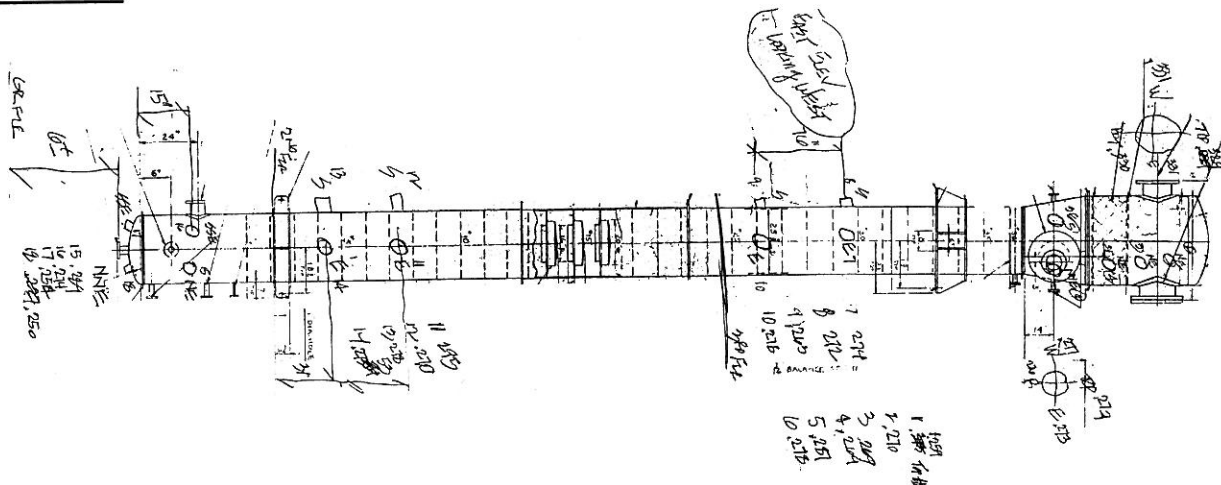
H-
* As shown on sketch @ NE Corner - .250" / @ SE Corner - .254"

Nozzles

(.280")(.312")

C	G
T-.273	T-.329
B-.276	B-.330
E-.273	E-.331
W-.277	W-.331

SKETCH:



APPENDIX C

MANUFACTURER DRAWINGS

APPENDIX D

U-1A FORM FOR VESSEL NO. T-50 #3 Stripper Column

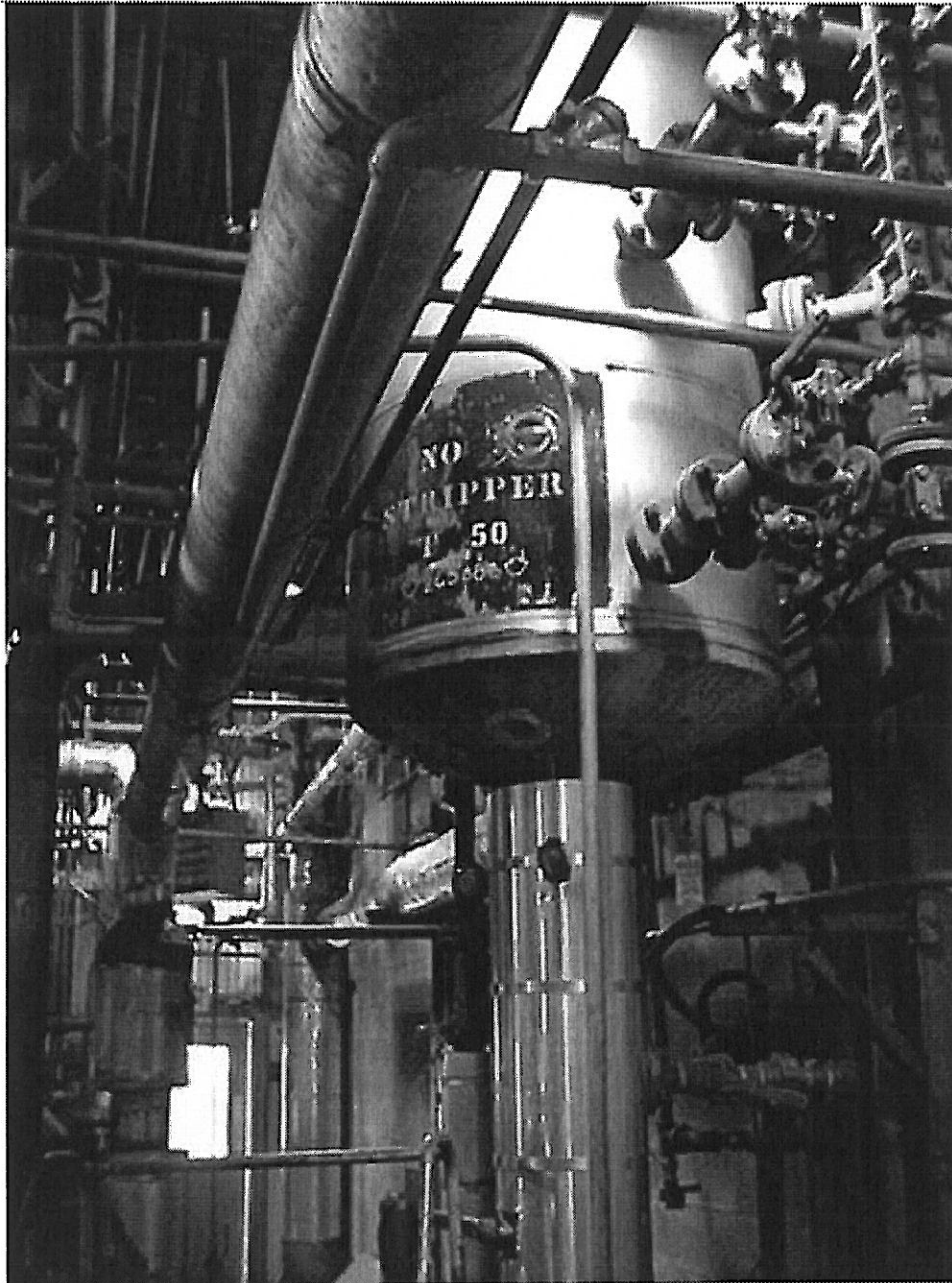
Note: The U-1A Form was not provided for this vessel.

APPENDIX E

PHOTOGRAPHS



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T-50 - Bottom



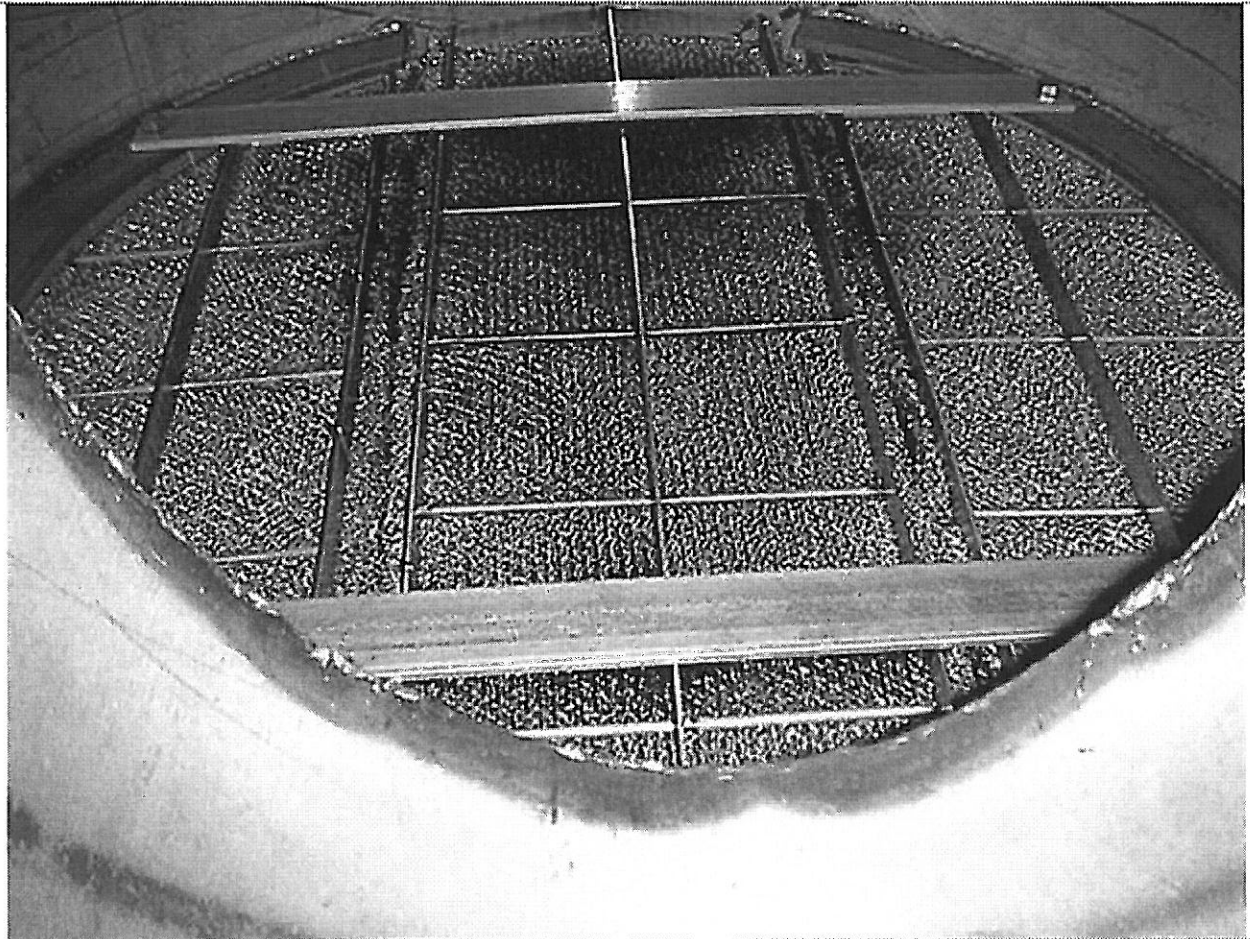
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T-50 – Inlet Nozzle



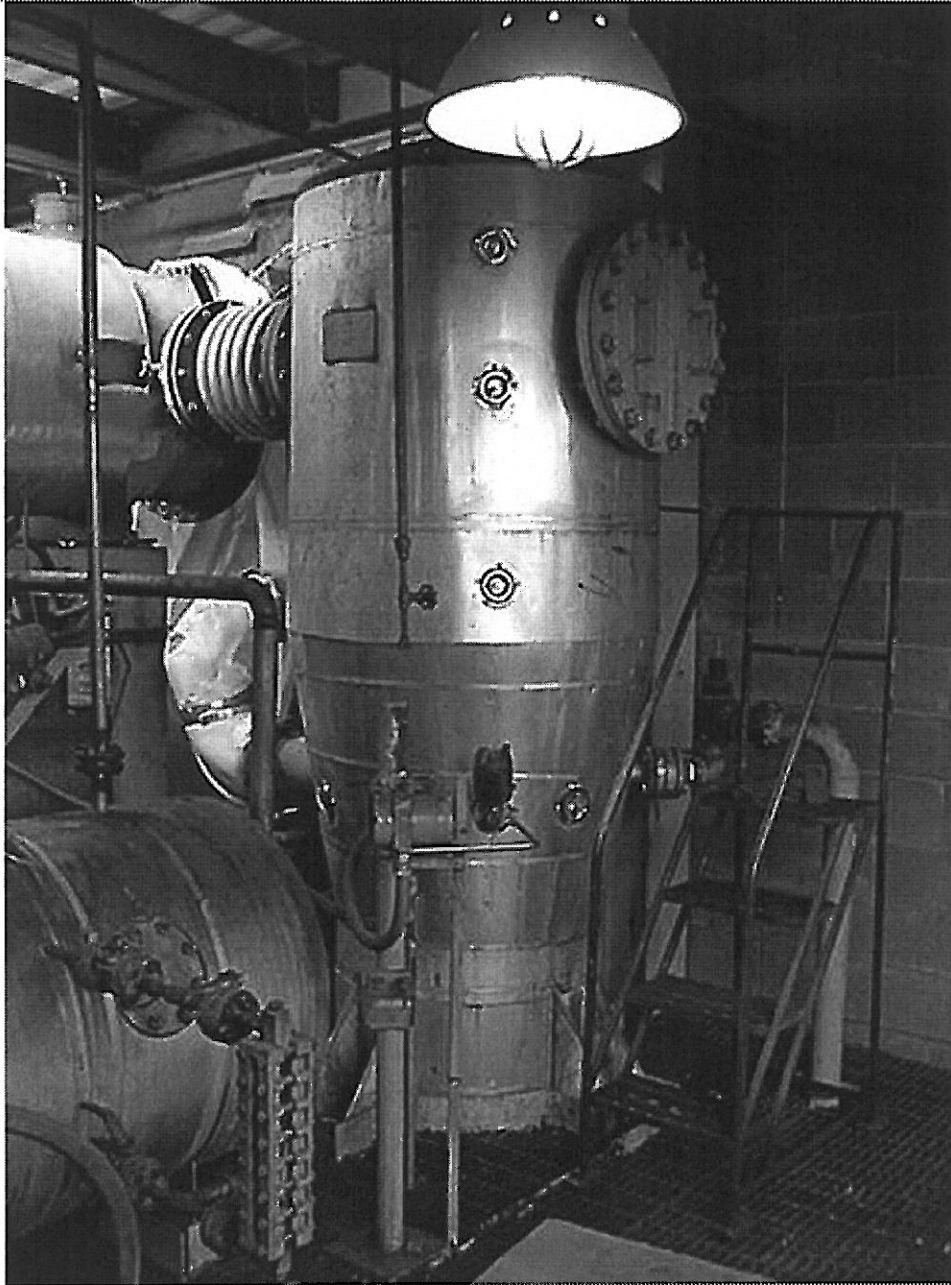
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T-50 – Mesh Screen at Top



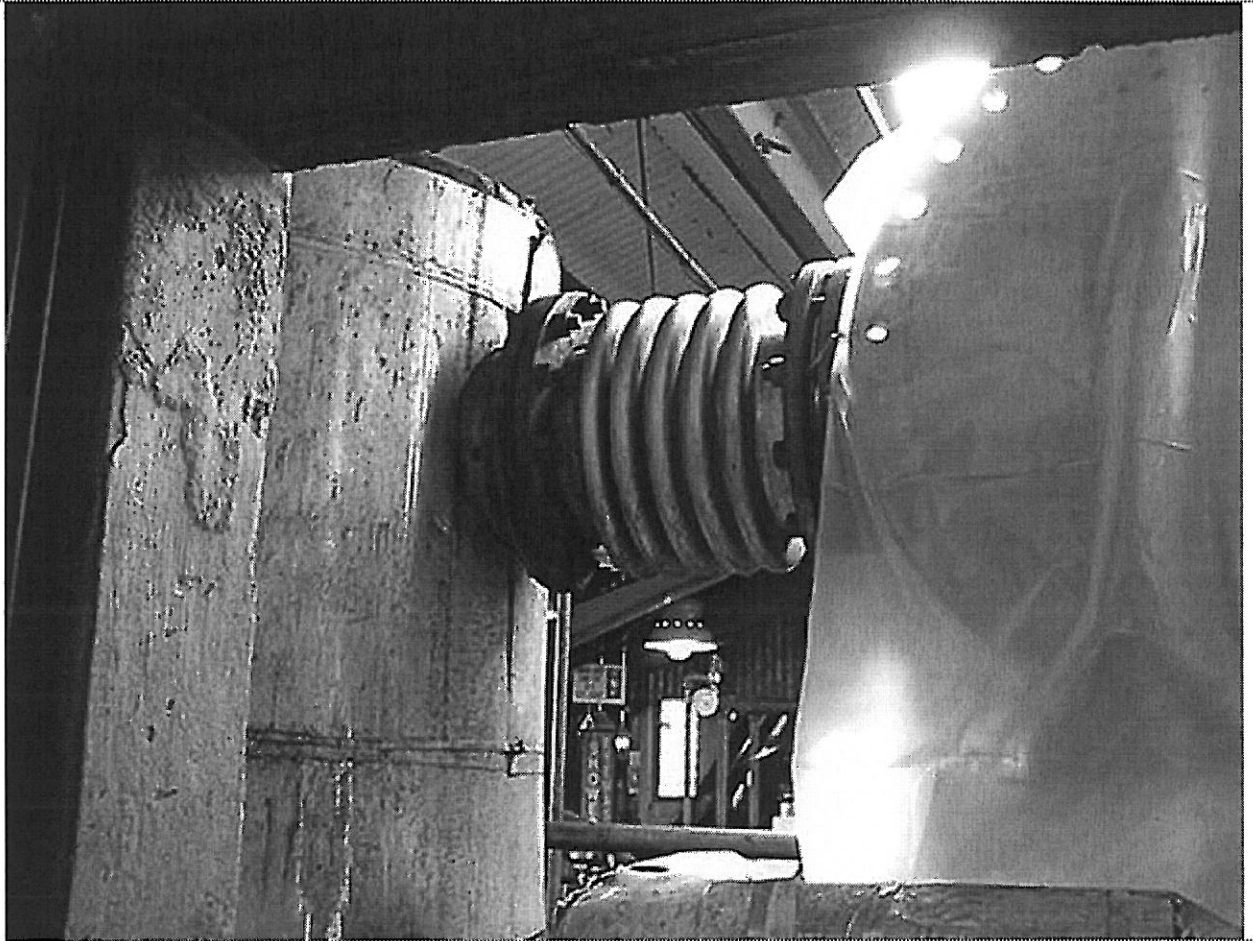
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T-50 – Top on Manway



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T-50 – Top at Vapor Outlet