

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

APPROVAL REQUESTED OF: [] Precedent [X] AAR Tank Car Committee Ballot AAR APPLICATION NO. A-777041 Applicant's No. 3639 Date 5-18-77

Applicant UNION TANK CAR CO., 151ST & RAILROAD AVE., EAST CHICAGO, IND. 46312

APPLICATION FOR APPROVAL OF: [X] Construction [] Conversion [] Alterations [] Welded [] Repairs (Other) Reporting Marks and Car Numbers DOWX 4448 THRU 4482 INCL. Number of Cars 35

- 1. Tank Specification DOT 105A300W
2. Stenciled Specification Same
3. Commodity Vinyl Chloride
4. Initial Commodity Wt. Per Gal., Lbs. 7.68
TANK SHELL:
5. Full Water Capacity, Gal. 25,700
6. Dome Capacity or Outage, Gal. N/A
7. Material & Thickness TC-128-B; Head=19/32" Shell=9/16" Except Center Sheet - 19/32"
8. Lining None Inside Diameter, In. 112 7/8
9. Head Radii: Main, In. 2:1 Knuckle, In. N/A
10. Test Pressure, PSI 300
11. Insulation, In. 4 Kind Fiberglass Thermal Conductivity, BTU/Hr/Sq. Ft./°F/In. 0.26

- SAFETY RELIEF DEVICES:
12. Type Safety Valve Start to Discharge, PSI 225 Number 1 Discharge, PSI 2884
13. Flow Capacity, CFM (Air) Actual 2884
14. Flow Capacity, CFM (Air) Required 293
15. Tank Surface Area, Sq. Ft. 1585
CAR STRUCTURE:
16. Bolster Slabbing Area, Sq. Ft. N/A
17. Estimated Light Wt., Lbs. 86,000
18. Center of Gravity Loaded, In. 87.3
19. Rail Load Limit, Lbs. 263,000
20. Truck Capacity, Tons 100 (3 11/16" Spring Travel)
21. *Max. Allowable Lbs./Gal. or Filling Density % 82.6
22. AAR Clearance Diagram Pl. "C"

NOTES: *This Filling Density Is Based On Rail Load Limit and IS Not the Maximum Permitted Filling Density Shown In DOT 173.314

Table with columns: The Following Drawings Apply, Drawing Number, Drawing Number, Application Number. Rows include items 23-37 with drawing numbers like 79166-01, 79163-A, 77993, etc.

REVISIONS:

APPLICATION BY G. J. Griger
I certify that the foregoing conforms to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards.
SIGNATURE [Signature]
TITLE Product Engineer

APPROVAL AAR Tank Car Committee Date Approved AUG 18 1977 [Signature] (Signature) on behalf of Tank Car Committee

CERTIFICATION: The cars enumerated below conform to the above approved description and to all applicable DOT and AAR requirements, including Specifications, Regulations, Rules of Interchange and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others required by 49 CFR Part 179.5 before these cars are placed in service.

Initials and Car Numbers: DOWX 4448 thru 4482 incl. Date September 28, 1977. completed. Copy sent to customer via D. C. Tracy. By [Signature] Title Product Engineer

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

AAR APPLICATION NO. F-763034
APPLICANT'S NO. BO 9955
DATE 4/23/76

APPROVAL REQUESTED OF: PRECEDENT AAR TANK CAR COMMITTEE BALLOT

APPLICANT GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: CONSTRUCTION CONVERSION ALTERATIONS WELDED REPAIRS (OTHER) Twenty-five (2)
REPORTING MARKS AND CAR NUMBERS DOWX 4423 to 4447, incl.

1. TANK SPECIFICATION	<u>DOT 105A300W</u>	12. TYPE	<u>Safety Valve</u>
2. STENCILED SPECIFICATION	<u>DOT 105A100W</u>	13. FLOW CAPACITY, CFM (AIR) ACTUAL	<u>1,109</u>
3. COMMODITY	<u>Ethylene Oxide</u>	14. FLOW CAPACITY, CFM (AIR) REQUIRED	<u>283</u>
4. INITIAL COMMODITY WT. PER GAL., LBS.	<u>7</u>	15. TANK SURFACE AREA, SQ. FT.	<u>1,607</u>
5. FULL WATER CAPACITY, GAL.	<u>25,321</u>	16. BOLSTER SLABBING AREA, SQ. FT.	<u>N/A</u>
6. DOME CAPACITY OR OUTAGE, GAL.	<u>None</u>	17. ESTIMATED LIGHT WT., LBS.	<u>84,800</u>
7. MATERIAL & THICKNESS	<u>AAR TC-128 Gr. "B"</u>	18. CENTER OF GRAVITY LOADED, IN.	<u>85 **</u>
	<u>9/16" Shell and Heads</u>	19. RAIL LOAD LIMIT, LBS.	<u>263,000</u>
8. LINING	<u>None</u>	20. TRUCK CAPACITY, TONS	<u>100</u>
	INSIDE DIAMETER, IN. <u>108</u>	21. * MAX. ALLOWABLE LBS./GAL. OK XXXXX XXXXX	<u>7.2</u>
9. HEAD RADII: MAIN, IN. <u>2:1 Ellips.</u>	KNUCKLE, IN. <u>N/A</u>	22. AAR CLEARANCE DIAGRAM PL.	<u>C</u>
10. TEST PRESSURE, PSI	<u>300</u>		
11. INSULATION, IN.	<u>4</u>		
	KIND <u>GWB @ 3/4# Density</u>		
	THERMAL CONDUCTIVITY, BTU/HR/SQ. FT./°F/IN. <u>.253</u>		

NOTES: * THIS FILLING DENSITY IS BASED ON RAIL LOAD LIMIT AND IS NOT THE MAXIMUM PERMITTED FILLING DENSITY SHOWN IN DOT 173.

** 3-11/16" Travel Springs, 47'-1-1/2" T.C.
Cars stenciled: "ETHYLENE OXIDE ONLY"
Line 21 is calculated with 2% outage in the tank as for flammable liquids.

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENT	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-2017	1058-1767	A-733081
24. ARRANGEMENT, TANK	1042-42-4	1042-42-2-B	A-733081
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1042-42-4	1042-42-2-B	A-733081
26. ANCHORAGE, INCLUDING CALCULATIONS	<u>U/E and Draft Sill</u>	0-1210-339	A-743338-A
27. FITTINGS ARRANGEMENT	1049-800	1049-736	A-733081
28. MANWAY ASSEMBLY/COVER	1078-422-1	1078-418-1-A	A-763024
29. PROTECTIVE HOUSING	1194-54-D	1194-54-B	A-733081
30. VENTING, LOADING AND DISCHARGE VALVES	<u>Jamesbury AZFRA-22-36-TT</u>	D-2994	A-763029-A P
31. SAFETY RELIEF DEVICES	<u>Midland A-1075</u>	A-1000	A-753111
32. XXXXXXXXXX	<u>Manway Cover Plate</u>	339-509	A-733081
33. LAGGING DEVICES	<u>Midland</u>	B-612	A-763029-A P
34. XXXXXXXXXX	<u>Eduction Pipe Arrangement</u>	1132-398	A-733081
35. REPAIRS			
36.			
37.			

REVISIONS:

APPROVAL BY AVV for A.E. Price TITLE CHIEF ENGINEER, TRANSPORTATION DIVISION
APPROVAL AAR Tank Car Committee DATE APPROVED MAY 13 1976 P.C. Peber
(Signature) on behalf of Tank Car Committee

CERTIFICATION: THE CARS ENUMERATED BELOW CONFORM TO THE ABOVE APPROVED DESCRIPTION AND TO ALL APPLICABLE DOT AND AAR REQUIREMENTS, INCLUDING SPECIFICATIONS, REGULATIONS, RULES OF INTERCHANGE AND THE DOT RAILROAD SAFETY APPLIANCE STANDARDS.

INITIALS AND CAR NUMBERS:

DOWX 4423 to 4447

DATE May 13, 1976
BY A. J. Y. for A.E. Price
TITLE Chief Engineer

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

AAR APPLICATION NO. F-763082

APPROVAL REQUESTED OF: PRECEDENT

AAR TANK CAR COMMITTEE BALLOT

APPLICANT'S NO. BO 9964
DATE 4/23/76

APPLICANT GENERAL AMERICAN TRANSPORTATION CORPORATION

APPLICATION FOR APPROVAL OF: CONSTRUCTION CONVERSION ALTERATIONS WELDED REPAIRS (OTHER)

REPORTING MARKS AND CAR NUMBERS DOWX 4418 to 4422, incl. NUMBER OF CARS Five (5)

1. TANK SPECIFICATION <u>DOT 105A300W</u>	12. TYPE <u>Safety Valve</u>
2. STENCILED SPECIFICATION <u>DOT 105A300W</u>	13. FLOW CAPACITY, CFM (AIR) ACTUAL <u>2,884</u>
3. COMMODITY <u>Vinyl Chloride</u>	14. FLOW CAPACITY, CFM (AIR) REQUIRED <u>281</u>
4. INITIAL COMMODITY WT. PER GAL., LBS. <u>See 21</u>	15. TANK SURFACE AREA, SQ. FT. <u>1,607</u>
5. FULL WATER CAPACITY, GAL. <u>25,321</u>	16. BOLSTER SLABBING AREA, SQ. FT. <u>N/A</u>
6. DOME CAPACITY OR OUTAGE, GAL. <u>None</u>	17. ESTIMATED LIGHT WT., LBS. <u>84,800</u>
7. MATERIAL & THICKNESS <u>AAR TC-128 Gr. "B"</u>	18. CENTER OF GRAVITY LOADED, IN. <u>85 **</u>
8. LINING <u>None</u>	19. RAIL LOAD LIMIT, LBS. <u>263,000</u>
9. HEAD RADII: MAIN, IN. <u>2:1 Ellips.</u>	20. TRUCK CAPACITY, TONS <u>100</u>
10. TEST PRESSURE, PSI <u>300</u>	21. * MAX. ALLOWABLE USX/PAK/XX FILLING DENSITY % <u>84</u>
11. INSULATION, IN. <u>4</u>	22. AAR CLEARANCE DIAGRAM PL. <u>C</u>
THERMAL CONDUCTIVITY, BTU/HR/SQ. FT./"F/IN. <u>.253</u>	

NOTES: * THIS FILLING DENSITY IS BASED ON RAIL LOAD LIMIT AND IS NOT THE MAXIMUM PERMITTED FILLING DENSITY SHOWN IN DOT 173.31

** 4-1/4" (D-7) Travel Springs, 47'-1-1/2" T.C. Cars equipped with ASF T-11 Trucks.

Cars stenciled: "VINYL CHLORIDE"

THE FOLLOWING DRAWINGS APPLY	DRAWING NUMBER	PRECEDENT	
		DRAWING NUMBER	APPLICATION NUMBER
23. GENERAL ARRANGEMENT	1058-2026	1058-1767	A-733081
24. ARRANGEMENT, TANK	1042-42-4	1042-42-2-B	A-733081
25. REINFORCED OPENINGS, INCLUDING CALCULATIONS	1042-42-4	1042-42-2-B	A-733081
26. ANCHORAGE, INCLUDING CALCULATIONS <u>U/E and Draft Sill</u>	0-1210-339	--	A-743338-A
27. FITTINGS ARRANGEMENT	1049-736-C	1049-736	A-733081
28. MANWAY ASSEMBLY XXXX	1078-422-1	1078-418-1-A	A-763024
29. PROTECTIVE HOUSING	1194-54-D	1194-54-B	A-733081
30. VENTING, LOADING AND DISCHARGE VALVES <u>Jamesbury AZFRA-22-36-TT</u>	D-2994	--	A-763029 Pend.
31. SAFETY RELIEF DEVICES <u>Midland A-1225</u>	255-289-B	--	A-753121-B
32. XXXXXX <u>Manway Cover Plate</u>	339-509	--	A-733081
33. GAGING DEVICES <u>Midland</u>	B-612	--	A-763029 Pend.
34. XXXXXX <u>Eduction Pipe Arrangement</u>	1132-398	1132-358-A	A-733081
35. REPAIRS			
36.			
37.			

REVISIONS:

APPLICATION BY AVV for A.E. Price TITLE CHIEF ENGINEER, TRANSPORTATION DIVISION

APPROVAL AAR Tank Car Committee DATE APPROVED MAY 13 1976 P.C. Peber
(Signature) on behalf of Tank Car Committee

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INITIALS AND CAR NUMBERS: DOWX 4418 to 4422

DATE May 13, 1976

BY A. V. Price TITLE Chief Engineer