



NATIONAL TRANSPORTATION SAFETY BOARD
Investigative Hearing

Norfolk Southern Railway general merchandise freight train 32N
derailment with subsequent hazardous material release and fires,
in East Palestine, Ohio, on February 3, 2023

GROUP	F
EXHIBIT	
29	

Agency / Organization

Trinity Tank Car, Inc.

Title

**Application for Approval and Certificate of
Construction, TILX402025, July 14, 2016**

APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION

1 APPROVAL REQUESTED OF: Non-Precedent

2 TYPE: Construction

3 AAR NO: L166086

4 DATE: 07/14/2016

4.1 ORDER DATE: 06/03/2016

5 APPLICANT'S NO: T16043

7 TANK SPECIFICATION: DOT-105A300W

8 STENCILED SPEC: DOT-105J300W

10 NUMBER OF CARS: [REDACTED]

6 APPLICANT: TRINITY TANK CAR, INC.
P.O. BOX 568887
DALLAS, TEXAS 75356-8887

9 REPORTING MARKS AND CAR NUMBERS: TILX [REDACTED]

11	Initial Commodity	VINYL CHLORIDE, INHIBITED	12	Density (LB Per Gallon)	7.6
13	Full Water Capacity (Gallons)	25100	14	Dome Capacity or Outage (Gallons)	per DOT 173.24b(a) (1)
15	Material Type / Grade Heads	AAR TC-128, Gr. B	15.1	Tank Head Material Normalized	Yes
15.2	Tank Head Spliced	No	15.3	Charpy Requirements	-30F Transverse
16	Material Type and Grade Shell	AAR TC-128, Gr. B	16.1	Tank Shell Material Normalized	Yes
16.2	Charpy Requirements	-30F Transverse	17	Material Thickness Heads (Inches)	.5625
18	Material Thickness Shell (Inches)	.5625	19	Lining Type	None
20	Inside Diameter - Center (Inches)	116	21	Inside Diameter - End Rings (Inches)	116
22	Head Radius, Main (Inches if not 2:1)	2:1	23	Test Pressure (PSI)	300
24	Insulation Type	FC-Fiberglass & Ceramic Fiber	25	Insulation Thickness (Inches)	3.5
26	Thermal Conductivity (BTU - in/hr. -ft sq. - degree F)	.257	27	Type of Safety Relief Devices	Valve
27.1	Number of Safety Relief Devices	1	28	Pressure Relief Device Start-to-Discharge (PSI)	247.5
29	Pressure Relief Device Flow Capacity (CFM Required)	326	30	Pressure Relief Device Flow Capacity (CFM Actual)	37,254
31	Tank Surface Area (Sq Ft)	1510	32	Underframe or Stub Sill Type	TRN024-TRN024 Stub Sill Design
33	Center of Gravity, Loaded (Inches)	89.5	34	Estimated Light Weight (lb)	83500
35	AAR Clearance Diagram	C	36	Rail Load Limit (lb)	263000
37	Truck Capacity (Tons)	100	38	Head Shield Type	F-Full Shield
38.1	Head Shield Thickness (inches)	.5			

Notes: Other Related Drawings are attached which should be verified.

Original Certificate:

Builder:

Date:

Former lading:

The Following Drawings Apply:

- 39 General Arrangement
- 40 Tank Arrangement
- 41 Reinforced Openings, Including Calculations
- 42 Anchorage, Including Calculations
- 43 Fittings Arrangement
- 44 Manway Assembly
- 45 Protective Housing
- 46 Venting, Loading, and Discharge Valves
- 47 Pressure Relief Devices
- 48 Heater Systems
- 49 Gauging Devices
- 50 Bottom Outlet Valve
- 51 Repairs
- 52 Manway Cover
- 53 Calculations
- 54 Tank Qualification Drawing

Drawing Number	The Following Prior Approvals Apply:	
	Drawing Number	Application/Certificate No
D- 50431		L156068
D- 52473 SH. 1B		
D- 52473 SH. 2B & 3B		
D-640435 SH. 1C & 2C		L166070
F-020-T16043 SH. 1, 2 & 3.		
T-032-80051C		
F-050-80039B		L156025
SEE PAGE 2		
MIDLAND A-37247		PRD 072003
NONE		
MIDLAND B-612		E102005
NONE		
F-300-80071 SH. 1 & 2		L166071
K-018-2013		L156068
D-50432		L156068

REVISIONS:

APPLICATION BY: Samuel Coates

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: Samuel Coates

TITLE: Project Engineer

APPROVAL - AAR Tank Car Committee

Date Approved 08/30/2016 Kenneth Dorsey

(signature) on behalf of the 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, as required by 49 CFR Part 179.5, before these cars are placed in service

Initials and Car Numbers:

TILX [REDACTED]

Name: Dean Matzo

Date: 10/24/2016

Title: Vice President Quality

8 CARS ARE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE DOT/TC AND AAR REQUIREMENTS. CAR BODY STRUCTURE MEETS THE REQUIREMENTS OF S-286-2006.

11 AND PRODUCTS AUTHORIZED IN DOT PART 173 FOR WHICH THERE ARE NO SPECIAL COMMODITY REQUIREMENTS AND NONREGULATED COMMODITIES COMPATIBLE WITH THIS CLASS OF CAR.

25 3" FG + 0.5" CF

29 VINYL CHLORIDE: *G1 =5.485
START TO DISCHARGE PRESSURE OF 247.5 PSIG PER TABLE A5.

38.1 MATERIAL: ASTM A572-50 STEEL

46 THESE ARE THE VALVES AND FITTINGS REFERENCED ON FITTINGS ARRGT
F-020-T16043 SH. 1 & 2

1. MIDLAND A-720, 2" ANGLE VALVE (QTY.= 3) ----- AAR E112004
2. MIDLAND A-167, 3" LIQUID EXCESS FLOW CHECK VALVE (QTY.= 2) ----- AAR E122001
3. MIDLAND A-146, 2" VAPOR EXCESS FLOW CHECK VALVE (QTY.= 1) ----- AAR E122004
4. MIDLAND A-119-W, 1-1/4" X 3/4" EXCESS FLOW CHECK VALVE (QTY.= 1) ----AAR E092017
5. MIDLAND A-257, 3/4" NEEDLE VALVE (QTY.= 1) ----- AAR E122003

Other Related Drawings:

D- 56056.pdf

JACKET ANCHOR ----- L156096