

FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules

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- 1. Manufactured by Downingtown Iron Works, Inc., Div. of Pressed Steel Tank
(Name and address of Manufacturer) Downingtown, Pa.
- 2. Manufactured for CARDOX CORPORATION, CHICAGO 1, ILLINOIS.
(Name and address of Purchaser)
- 3. Type Horiz Kind Tank Vessel No. (34085) (Mfr.' Serial) (State & State No.)
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Nat'l Bd. No. 34085 Yr. Built 1958)

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of heat exchangers.

- 4. SHELL: Material Stl. SA-212 T.S. 70,000 Nominal Thickness 3/4 in. Corrosion Allowance 0 in. Diam. 4 ft 6 in Length 11 ft 3 in T.L. 11 ft 3 in
(Kind and Spec. No.) (Fig. or F.B. & lowest T.S.)
 - 5. SEAMS: Long Welded Dbl. Butt S.R. No X.R. Spot Sectioned No Efficiency 80 %
(Welded, Dbl. Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)
Girth Welded Dbl. Butt S.R. No X.R. Spot Sectioned No No. of Courses 1
 - 6. HEADS: (a) Material Stl. SA-212 T.S. 70,000 (b) Material Gr. B T.S. 70,000
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)
(a) Ends 9/16 -- -- 2:1 -- -- -- Concave
- If riveted describe seams fully on reverse side of form.
- If removable, bolts used _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

- 7. STAYBOLTS: _____ If hollow _____ Attachment _____ Pitch _____ X _____ Diam. _____
(Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (Nominal)

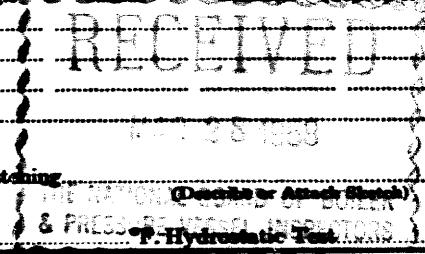
- 8. JACKET CLOSURE: _____
(Describe as ogee & weld, bar, etc. If bar, give dimensions. If bolted, describe or sketch.)
- 9. Constructed for Int. pressure of 363 psi. Max. Temp. 650 °F. Subzero _____ °F. Hydrostatic Test 495-546 psi.

Items 10 and 11 to be completed for tube sections.

- 10. TUBE SHEETS: Stationary. Material _____ Diam. _____ in. Thickness _____ in. Attachment _____
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)
- _____ Floating. Material _____ Diam. _____ in. Thickness _____ in. Attachment _____
- 11. TUBES: Material _____ O.D. _____ in. Thickness _____ inches or gage. Number _____ Type _____
(Kind & Spec. No.) (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

- 12. SHELL: Material _____ T.S. _____ Nominal Thickness _____ in. Corrosion Allowance _____ in. Diam. _____ ft. Length _____ ft. in.
 - 13. SEAMS: Long Welded Dbl. Butt S.R. No X.R. Spot Sectioned No Efficiency 80 %
(Welded, Dbl. Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)
Girth Welded Dbl. Butt S.R. No X.R. Spot Sectioned No No. of Courses 1
 - 14. HEADS: (a) Material _____ T.S. _____ (b) Material _____ T.S. _____ (c) Material _____ T.S. _____
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)
(a) Top, bottom, ends _____
(b) Channel _____
(c) Floating _____
- If riveted describe seams fully on reverse side of form.
- If removable, bolts used (a) _____ (b) _____ (c) _____
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)



- 15. Constructed for Int. pressure of _____ psi. Max. Temp. _____ °F. Subzero _____ °F. Hydrostatic Test _____ psi.

Items below to be completed for all vessels where applicable.

- 16. SAFETY VALVE OUTLETS: Number _____ Size _____ Location _____
- 17. NOZZLES:

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness Per Code	Reinforcement Material	How Attached
Stand Pipe	1	6"	L.J.F. & Pipe	SA-181 & SA-106	"	Steel	Welded
Misc.	6	1-1/2" & 1"	Threaded	SA-106	"	"	"
- 18. INSPECTION: Manholes, No. 1 Size 15 Location in head
- ORINGS: Handholes, No. _____ Size _____ Location _____
Threaded, No. _____ Size _____ Location _____
- 19. SUPPORTS: Skirt _____ Lugs 6 Legs _____ Other _____ Attached Welded to shell
(Yes or No) (Number) (Number) (Describe) (Where & How)
- 20. REMARKS: Vessel used as a CO2 storage tank.

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooler, etc. State contents of each part.)

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this unfired pressure vessel conform to the ASME Code for Unfired Pressure Vessels.

Date Feb. 18, 19 58 Signed Downingtown Iron Works, Inc. By [Signature]
(Manufacturer) E. Darlington

Certificate of Authorization Expires 12-31-58

CERTIFICATE OF SHOP INSPECTION

Insurance Company's Serial Number H.S.B. 34085
VESSEL MADE BY Downingtown Iron Works, Inc. at Downingtown, Pa.

I, the undersigned, holding a Certificate of Competency as an Inspector of Boilers and Unfired Pressure Vessels in THE STATE OF Penna. & Ohio and employed by THE HARTFORD STEAM BOILER INSPECTION AND INSURANCE COMPANY of HARTFORD, CONN., inspected internally and externally, the vessel described in this report on 19, and certify that the statements made in this report are correct, corresponding with mill test reports of materials furnished by the builders, and measurements made of the vessel; and that this vessel is constructed in accordance with the ASME Code for Unfired Pressure Vessels.

Date FEB 24 1958, 19 58

[Signature]
Inspector's Signature

Commissions N.E. 1337 Pa. 1319
State or Nat'l Ed. & Number

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a Certificate of Competency as an Inspector of Boilers and Unfired Pressure Vessels in THE STATE OF and employed by of , have compared the statements in this manufacturer's data report with the completed vessel, and certify that parts referred to as data items were completed in the field in accordance with the requirements of the ASME Code for Unfired Pressure Vessels. The completed vessel was inspected and subjected to a hydrostatic test of psi.

Date , 19

Inspector's Signature

Commissions
State or Nat'l Ed. & Number