

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

(Alternative Form For Single Chamber, Completely Shop-Fabricated Vessels Only)

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

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448985-

98-10-23

MAD

1. Manufactured and certified by: **LARSEN & D'AMICO MFG. LTD.**, 9805 - 51 Avenue, Edmonton, Alberta T6E 4W8
(Name and Address of Manufacturer)
2. Manufactured for: **ARGO SALES LTD., P.O. BOX 1160, NISKU, ALBERTA, T9E 8A8**
(Name and Address of Purchaser)
3. Location of installation: **RESALE**
(Name and Address)
4. Type: **Vertical** (Horz. Vert. Tank, etc.)

C-9041 (Mfg.'s serial No.)	N3078.213 (CRN)	LD-3360-A REV 1 (Drawing No.)	N/A (Nat'l. Id. No.)
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5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 **1995** to **1997**
(Year)

N/A Code Case Numbers	Special Services per UG-120(d)	1998 (Year Built)
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N/A
Special Services per UG-120(d)

6. Shell: **SA-516-70N**

1.0" Nom. Thk inch	(25.40) Corr Allow inch	1/8" (3.2) Diam ID / O.D inch	20" O.D. (508) Length Overall inch
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7. Seams: **TYPE 1 FULL**

Long. (Welded, Dbl Sngl., Lap, Butt)	HT Temp	60 Time (hr)	TYPE 1 Girth (Welded Dbl Sngl. Lap Butt)
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8. Heads: (a) **Matt SA-516-70 N** (Spec No Grade)

100 E-ft (%)	1160 °F 621.1 °C H T Temp	60 Time (hr)	TYPE 1 Girth (Welded Dbl Sngl. Lap Butt)
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- (b) **Matt SA-516-70 N** (Spec No Grade)

Location (Top, Bottom, Ends)	Minimum Thickness in. (mm)	Corrosion Allowance in. (mm)	Crown Radius in. (mm)	Knuckle Radius in. (mm)	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Concave or Convex)
(a) TOP	0.9375/(23.81)	1/8" (3.2)	0" (0.00)	0" (0.00)	2:1				CONCAVE
(b) BOTTOM	0.9375/(23.81)	1/8" (3.2)	0" (0.00)	0" (0.00)	2:1				CONCAVE

If removable, bolts used (describe other fastenings) **N/A**
(Mail, Spec No, Gr, Size, No)

9. MAWP **1440 psi** at **1440 psi**

9928 Kpa at max. temp.	100 °F 37.84 °C	Min design metal temp.	-20 °F -28.88 °C
9928 Kpa	Hydro Test pressure	2160 psi	14893 Kpa

10. Nozzles, inspection and safety valve openings:

Purpose (inlet, outlet, drain)	No.	Diam or Size	Type	Mat'l	Nom Thk	Reinforcement Mat'l	How Attached	Location
SEE ATTACHED U4 FORM								

11. Supports: Skirt **YES** (Yes or No) Lugs **N/A** (No) Legs **N/A** (No) Other **N/A** (Describe)

Attached	BTM HEAD / WELDED (Where and How)
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12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: **IMPACT TESTS EXEMPT PER UG-20(f) PARAGRAPHS 1-6 AND UCS-66(c) ITEM #21**

**HEAD CALCULATED Min. 0.9375 in. (23.81 mm)

Type: **CONTACTOR TOWER**
 Weight: **9425 lbs.** (4276.18 kg)
 Capacity: **50.28 cu.ft.** (1.42 cu. Meters)

** PRESSURE RELIEF DEVICE PROVIDED BY **WOF 3784**
 OTHERS IN THE PIPING
 Hydrotest Position: **HORIZONTAL**
 Fabrication Drawing No: **LD-3360-A REV 3**

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 14254 Expires October 28, 2001

Date **9-10-23/98** Company Name **Larsen & D'Amico Manufacturing Ltd** Signed (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by: **Larsen & D'Amico Manufacturing Ltd.** at **9805-51 Avenue, Edmonton, Alberta** I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of **Alberta** and employed by **Alberta Boilers Safety Association** have inspected the component described in this Manufacturer's Data Report on **9805-51 Avenue, Edmonton, Alberta**, 19 **98** and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date **98-10-23** Signed (Authorized Inspector) Commissions **Alberta 528**
 (National Board (include Endorsements) State Prov and No.)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by:

LARSEN & D'AMICO MFG. LTD., P.O. BOX 1180, NISKU, ALBERTA, T9E 8A8
(Name and Address of Manufacturer)

2. Manufactured for:

ARGO SALES LTD., P.O. BOX 1180, NISKU, ALBERTA, T9E 8A8
(Name and Address of Purchaser)

3. Location of installation:

RESALE
(Name and Address)

4. Type: **Vertical**
(Horz. Vert, or Sphere)

CONT. TOWER C-9041 (Mfg's Serial No.)
(Tank, Sep., Heat Exh., Etc.)

N3078.213 (CRU)

LD-3300-A REV 1 (Drawing No.)

N/A (Flat Bd No.)

1998 (Year Built)

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Purpose (Inlet, Outlet, Drain)	Item No.	Diameter of Size	Type	Material	Nominal Thk.	Reinforcement Material	How Attached	Location
INLET	N1	3"	600# RFWN PIPE	SA-105	SCH XXH		WELDED	SHELL
		3"	ELBOW	SA-106-B	SCH XXH			
		3"	ELBOW	SA-234-WPB	SCH 80			
		7.5"	REPAD		38"	SA-516-70		TOP HEAD
GAS OUTLET	N2	3"	600# RFWN PIPE	SA-105	SCH XXH		WELDED	TOP HEAD
		3"	PIPE	SA-106-B	SCH XXH			
		7.5"	REPAD		38"	SA-516-70		BTM HEAD
DRAIN	C1	1"	COUPLING	SA-105	6000#		WELDED	BTM HEAD
		1"	PIPE	SA-106-B	SCH XXH			
		1"	ELBOW	SA-234-WPB	SCH XXH			
WATER OUT	C2	1"	COUPLING	SA-105	6000#		WELDED	SHELL
COIL	C3 A-D	1"	COUPLING	SA-105	6000#		WELDED	SHELL
LG OIL	C4 A-B	3/4"	COUPLING	SA-105	6000#		WELDED	SHELL
INSPECTION	C5 A/B	2.375 ID	COUPLING	SA-105	6000#		WELDED	SHELL
TRAY DRAINS	C6 A-I	1"	COUPLING	SA-105	6000#		WELDED	SHELL
LG WATER	C7 A/B	3/4"	COUPLING	SA-105	6000#		WELDED	SHELL
LC WATER	C8	2"	COUPLING	SA-105	6000#		WELDED	SHELL
TI	C9	3/4"	COUPLING	SA-105	6000#		WELDED	SHELL
PI	C10	1/2"	COUPLING	SA-105	6000#		WELDED	SHELL
GLYCOL OUT	C11	1"	COUPLING	SA-105	6000#		WELDED	SHELL
GLYCOL IN	C13	1"	COUPLING	SA-105	6000#		WELDED	SHELL
PSV	C14	2"	COUPLING	SA-105	6000#		WELDED	SHELL
OIL OUT	C15	1"	COUPLING	SA-105	6000#		WELDED	SHELL
LC OIL	C16	2"	COUPLING	SA-105	6000#		WELDED	SHELL
HLSD	C17	2"	COUPLING	SA-105	6000#		WELDED	SHELL
BREAK FLANGES	21	20"	600# RFWN	SA-105	SCH 80		WELDED	SHELL
		20"	600# Flex Gsk't	316 SS				
		1-5/8"	STUDS	SA-193-B7M				
		1-5/8"	NUTS	SA-194-2H				

Certificate of Authorization:

Date **Oct 23/98** Name **LARSEN & D'AMICO MFG. LTD.**
(Manufacturer)

Type: U No. 14254
[Signature]
(Authorized Inspector)

Signed *[Signature]*
(Representative)

Expires **OCTOBER 28** 2001

Commission **Alberta 126**
(Alberta Board of Embroidment State Province and No.)