INVENTORY 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

pc 003273 No.

THE WARD COMPANIES
TRANSFORMER DEPT.

DIV:

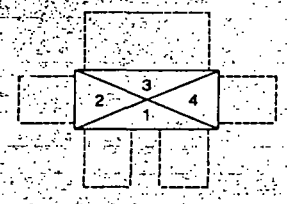
Purchased From: Texas Gulf			Original Cost:
Town:		State:	Incoming Freight:
Received Via:	Date: 7-20-95	Our P.O. No.:	Total Investment:
Sold To:			Shop Order No.:
Cust. P.O. No.:		Date Billed:	Invoice No.:

10816846

TRANSFORMER DATA:

TRANSFORMER

MFG: G.E.	KVA: 100		Phase: 1	Cycles: 60	Class:
PRI. Volts: 22900	°C Rise: 65	Imp:	Type: OA	Form:	Insul. Class:
SEC. Volts: 240/480	Pol:	H.V. Bil: KV	L.V. Bil: KV	Ser. No.: 2129	
No. Taps: —	% Taps — 2 Up — 2 Down	Gals. Oil:	Year Built:	No.:	
H.V. Bush: ☐ Stud ☐ Eyebolt ☐ Spade ☐ Wall ☐ Cover ____ Holes	Loc: Area:	HT. Top H.V. Bush:	Max. HT.	C. & C. Wt.	
L.V. Bush: ☐ Stud ☐ Eyebolt ☐ Spade ☐ Wall ☐ Cover ____ Holes	Loc: Area:	HT. Less H.V. Bush:	Ship. Height:	T. & F. Wt.	
H.V. Terminal Enclosure: ☐ Throat ☐ Air ☐ Oil Chamber		Wide:	Ship. Width:	Oil Wt.	
L.V. Terminal Enclosure: ☐ Throat ☐ Air ☐ Oil Chamber		Deep:	Ship Depth:	Total Wt.	
Pothead: ☐ H.V. ☐ L.V. ☐ Top ☐ Bottom		☐ Oil Level Gauge ☐ w/c		☐ Live Front ☐ Dead Front	
Tank Design: ☐ Straight ☐ Oblong ☐ Round ☐ Flat		☐ Temperature Gauge ☐ w/c		☐ Radial Feed ☐ Loop Feed	
Radiators: ☐ Rd. Tubes ☐ Panels ☐ Removable		☐ Wdg. Temp. Gauge ☐ w/c		☐ Bushing Wells	
☐ Welded Top ☐ Bolted Top ☐ Sealed Tank ☐ Gas-Oil-Sealed		☐ Pres./Vac. Gauge ☐ w/c		☐ Load Break Inserts	
☐ Conservator (Removable ☐ Yes ☐ No) ☐ Relief Pipe		☐ Pres./Vac. Reg. Valve		☐ Load Break Bushing	
☐ Auto. Gas Sealed ☐ Free Breathing		☐ Pres. Relief Device ☐ w/c		☐ LBOR Switch - POS.	
☐ Oil ☐ Silicon ☐ RTemp ☐ Water-Cooled		☐ Pres. Relief Valve		☐ Dual Voltage Switch	
☐ Gas - Type ____ ☐ Other ____		☐ Sudden Pres. Relay ☐ S.I. Rel.		☐ Delta - Wye Switch	
		☐ Drain Valve ☐ Lower		☐ Arresters ( ) ____ KV	
A 24045		☐ Tap Changer ☐ Ext. ☐ Int.		☐ ____ Deep Compartment	
B 23373		☐ Fans ( ), ____ V., ____ PH.		☐ Fuses - Type ____	
C 22900		☐ Fan Cont. ____ V., ____ PH.		☐ Bayonet ☐ ELSP Back-Up	
D 2232B		☐ Bushing C.T. ☐ H.V. ____ ☐ L.V. ____		☐ ARC Strangler ☐ NX ☐ Clip Style	
E 21755		☐ Arrester MTGS. ☐ H.V. ☐ L.V.		☐ Loadbreak ☐ Drywell Canister ☐ Non-Loadbreak	
		☐ Oil Pump		☐ Internal Weak Link	
HG 100		☐ TCUL		☐ ELS Bayonet	
HL 0				☐ EFD	
LG 120					



Unit Burnt inside, oil is Black
will not Ratio.
Leaking oil, gasket no good

Billed: 9-1-95

TRANSFORMER TEST DATA

KVA 100	PH. 1	CY. 60	PRI. V. 22900	SEC. V. 480
AMBIENT TEMP. °F	TOP OIL TEMP. °C	HUMIDITY %		

INSULATION RESISTANCE:

TEST	TEST RESULTS IN MEGOHMS	TEST KV	GUARD
LOW TO GROUND &	20,000		
HIGH TO GROUND &	20,000		
HIGH TO LOW:	20,000		

WINDING RESISTANCE: (IN OHMS)

$X_1 - X_2$	13.07	$H_1 - H_2$	30.4
$X_1 - X_3$		$H_1 - H_3$	
$X_2 - X_3$		$H_2 - H_3$	
$X_0 - X_1$		$H_0 - H_1$	

TRANSFORMER TURNS RATIO: (POLARITY: ☐ SUBTRACTIVE ☐ ADDITIVE)

VOLTAGE	TAP NU.	% TAP	H – H /X – X	H – H /X – X	H – H /X – X	CALCULATED
24045	A	105	49.547			
23473	B	102.5	48.349			
22900	C	100%	47.157			
22328	D	97.5	45.966			
21755	E	95	44.773			
			out in "C" pos. 100%			

DIELECTRIC INSULATION TESTS:

APPLIED	WINDING	VOLTAGE RATING	TEST VOLTAGE APPLIED IN KV	DURATION OF TESTS IN SECS.
POTENTIAL	H	22900	50	60
TEST	X	480	10	60

INDUCED POTENTIAL TEST: 1.5 TIMES RATED VOLTAGE ACROSS FULL WINDING; _____ KV FROM _____ KV LINE TERMINAL TO GRD; _____ CYCLES PER SEC. FOR _____ CYCLES

EXCITING CURRENT:

VOLTAGE _____ LINE CURRENT _____	A PHASE	B PHASE	C PHASE	AVERAGE
	_____ AMPS., _____ %	_____ AMPS., _____ %	_____ AMPS., _____ %	_____ %

LOSSES / IMPEDANCE:

NO LOAD LOSS WATTS	LOAD LOSS WATTS	TOTAL LOSS WATTS	% IX	% IR	% IZ	CALCULATED % IZ

OIL TEST DATA: NEW Oil (Vacuum)

AVERAGE DIELECTRIC	NEUT. #	COLOR	I.F.T.	SPECIFIC GRAVITY	PCB	
— — — _____ AV.						

CHECK LIST:

	H.V. BUSH. LOC:	L.V. BUSH. LOC:	DATE TESTED: 8-22-95
☐ OIL LEVEL			TESTED BY: Dawn Steinna
☐ NO LEAKS			APPROVED BY:
☐ PRI. BUSHINGS			
☐ SEC. BUSHINGS			
☐ GAUGES			
☐ INSPECTION COVER			
☐ BUSHINGS MARKED			
☐ SEC. GRD. CONNECTED			
☐ WARD LABELS			

WARD TRANSFORMER COMPANY
SHOP & TEST DIVISION

REPORT OF TRANSFORMER TEST

ORDER NUMBER	:3141957	PHASE	: 1
CUSTOMER	:TEXASGULF	POLARITY	:SUBT.
MAKE	:G.E.	TYPE	:POLEMOUNT
SERIAL NUMBER	:2129	PERCENT IMPEDANCE	: 3.00
KVA	:100	CYCLES	: 60
HV WINDING	:22900	DEG C RISE	:65
LV WINDING	:480	INSULATION MEDIUM	:OIL
WINDING MATERIAL HV/LV	:CU/CU	DATE TESTED	:8/20/95

RESISTANCES,EXCITING CURRENT,LOSSES AND IMPEDANCE are based on normal rating, unless otherwise stated. Losses and regulation are based on wattmeter measurements. For three phase transformers the resistance given are the sum of the three phases in series.

WINDING RESISTANCES 65 C

SERIAL NO	RESISTANCE IN OHMS 22900 V	480 V	0 V	0 V	0 V
2129	34.59270	0.01487	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000
	0.00000	0.00000	0.00000	0.00000	0.00000

NO-LOAD TEST

SERIAL NO	PER CENT EXCITING CURRENT AT 100%	110%	NO-LOAD LOSS WATTS AT 100% OF RATED VOLTAGE
2129	0.87	1.26	170
	0.00	0.00	0
	0.00	0.00	0
	0.00	0.00	0
	0.00	0.00	0

LOAD LOSS TEST

SERIAL NO	22900 V TO 480 V AT 100 KVA LOAD LOSS WATTS	% IMP	0 V TO 0 V AT 0 KVA LOAD LOSS WATTS	% IMP	0 V TO 0 V AT 0 KVA LOAD LOSS WATTS	% IMP	0 V TO 0 V AT 0 KVA LOAD LOSS WATTS	% IMP
2129	1388	3.3	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	0	0.0
	0	0.0	0	0.0	0	0.0	0	0.0

EFFICIENCIES | REGULATION

	100% LOAD	75% LOAD	50% LOAD	25% LOAD	100% P.F.	80% P.F.	
AVERAGE	98.47	99.02	99.42	99.66	1.43	2.74	

EFFICIENCY AND REGULATION CALCULATIONS ARE BASED ON 100 KVA

DIELECTRIC TESTS

APPLIED-POTENTIAL TEST	VOLTAGE RATING OF WINDING TESTED	TEST VOLTAGE APPLIED IN KV	DURATION IN SECONDS
VOLTAGE APPLIED BETWEEN EACH WINDING AND ALL OTHER WINDINGS ARE CONNECTED TO CORE AND GROUND	22900	50.00	60
	480	10.00	60
	0	0.00	0
INDUCED-POTENTIAL TEST	1.50 TIMES RATED VOLTAGE ACROSS FULL WINDING 180 CYCLES PER SECOND FOR 7200 CYCLES		

REMARKS:

DATE: 8/22/95 TESTED BY: _____

APPROVED BY: _____

I E6-7857

P.O. # E-10095124

UTED
WER
RVICES

OIL TEST REPORT

CITY: Aurora STATE: NC UPSI NO:

NAME PLATE DATA

	High Voltage	22,300		No. Radiators		3/3		Ground			
	Low Voltage	240/480		No. Fans				Outside		X	
	Impedance	2.73		Physical Dimensions		4'Tx7'R		Inside			
	KVA	100		Gas Headspace		Yes		Platform			
	Phase	1/60		Water Cooled		No		Pole		X	
	Fuse			Bushings Top/Side/Oil		Top/Side		Roof			
	Welded	No		Conservator Tank		No		Access		25'	
PCB	RECT	FURN.		PRECIP.		TAPC.		SW.		REG.	

EQUIPMENT INSPECTION DATA

Peak Temp	Pole Lines	PSI VAC	Paint	Bushing	Environment	LEAKS	RECOMMENDED SERVICE
			Poor	Dirty	Clean	None	Paint

LIQUID TEST DATA

D974 Neut No	D971 IFT	D1524 Color	D1524 Visual	D1298 S.G.	D924 P.F.	D1533 H2O/PPM	D3612 DGA	ICP Metals	PCB PPM	Classification	Required Service
0.020	34.3	1.5	Clear	0.880					Yes	Good	Retest 1 yr.

PCB PPM CONTENT

PCB Cartridge Number	1242	1254	1260	Other	Total
23195					BDL

SHOP

WARD TRANSFORMER CO., INC.

P.O. BOX 30009 • MT. HERMAN CHURCH ROAD
RALEIGH, N.C. 27622

PHONE: 919-787-3553
800-334-9600

FAX: 919-787-1683

ORDER SHEET

ORDER NO.	DATE SOLD	SALESMAN
0003141957	07/13/95	33

CUSTOMER NO.	TERMS
007782	.0 % Disc - 0 Days Net

SOLD TO
TEXASGULF INC
PO BOX 48
AURORA, NORTH CAROLINA
27806

CUSTOMER P.O. NO. E-10095126
ATTENTION: Callaree Hoffman
TELEPHONE NO.: 919-322-4111

SHIP TO
TEXASGULF CHEMICALS
HWY 306 NORTH
AURORA, NC
27806

REFERENCE NO.:
ATTENTION:
TELEPHONE NO.: 919-322-8192

DATE REQUIRED: 07/31/95
F.O.B. PT. & FREIGHT:
SHIP VIA: SOUTHEASTERN/COL

ITEM NUMBER	QTY. ORD.	QTY. SHIP	DESCRIPTION	UNIT	UNIT PRICE	DISCOUNT
3-3273	1	0	REPAIR GE 100 KVA	EA		
			TRANSFORMER			
			SERIAL# N286327-VETA			
			HV: 22,900			
			LV: 240/480 WITH 2.73% IMP.			
			TAG THE UNIT " NUMBER P-012 GE"			
			KEEP UP WITH TIME & MATERIALS			
			07/31/95 Certified 01876			

INSTRUCTIONS:

U.S. EPA REGION IV

SDMS

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V. 2-040506