

**SERFILCO®****SERIES 'R'  
MAGNETIC COUPLED PUMP  
SPECIFICATIONS**TECHNICAL  
BULLETIN  
TP-120**PUMP**

- Synchronous drive, magnetically coupled for zero leakage applications.
- Non-metallic wetted parts.
- Meets ANSI B73.1 dimensional specification for flange position.
- Back pull out design.
- Maximum pressure is 150 psi and temperature is 212 degree F.

**CASING**

- Top centerline discharge.
- One piece solid ductile iron casing, lined with a chemically bonded, HALAR (ECTFE)\* 0.100" to 0.125" thick.
- Foot support for maximum resistance to distortion from pipe loads.
- Thrust ring integral with front center support.
- 150 lbs ANSI flanges standard.

**IMPELLER**

- Enclosed type.
- Manufactured with TEFZEL (ETFE)\*\* fluoropolymer.
- One piece construction with fully encapsulated magnets.
- Removable, press fit main bushing with locking SiC key.
- Removable mouth ring.

**SHAFT**

- Selection of materials: High purity SIC
- Non-rotational one piece solid construction.
- Fully supported at both ends utilizing front and rear casing.

**BRACKET**

- Provides metal-to-metal fit to casing.
- Allows close couple to motor face or bearing frame.
- Sealed enclosure provides secondary containment.
- Drilled and tapped for monitoring sensor.

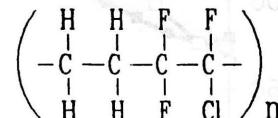
**REAR CASING**

- Injection molded TEFZEL\*\* fluoropolymer backed by non-metallic reinforcement.
- No energy loss in magnetic coupling.
- Fully confined casing O-ring.

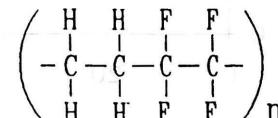
**MAGNETIC COUPLING**

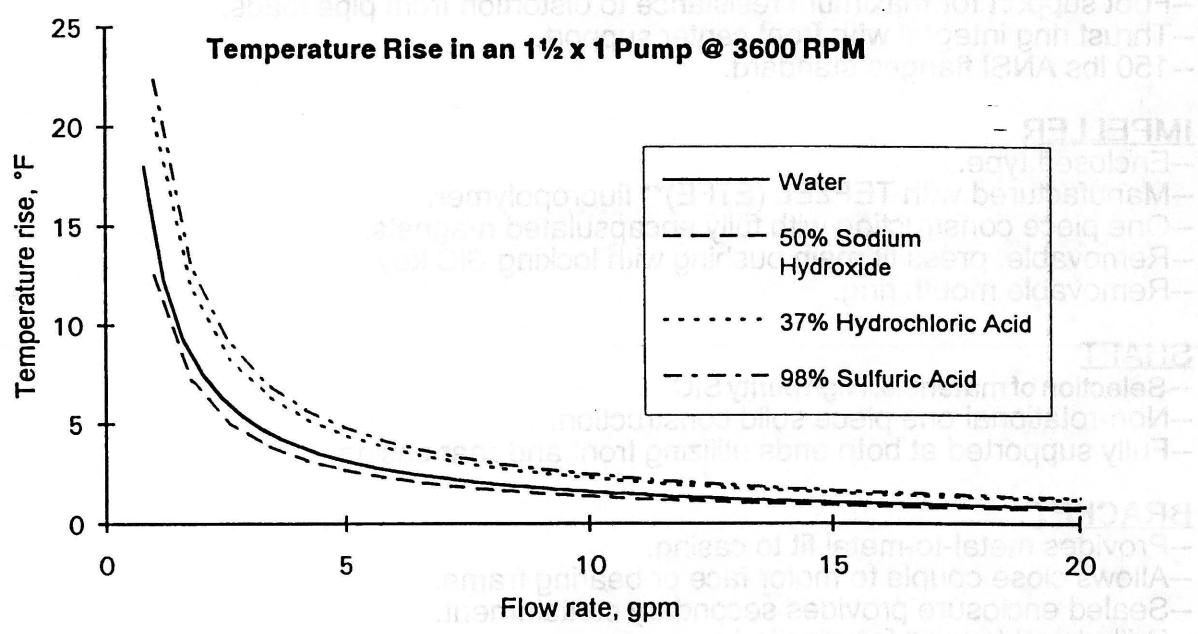
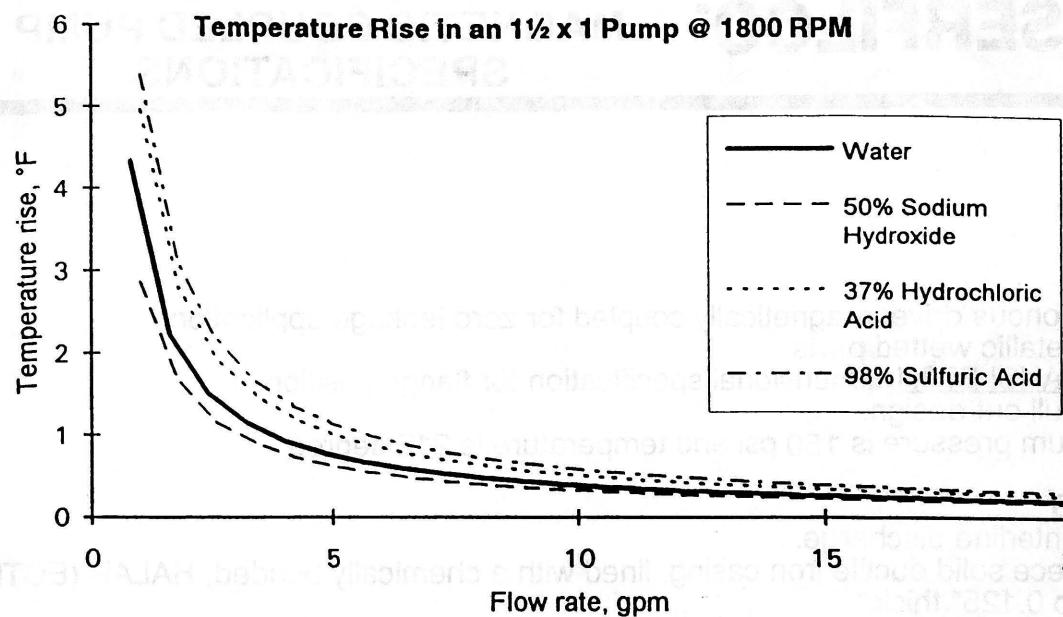
- Neodymium Iron for maximum strength.
- Strong and stable torque provided to temperature of 250 deg. F.
- Designed for zero slippage.
- Utilizes standard NEMA motor eliminating use of soft start devices.

\* Halar is a product of Ausimont which is a predominantly 1:1 alternating copolymer of ethylene and chlorotrifluoroethylene forming linear chains with the predominant repeating unit as shown at right. Halar is resistant to most corrosive chemicals and organic solvents at room and elevated temperatures.

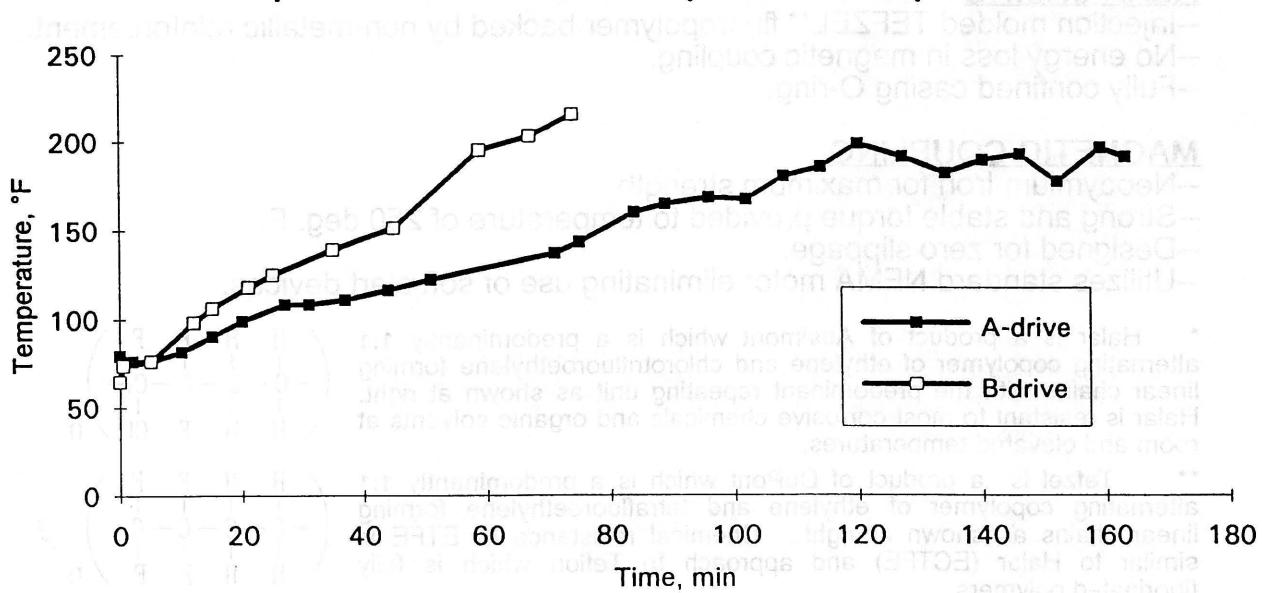


\*\* Tefzel is a product of DuPont which is a predominantly 1:1 alternating copolymer of ethylene and tetrafluoroethylene forming linear chains as shown at right.. Chemical resistance of ETFE is similar to Halar (ECTFE) and approach to Teflon which is fully fluorinated polymers.

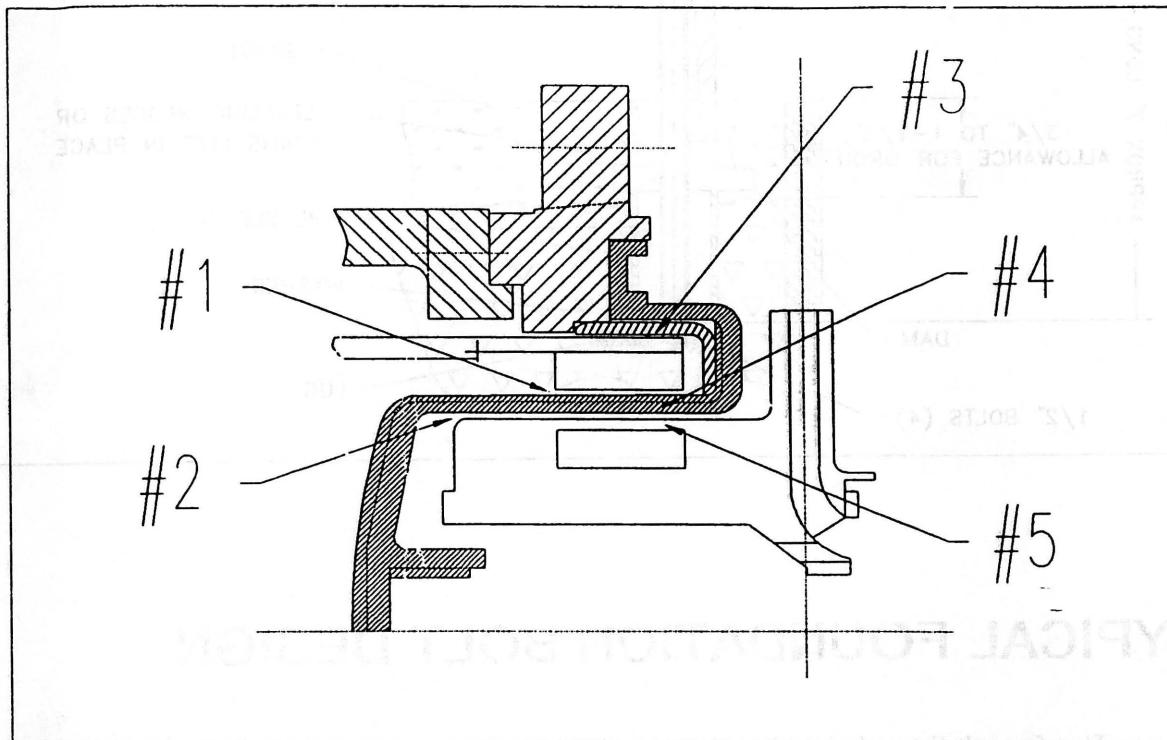




#### Temperature Rise in an 1½ x 1 Pump with Locked Impeller



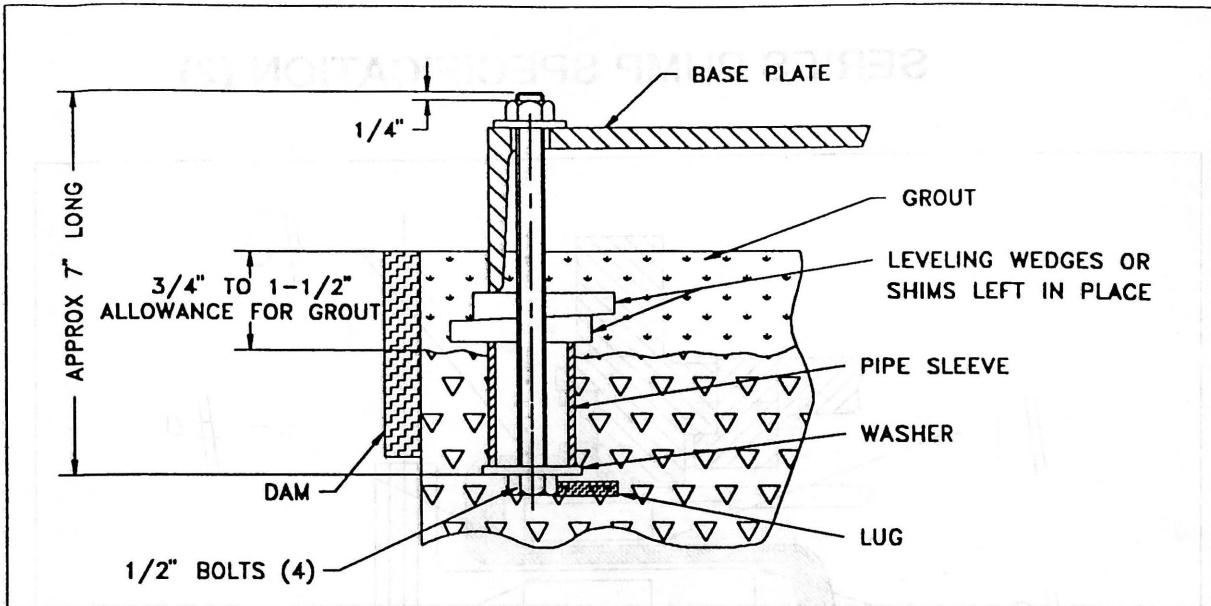
## SERIES PUMP SPECIFICATION (2)



### CLEARANCE BETWEEN STATIONARY AND ROTATIONAL PARTS AND WALL THICKNESS.

1. The clearance (#1) between outside of rear casing (hatched parts) and inside of outer magnet is 0.050 to 0.060 inch.
2. The clearance (#2) between inside of rear casing and outside wall (#5) that encapsulates the inner magnet is 0.050 to 0.060 inch.
3. The clearance (#3) between outside of outer magnet and inside of backup ring is 0.020 inch. The clearance which is smaller than #1 clearance is provided in order to stop the outer magnet from hitting the rear casing in case of failure of motor bearing or bearing frame.
4. The wall thickness(#4) of ETFE (Tefzel) or ECTFE (Halar) portion of rear casing is 0.100 inch. The composite (fiber fabrics with vinyl ester) reinforcement which is not removable from the inside wall is about 0.030 inch thick.
5. The wall thickness (#5) of ETFE (Tefzel) or ECTFE (Halar) which is encapsulating the inner magnet is from 0.080 to 0.100 inch.

note: The hatched are stationary parts. Non-hatched are rotational parts.



## TYPICAL FOUNDATION BOLT DESIGN

The foundation should be sufficiently substantial to absorb vibration and form a permanent, rigid support for the base plate. This is important in maintaining the alignment of a direct connected unit. A concrete foundation on a solid base should be satisfactory. Foundation bolts of the proper size (1/2" -13 x 7" long recommended for ordinary installation) should be embedded in the concrete, located by a drawing or template. A pipe sleeve larger than the bolt should be used to allow movement for final positioning of the bolts.

The base plate should be supported on rectangular metal blocks and shims or on metal wedges having a small taper. The support pieces should be placed close to the foundation bolts. A spacing of 24 inches suggested. A gap of about 3/4 inches to 1-1/2 inches should be allowed between the base plate and the foundation for grouting.

Adjust the metal supports or wedges until the shafts of the pump and driver are level. Check the coupling faces as well as the suction and discharge flanges of the pump for horizontal or vertical position by means of a level. Correct the positions, if necessary, by adjusting the supports or wedges under the base plate as required.

When the alignment is correct, the foundation bolts should be tightened evenly but not too firmly. The units can then be grouted to the foundation. Legs of the base plate should be completely filled with grout and it is desirable to grout the leveling pieces, shims or wedges in place. The foundation bolts should not be tightened until the grout is hardened, usually about 48 hours after pouring.

## USER'S LIST

SERIAL #	CUSTOMER	CHEMICAL	FLOW (GPM)	HEAD (FT.)	TEMP.
3437	ABBOTT LABS	ETHYLENE GLYCOL	40	50	100F
3502	ABBOTT LABS	ETHYLENE GLYCOL	40	50	100F
3438	ABBOTT LABS	ETHYLENE GLYCOL	50	120	100F
3500	ABBOTT LABS	ETHYLENE GLYCOL	50	120	100F
3794	ACOM	HAFNIUM DISULFIDE	40	92	90F
3803	ACOM	HAFNIUM DISULFIDE	40	95	90F
3527	ACT	MISC. ACIDS	40	---	---
4938	A.E. STALEY	HYDROCHLORIC ACID	150	150	70F
4864*	AGRO-CHEM	UREA SYNTHETIC	300	20	AMB
3627	AIRPOL/BRINDLE	MISC. ACIDS	20	90	AMB
3626	AIRPOL/BRINDLE	MISC. ACIDS	150	80	AMB
4928	ALLIED SIGNAL	SODIUM HYDROXIDE	25	80	80F
4929	ALLIED SIGNAL	SODIUM HYDROXIDE	25	80	80F
3609	ALLIED SIGNAL	SULFURIC ACID	10	150	---
4884	AMER CRYSTAL SUGAR	HYDROCHLORIC ACID	65	110	75F
3821	AMER CRYSTAL SUGAR	HYDROCHLORIC ACID	50	150	75F
2183	AMER FRUCTOSE	HYDROCHLORIC ACID	35	150	AMB
4980	AMERICAN MAIZE	HYDROCHLORIC ACID	70	105	AMB
3760	AMERICAN MAIZE	SODIUM HYDROXIDE	---	---	AMB
3773	AMERICAN MAIZE	SODIUM HYDROXIDE	---	---	AMB
4979	AMOCO/JOLIET	HYDROBROMIC ACID	20	85	120F
3507	ANHEUSER-BUSCH	LITHIUM CHLORIDE	160	85	140F
4883	AQUALON COMPANY	FORMALDEHYDE	40	100	100C
3754	ARROWHEAD WATER	HYDROCHLORIC ACID	80	101	---
3777	ARROWHEAD WATER	SODIUM HYDROXIDE	110	100	---
4924	ASHLAND CHEMICAL	HAFNIUM	30	70	---
4926	ASHLAND CHEMICAL	HAFNIUM	30	71	---
4925	ASHLAND CHEMICAL	HYDROGEN PEROXIDE	30	71	---
2051	ASHLAND CHEMICAL	SULFURIC ACID	50	75	AMB
4920	AUSIMONT NO. AMER.	HYDROCHLORIC ACID	40	80	AMB
4921	AUSIMONT NO. AMER.	HYDROCHLORIC ACID	40	80	AMB
4937	AUSIMONT NO. AMER.	HYDROCHLORIC ACID	200	80	150F
4879	BAKER BROTHERS SYS	MISC. ACIDS	20	40	200F
4880	BAKER BROTHERS SYS	MISC. ACIDS	20	40	200F
4891	BAKER BROTHERS SYS	MISC. ACIDS	20	40	200F
3841	BEKAERT STEEL	HYDROCHLORIC ACID	50	55	AMB
3842	BEKAERT STEEL	HYDROCHLORIC ACID	50	55	AMB
3829	BEKAERT STEEL	HYDROCHLORIC ACID	50	30	AMB
3833	BEKAERT STEEL	HYDROCHLORIC ACID	50	30	AMB
3840	BEKAERT STEEL	HYDROCHLORIC ACID	50	30	AMB
3832	BEKAERT STEEL	HYDROCHLORIC ACID	50	35	AMB
4375	BEKAERT STEEL	SPENT ACID	61	56	150F
4899	BEKAERT STEEL	SPENT ACID	61	56	150F
4874	BEKAERT STEEL	SPENT ACID	33	73	150F
4900	BEKAERT STEEL	SPENT ACID	33	73	150F
4888	BEKAERT STEEL	SPENT ACID	38	70	150F
4885	BEKAERT STEEL	SPENT ACID	38	70	150F
4886	BEKAERT STEEL	SPENT ACID	38	70	150F
4871	BEKAERT STEEL	SPENT ACID	55	24	150F
4901	BEKAERT STEEL	SPENT ACID	55	24	150F
4872	BEKAERT STEEL	SPENT ACID	55	24	150F
4902	BEKAERT STEEL	SPENT ACID	55	24	150F
4873	BEKAERT STEEL	SPENT ACID	150	40	150F

## USER'S LIST (CONT.)

SERIAL #	CUSTOMER	CHEMICAL	FLOW (GPM)	HEAD (FT.)	TEMP.
4903	BEKAERT STEEL	SPENT ACID	150	40	150F
4906	BEKAERT STEEL	SPENT ACID	165	23	150F
4907	BEKAERT STEEL	SPENT ACID	165	23	150F
4914	BEKAERT STEEL	SPENT ACID	145	40	150F
4915	BEKAERT STEEL	SPENT ACID	145	40	150F
2092	BORDEN CHEMICAL	FORMALDEHYDE	---	---	---
2093	BORDEN CHEMICAL	FORMALDEHYDE	---	---	---
2085	BORDEN CHEMICAL	FORMALDEHYDE	---	---	---
2086	BORDEN CHEMICAL	FORMALDEHYDE	---	---	---
2087	BORDEN CHEMICAL	SODIUM HYDROXIDE	---	---	---
2090	BORDEN CHEMICAL	SODIUM HYDROXIDE	---	---	---
2088	BORDEN CHEMICAL	SULFURIC ACID	---	---	---
2089	BORDEN CHEMICAL	SULFURIC ACID	---	---	---
2091	BORDEN CHEMICAL	SULFURIC ACID	---	---	---
3793	C P CHEMICALS	FLUOROBORIC ACID	100	55	150F
2027	CABOT CORP.	SULFURIC ACID	20	40	240F
2329	CHEMROX	ETHYLENE GLYCOL	40	50	80F
3424	CHEMROX	ETHYLENE GLYCOL	40	50	100F
3425	CHEMROX	ETHYLENE GLYCOL	20	50	100F
3423	CHEMROX	ETHYLENE GLYCOL	20	100	100F
3558	CHEMROX	ETHYLENE GLYCOL	30	120	---
3559	CHEMROX	ETHYLENE GLYCOL	30	50	---
3573	CHEMROX	ETHYLENE GLYCOL	70	80	100F
3641	CHEMROX	ETHYLENE GLYCOL	70	70	100F
3727	CHEMROX	ETHYLENE GLYCOL	45	140	100F
3729	CHEMROX	ETHYLENE GLYCOL	45	140	100F
4909	CHEMROX	ETHYLENE GLYCOL	25	120	AMB
4910	CHEMROX	ETHYLENE GLYCOL	20	70	AMB
3640	CHEMROX	ETHYLENE GLYCOL	70	130	100F
3486	CHEMROX	ETHYLENE GLYCOL	50	100	100F
3463	CHEMROX	ETHYLENE GLYCOL	70	120	---
2330	CHEMROX	ETHYLENE GLYCOL	50	148	80F
3574	CHEMROX	ETHYLENE GLYCOL	180	130	100F
4904	CHEMROX	STORAGE TANK PUMP	---	---	---
4866	CHEMROX	STORAGE TANK PUMP	450	130	---
4877	CHEMROX	STORAGE TANK PUMP	450	130	---
4908	CHEMROX	ABSORBER PUMP	---	---	---
4868	CHEMROX	ABSORBER TOWER PUMP	120	70	---
4957	CHEMTECH	HAFNIUM	80	25	AMB
3614	CIBA GEIGY CORP.	HYDROCHLORIC ACID	55	85	---
3617	CIBA GEIGY CORP.	HYDROCHLORIC ACID	30	21	---
3616	CIBA GEIGY CORP.	SODIUM HYDROXIDE	70	87	---
3823	CIBA GEIGY CORP.	SODIUM HYDROXIDE	35	45	60F
3792	CIBA GEIGY CORP.	SODIUM HYDROXIDE	100	45	60F
3788	CIBA GEIGY CORP.	TOLUENE	40	70	105F
3789	CIBA GEIGY CORP.	TOLUENE	40	70	105F
3443	CLEAN HARBORS	SULFIDE	20	15	---
3465	CLEAN HARBORS	SULFURIC ACID	20	20	---
3457	CLOROX	ACID BLEND	30	35	---
3458	CLOROX	ACID BLEND	30	57.5	---
3411	CLOROX	CAPRIC ACID	30	57.5	---
3416	CLOROX	CAPRIC ACID	40	45	---
3485	CLOROX	CAPRIC ACID	50	62	120F

## USER'S LIST (CONT.)

SERIAL #	CUSTOMER	CHEMICAL	FLOW (GPM)	HEAD (FT.)	TEMP.
3415	CLOROX	CAPRIC ACID	40	45	---
3414	CLOROX	HYDROGEN PEROXIDE	35	140	---
3459	CLOROX	HYDROGEN PEROXIDE	35	140	---
3464	CLOROX	NEODOL	75	70	---
3412	CLOROX	PHOSPHORIC ACID	25	25	---
3413	CLOROX	PHOSPHORIC ACID	30	35	---
3460	CLOROX	PHOSPHORIC ACID	25	25	---
3461	CLOROX	PHOSPHORIC ACID	25	25	---
3417	CLOROX	SODIUM HYDROXIDE	40	45	90F
3784	CLOROX	SODIUM HYDROXIDE	64	140	80F
3592	CLOROX	SODIUM HYDROXIDE	100	50	100F
3786	CLOROX	SODIUM HYDROXIDE	100	27	80F
3824	CLOROX	SODIUM HYDROXIDE	65	27	---
4890	CLOROX	SODIUM HYDROXIDE	300	45	70F
4894	CLOROX	SODIUM HYDROXIDE	300	45	70F
3785	CLOROX	SODIUM HYPOCHLORITE	60	35	AMB
4911	CLOROX	SODIUM HYPOCHLORITE	250	40	80F
4912	CLOROX	SODIUM HYPOCHLORITE	300	60	80F
4969	CLOROX/KANSAS	SODIUM HYPOCHLORITE	350	46	AMB
3517	CR BARD	ETHYLENE GLYCOL	---	---	---
1991	DELCO REMY	SULFURIC ACID	60	26	AMB
1998	DELCO REMY	WATER	265	95	90F
2373	DI CHEM	SULFURIC ACID	75	33	---
3544	DIAZ CHEMICAL	HYDROBROMIC ACID	30	80	100F
4917	DIGITAL EQUIPMENT	ALUMINUM SULFATE	25	65	---
4946	DIGITAL EQUIPMENT	CUPRIC CHLORIDE	40	35	---
4918	DIGITAL EQUIPMENT	FRESH ETCH	30	120	---
4950	DIGITAL EQUIPMENT	FRESH ETCH	30	60	---
4943	DIGITAL EQUIPMENT	HYDROCHLORIC ACID	30	120	---
4954	DIGITAL EQUIPMENT	HYDROCHLORIC ACID	30	45	---
4951	DIGITAL EQUIPMENT	HYDROGEN PEROXIDE	20	120	---
4953	DIGITAL EQUIPMENT	HYDROGEN PEROXIDE	20	45	---
4922	DIGITAL EQUIPMENT	NITRIC ACID	20	65	---
4944	DIGITAL EQUIPMENT	NITRIC ACID	40	35	---
4955	DIGITAL EQUIPMENT	POTASSIUM HYDROXIDE	30	25	---
4916	DIGITAL EQUIPMENT	SODIUM HYDROXIDE	30	120	---
4923	DIGITAL EQUIPMENT	SOLDER BRITE	30	50	---
4919	DIGITAL EQUIPMENT	SP. ETCH	40	35	---
4942	DIGITAL EQUIPMENT	SULFURIC ACID	30	45	---
4949	DIGITAL EQUIPMENT	SULFURIC ACID	30	120	---
4952	DIGITAL EQUIPMENT	SULFURIC ACID	30	45	---
4945	DIGITAL EQUIPMENT	VENMET 533 SOLN.	25	25	---
2010	DOW CHEMICAL	HYDROBROMIC ACID	10	135	AMB
2011	DOW CHEMICAL	HYDROBROMIC ACID	10	135	AMB
4975	DOW/JOLIET	FUEL OIL	10	160	10C
4978	DOW/JOLIET	FUEL OIL	10	160	10C
4981	DOW/JOLIET	FUEL OIL	10	65	10C
3680	DOW CORNING	HYDROCHLORIC ACID	80	108	250F
2049	DOW CORNING	HYDROCHLORIC ACID	65	127	122F
2050	DOW CORNING	HYDROCHLORIC ACID	65	127	122F
4941	DPC INDUSTRIES	SODIUM HYPOCHLORITE	100	160	AMB
3687	DUPONT	CHROMIC ACID	40	40	104F
3684	DUPONT	WATER-LIKE SOLUTIONS	75	60	AMB

## USER'S LIST (CONT.)

SERIAL #	CUSTOMER	CHEMICAL	FLOW (GPM)	HEAD (FT.)	TEMP.
2057	DYNACHEM	HYDROCHLORIC ACID	80	35	65C
3479	E I DUPONT	SULFURIC ACID	15	40	AMB
3531	ECODYNE	SULFURIC ACID	10	40	70F
3474	ELTECH	COPPER CHLORIDE	100	25	100C
3499	FINCH, PRUYN CO.	ALUMINUM SULFATE	2	---	---
3831	FRANK HEMMEN	HYDROCHLORIC ACID	150	---	40C
3643	GE SILICONES	SILICONE FLUID	50	48	100C
3462	GELBER	CAPRIC ACID	40	45	---
2048	GELBER	SODIUM HYPOCHLORITE	100	50	70F
1997	GNB BATTERIES	SULFURIC ACID	20	57	AMB
4892	GNB, INCORPORATED	SODIUM HYDROXIDE	15	60	AMB
4893	GNB, INCORPORATED	SODIUM HYDROXIDE	15	60	AMB
2116	GOODYEAR TIRE	ANILINE	30	100	104F
3834	GREAT WESTERN CHEM	HYDROCHLORIC ACID	150	20	AMB
3650	GREER STEEL	FERRIC CHLORIDE	350	65	210F
4864*	GREER STEEL	FERRIC CHLORIDE	350	65	210F
2029	GRUMMAN	NITRIC ACID	200	68	AMB
2030	GRUMMAN	NITRIC ACID	200	68	AMB
3561	GTE PRODUCTS	HYDROCHLORIC ACID	40	116	AMB
4881	GTE PRODUCTS	HYDROCHLORIC ACID	100	110	AMB
4869	GURTLER CHEMICAL	HAFNIUM DISULFIDE	100	38	---
4878	HOECHST CELANESE	SULFURIC ACID	72	87	30C
3435	HULS AMERICA	SULFURIC ACID	40	105	---
3728	IBM	FERRIC CHLORIDE	80	120	130F
3734	IBM	SODIUM CHLORITE	30	15	190F
4848	IBM	FERRIC CHLORIDE	80	120	130F
3678	ICI AMERICAS	HYDROCHLORIC ACID	80	136	100C
3512	IND. PUMP SALES	SODIUM HYPOCHLORITE	---	---	---
3787	INDEP. MINING	SODIUM HYDROXIDE	120	160	AMB
3828	J.R. SIMPLOT CO.	AMMONIUM SULFATE	70	65	100F
3484	JOHNSON MATTHEY	MISC. ACIDS	60	---	---
2181	JOHNSON MATTHEY	PALLADIUM CHLORIDE	20	100	120F
3400	JOHNSON MATTHEY	SATURATED CHLORINE	20	100	---
2182	JOHNSON MATTHEY	SATURATED CHLORINE	60	140	140F
3548	JOHNSON MATTHEY	SODIUM HYDROXIDE	60	100	---
4927	KENTUCKY UTILITIES	SULFURIC ACID	50	70	AMB
3759	KLEEN-BRITE LABS	SULFURIC ACID	2.06	100	AMB
3496	KOCH CHEMICAL	COMPATIBLE MATERIAL	50	92	---
3445	KOCH CHEMICAL	SODIUM HYDROXIDE	10	40	AMB
3683	MALLINKRODT	DILUTE HAFNIUM	---	---	AMB
3534	MALLINKRODT	PHOSPHORIC ACID	25	28	---
3387	MATERIALS TECH.	SODIUM HYDROXIDE	50	60	AMB
2219	MCDONNELL-DOUG.	NITRIC ACID	---	---	170F
2047	MCKESSON	SODIUM HYPOCHLORITE	100	50	70F
2020	MCKESSON	SODIUM HYPOCHLORITE	100	50	70F
3513	MIDWAY WIRE	HYDROCHLORIC ACID	40	22	180F
2000	MOD. HARD CHROME	CHROMIC ACID	70	50	140F
3429	MONSANTO TEXTILES	SULFURIC ACID	3.1	94.3	---
3560	MORTON THIOKOL	WATER FOR SCRUBBER	30	90	150F
3498	MURPHY PHOENIX	POTASSIUM HYDROXIDE	120	25	---
3470	NAT. STARCH	ALUMINUM SULFATE	20	50	---
3483	NAT. STD. CO.	HYDROCHLORIC ACID	80	80	90F
3466	NGK METALS	SULFURIC ACID	20	30	AMB

## USER'S LIST (CONT.)

SERIAL #	CUSTOMER	CHEMICAL	FLOW (GPM)	HEAD (FT.)	TEMP.
3654	OCCIDENTAL CHEM	HYDROCHLORIC ACID	10	150	AMB
3696	OLIN CHEMICAL	SODIUM HYDROXIDE	50	130	100F
3579	OLIN CHEMICAL	SODIUM HYPOCHLORITE	70	61.2	---
3666	OTP	TRICHLOROETHYLENE	15	40	---
2128	OVONIC BATTERY	NICKEL NITRATE	150	20	60C
2127	OVONIC BATTERY	SODIUM HYDROXIDE	150	20	80C
3405	PARKER AMCHEM	MISC. ACIDS	100	60	---
2036	PENINSULA VALVE	PHOSPHORIC ACID	62	74	AMB
3564	PMC SPECIALTIES	HYDROCHLORIC ACID	30	80	140F
3391	PMC SPECIALTIES	NITRIC ACID	50	36	AMB
3563	PMC SPECIALTIES	SULFURIC ACID	50	80	140F
3577	PMC SPECIALTIES	SULFURIC ACID	50	80	140F
3722	POWER STATION	SULFURIC ACID	49.5	60	---
3719	POWER STATION	SULFURIC ACID	150	25.3	140F
1987	PRATT & WHITNEY	NICKEL PLATING SOL.	60	116	160F
4882	PRECISION CAST	SULFURIC ACID	20	MIN	---
3639	PROCHEM	NITRIC ACID	180	32	145F
3676	PROCTER & GAMBLE	PROPRIETARY BLEND	20	39	70F
3770	PVS CHEMICAL	SULFURIC ACID	30	80	---
3487	PVS CHEMICAL	SULFURIC ACID	120	50	AMB
4976	RABBIT CREEK MINE	HYDROCHLORIC ACID	15	25	AMB
4974	RABBIT CREEK MINE	SODIUM HYDROXIDE	10	35	AMB
1996	READING ALLOY	NITRIC ACID	30	40	AMB
1995	READING ALLOY	SULFURIC ACID	30	40	AMB
3816	REHEIS CHEM. CO.	ALUMINUM CHLORIDE	50	140	AMB
4956	RHONE POULENC	ETHYLENE GLYCOL	50	71	AMB
4973	RHONE POULENC	ETHYLENE GLYCOL	50	71	AMB
4930	RHONE POULENC	MIXED SOLVENTS	20	98	AMB
4967	RHONE POULENC	XYLENE	15	31	AMB
4968	RHONE POULENC	XYLENE	15	31	AMB
4934	ROMAC	SODIUM HYDROXIDE	18	58	---
3398	ROMAC	METHYL CHLORIDE	150	75	110F
4870	ROWELL CHEMICAL	SODIUM HYDROXIDE	240	35	AMB
3456	SAUQUOIT IND.	PLATING SOLUTIONS	150	140	140F
4898	SCHERING PLOUGH	HYDROCHLORIC ACID	20	25	AMB
4947	SCHERING PLOUGH	SULFURIC ACID	40	100	85F
2066	SCM CORP.	SULFURIC ACID	18	80	120F
3521	SEH AMERICA	NITRIC ACID	16	50	---
3797	SIGNAL TREAT SER.	CRUDE OIL	12	153	AMB
3827	SOCODEC	HYDROCHLORIC ACID	60	19.5	30C
3480	SOMERSET	LITHIUM CHLORIDE	40	60	140F
3481	SOMERSET	LITHIUM CHLORIDE	40	60	140F
3418	SOMERSET	LITHIUM CHLORIDE	120	60	170F
3820	SOUTHERN CELLULOSE	SODIUM HYPOCHLORITE	40	145	AMB
3682	SRC ENGINEERS	NAOH OR HCL	200	110	---
3588	STANLEY HARDWARE	CHROMIC ACID	10	18.5	200F
4913	TAKEDA CHEM. PROD.	SODIUM HYPOCHLORITE	48	172	68F
4948	TEJAS PUMP	SODIUM HYPOCHLORITE	350	120	---
4971	TEJAS PUMP	SODIUM HYPOCHLORITE	350	120	---
2005	TENCARVA	HYDROBROMIC ACID	15	126	AMB
4865	TEXAS PROCESS	CUPRIC CHLORIDE	250	70	130F
4896	TEXAS PROCESS	CUPRIC CHLORIDE	250	70	130F
4897	TEXAS PROCESS	CUPRIC CHLORIDE	250	70	130F

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