



ENGINEERING SPECIFICATIONS
TEXAS DIVISION

PLAINTIFF'S EXHIBIT

DOW-2375

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HOT WATER & CONDENSATE
150 PSIG @ 350F MAX.

ITEM	SIZE	DESCRIPTION
N-213		1 PIPING SHALL BE INSTALLED IN ACCORDANCE WITH ENGR SPEC 47-110.
N-1		2 ALL 1/2 NPT NIPPLES USED FOR INSTRUMENT AND TEST CONNECTIONS SHALL BE HEAVY HEX BAR STOCK WITH A MINIMUM WALL THICKNESS OF 0.151 INCH. (0.400 I.D.).
N-1B		3 ALL CARBON STEEL NIPPLES USED FOR DRAINS AND VENTS SHALL BE MINIMUM SCH 80.
N-212		4 USE EXTRA STRONG PIPE WHEN THREADED. LESSER SCHEDULES AS NOTED ARE OPTIONAL WHEN WELDED.
PIPE		
P-28B	1/2 THRU 1 1/2	ASTM A-106 GR B, EX STRONG SEAMLESS STEEL PIPE.
P-27B	1/2 THRU 1 1/2	ASTM A-106 GR B, STD WEIGHT SEAMLESS STEEL PIPE.
P-68	2 THRU 4	ASTM A-587, SCH 40 ERW STEEL PIPE, ALUMINUM KILLED, FLANGING AND BENDING QUALITY. J&L FLAREWELD SPEC JL-PP, REPUBLIC SPEC ST-202, OHIO ERW OR B&W FLARE BEND.
P-3BW	2 THRU 12	ASTM A-53 OR API-5L GR B, STD WEIGHT SEAMLESS OR ELEC WELD STEEL PIPE.
FITTINGS		
ELTXR-4	1/2 THRU 1 1/2	300-LB THREADED MALLEABLE IRON FITTINGS, ASTM A-197, ANSI B16.3.
C-2	1/2 THRU 1 1/2	300-LB THREADED MALLEABLE IRON LINE COUPLING, ASTM A-197, ANSI B16.3.
C-3	1/2 THRU 1 1/2	3000-LB THREADED FORGED STEEL COUPLING, ANSI B16.11, OR 3000-LB THREDOLET, ASTM A-105, FOR WELDING IN.
C-54	1/2 THRU 1 1/2	3000-LB THREADED FORGED STEEL NIPOLET, ASTM A-105, DIMENSIONS PER BONNEY FORGE CATALOG

What is this?

W-B, PG. 29.

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ITEM	SIZE	DESCRIPTION
U-1	1/2 THRU 1 1/2	300-LB THREADED MALLEABLE IRON UNION, ASTM A-197, BRASS SEAT, STOCKHAM 795.
PC-2	1/2 THRU 1 1/2	THREADED SOLID STEEL HEX HEAD PLUG, ASTM A-105, ANSI B16.11.
ELTR-64	1/2 THRU 1 1/2	3000-LB SOCKET WELDING FORGED STEEL FITTINGS, ASTM A-105, ANSI B16.11.
R-22	1/2 THRU 1 1/2	EX STRONG STEEL SWAGED NIPPLE, ASTM A-106 OR A-53 GR B, OR ASTM A-696 GR B OR C BARSTOCK, THREADED, BEVELED, PLAIN, OR ANY COMBINATION OF ENDS.
C-14	1/2 THRU 1 1/2	3000-LB SOCKET WELDING FORGED STEEL COUPLING, ANSI B16.11, OR 3000-LB SOCKOLET, ASTM A-105, FOR WELDING IN.
U-4	1/2 THRU 1 1/2	3000-LB SOCKET WELDING FORGED STEEL UNION, ASTM A-105, AAR DIMENSIONS, STEEL TO STEEL SEAT, PETRO AAR OR VOGT SW-1931.
PC-27	1/2 THRU 1 1/2	3000-LB SOCKET WELD FORGED STEEL CAP, ASTM A-105.
NOTE	2 THRU 4	PIPE BENDS, MINIMUM 5 NOMINAL RADIUS, MAY BE USED WITH P-68.
ELTR-15B	2 THRU 12	STD WEIGHT SEAMLESS STEEL WELDING FITTINGS, ASTM A-234 GR WPB, ANSI B16.9.
PC-51B	2 THRU 12	STD WEIGHT SEAMLESS STEEL WELDING CAP, ASTM A-234 GR WPB, ANSI B16.9.
FLANGES		
F-19-RF	1/2 THRU 1 1/2	150-LB RAISED FACE THREADED FLANGE, ASTM A-105, ANSI B16.5.
F-14-RF	1/2 THRU 1 1/2	150-LB RAISED FACE SOCKET WELDING FLANGE, ASTM A-105, ANSI B16.5.
F-2	2 THRU 4	150-LB LAP JOINT FLANGE, ASTM A-105, ANSI B16.5.
F-24-RF	2 THRU 12	150-LB RAISED FACE WELDING NECK FLANGE, ASTM A-105, ANSI B16.5, BORE TO MATCH WELDING FITTINGS.

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ITEM	SIZE	DESCRIPTION
F-3-RF	1/2 THRU 12	150-LB RAISED FACE BLIND FLANGE, ASIM A-105, ANSI B16.5.
BRANCH CONNECTIONS		
BC-2S		FOR THREADED PIPING, USE STRAIGHT SIZE OR REDUCING TEE. WHEN BRANCH IS SMALLER THAN HEADER, A NIPPLE AND REDUCING COUPLING OR SWAGED NIPPLE MAY BE USED.
BC-16W		FOR WELDED PIPING, BRANCH LINES SHALL BE WELDED IN WITHOUT REINFORCEMENT REGARDLESS OF SIZE COMBINATION. FOR THREADED BRANCH CONNECTION, USE 3000-LB FULL COUPLING, THREDOLET, OR NIPPLET WELDED TO HEADER.
GASKETS		
G-9		STD FLAT RING GASKET, 1/16 INCH THICK ASBESTOS WITH SILICON RELEASING AGENT, JM-60, GARLOCK 7021 OR NICOLET 225 OR 245.
G-9A		STD FLAT RING GASKET, 1/8 INCH THICK ASBESTOS WITH SILICON RELEASING AGENT, JM-60, GARLOCK 7021 OR NICOLET 225 OR 245.
N-200		USE 1/8 INCH GASKET WHERE POSSIBLE.
JOINT COMPOUND		
JC-3		CRANE HIGH TEMP ANTICUTTING THREAD COMPOUND OR JOHN CRANE THRED-GARD.
JC-21		FEL PRO C5-A.
FLANGE BOLTS		
B-A307B3		ASTM A-307 GR B HEAVY HEX OR SQUARE HEAD GALV MACHINE BOLTS WITH HEAVY HEX GALV NUTS.
BOLT LUBRICANT		
BL-1A		ARMITE LEO-PLATE 250.
BL-1B		JOHN CRANE THRED-GARD.
BL-2		FEL PRO C5-A.

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ITEM	SIZE	DESCRIPTION
VALVES		
V-40	1/2 THRU 1 1/2	150-LB SCREWED, INSIDE SCREW, RISING STEM GATE VALVE. ALL BRONZE, UNION BONNET, SPLIT WEDGE DISC.
V-474	1/2 THRU 1 1/2	800-LB SOCKET WELDING CS/Y SOLID WEDGE GATE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM WITH HARD FACED SEAT RINGS, BOLTED BONNET.
V-642A	2 THRU 12	150-LB FLANGED CS/Y WEDGE GATE VALVE, DUCTILE IRON BODY, 13 CHROME ALLOY STEEL TRIM.
V-56F	2 THRU 12	150-LB FLANGED CS/Y FLEXIBLE DISC GATE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM WITH STELLITED SEAT RINGS.
V-42	1/2 THRU 1 1/2	150-LB SCREWED RISING STEM GLOBE VALVE, BRONZE BODY, COMPOSITION DISC, UNION OR BOLTED BONNET.
V-595	1/2 THRU 1 1/2	600-LB SOCKET WELDING CS/Y GLOBE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM, WITH HARD-FACED SEAT, BOLTED BONNET.
V-36	2 THRU 10	150-LB FLANGED CS/Y GLOBE VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM.
V-475	1/2 THRU 1 1/2	200-LB SCREWED HORIZONTAL SWING CHECK VALVE, ALL BRONZE, SCREWED CAP.
V-594	1/2 THRU 1 1/2	600-LB SOCKET WELDING HORIZONTAL LIFT CHECK VALVE, CARBON STEEL BODY, 13 CHROME ALLOY STEEL TRIM, BOLTED CAP.
V-646	2 THRU 10	150-LB FLANGED HORIZONTAL SWING CHECK VALVE, DUCTILE IRON BODY, 13 CHROME ALLOY STEEL TRIM.

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DOW CHEMICAL U.S.A.

TEXAS DIVISION
FREEPORT, TEXAS 77541

DATE: 2-21-79

TO: Benny Howard

BLDG. B-2401

Attached is a copy of Engineering Specification, 46-900
which is in form for issuing.

If this specification meets your approval, please sign below and return.

In order to meet our projected issue deadline this copy MUST be returned
by 2-22, to Reva Young - B-2401.

APPROVED: B. H. H. DATE: 3-6-79

APPROVED AS MARKED: _____ DATE: _____

Reva Young
Engineering Specifications
B-2401
Tel. 1641

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY



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DOW CHEMICAL U.S.A.

TEXAS DIVISION
FREEPORT, TEXAS 77541

DATE: 2-21-79

TO: Benny Howard

BLDG. B-2401

Attached is a copy of Engineering Specification, 46-900
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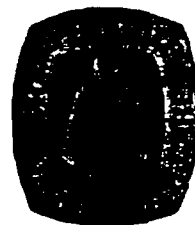
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