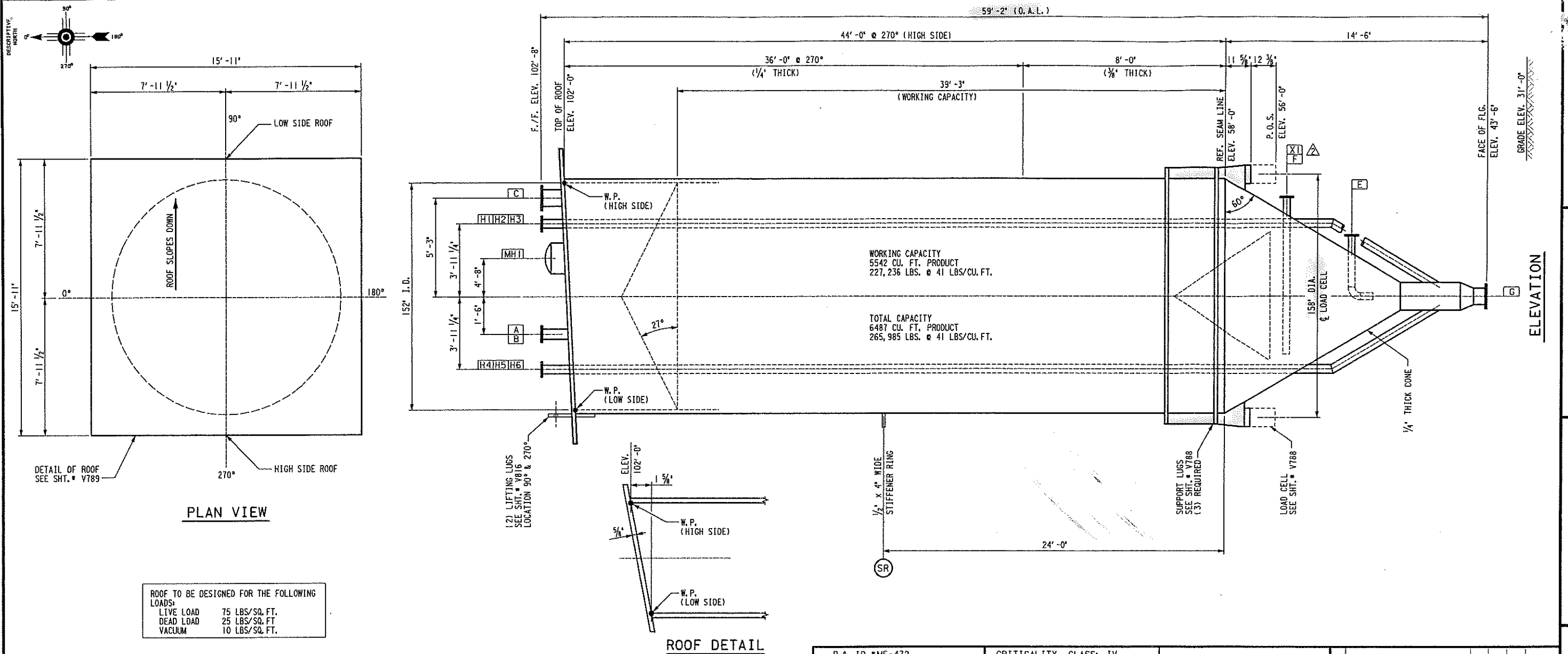


642201 - EQUIP - J:\642201\equip\786.dgn (18-Feb-98 3:10 PM) LOWBA [J07A]



ROOF TO BE DESIGNED FOR THE FOLLOWING LOADS:
 LIVE LOAD 75 LBS/SQ. FT.
 DEAD LOAD 25 LBS/SQ. FT.
 VACUUM 10 LBS/SQ. FT.

REV	DESIGN DATA	REV	MATERIALS	
	CONSTRUCTION: TECHNICAL SPECIFICATION TS685-01		SHELL: B209-5052-H112 ROOF: B209-5052-H112	
	CODE STAMP REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NATIONAL BOARD REGISTRATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		CONE: B209-5052-H112 FLANGES: B209-5052-H112 STIFF. RING: B209-5052-H112	
	DESIGN PRESSURE INTERNAL 1.5 PSIG EXTERNAL 0.5 PSI		NOZZLE NECKS: B209-5052-H112 (PLATE) / B241-6061-T6 (PIPE)	
	DESIGN TEMPERATURE INTERNAL 160 °F EXTERNAL 160 °F		BLINDS: B209-5052-H112	
	OPERATING PRESSURE INTERNAL 1 PSIG EXTERNAL --- PSI		BOLTS: 304 S.S. NUTS: 304 S.S.	
	OPERATING TEMPERATURE INTERNAL 100 TO 140 °F EXTERNAL --- °F		GASKETS: 1/4" THICK WHITE NITRILE (BOSTON #362)	
	MIN. DESIGN METAL TEMPERATURE +30 °F		SUPPORTS: B209-5052-H112 OR B209-6061-T6	
	CORROSION ALLOWANCE PRESSURE PARTS: 0 INCH		ATTACHMENTS: PLATE: B209-5052-H112	
	INTERNAL: 0 INCH (WELDED IN PARTS)		PIPE: B241-6061-T6	
	SUPPORTS: 0 INCH		ANCHOR BOLTS: SA193-B8	
	PELLET BULK DENSITY 38 - 41 LBS/CU. FT.		DESIGN ALLOWABLE STRESS AT 160 °F	
	LETHAL SERVICE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		PLATE 7600 PSI	
	POSTWELD HEAT TREATMENT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		PIPE PSI	
	RADIOGRAPHY SPOT		FORGING PSI	
	JOINT EFFICIENCY SHELL 85% CONE 85% HEADS 85%		WEIGHTS AND MOMENTS	
	MAX. ALLOW. WORKING PRESSURE 1.5 PSIG AT 160 °F LIMITED BY DESIGN		WEIGHT ERECTED: LBS	
	MAX. ALLOW. PRESSURE 1.5 PSIG NEW AND COLD LIMITED BY DESIGN		WEIGHT EMPTY: 12,925 LBS	
	PNEUMATIC TEST PRESSURE SEE GENERAL NOTE 'J', SHT. # V787		OPERATING: 240,161 LBS	
	WIND DESIGN ASCE 7-95 ZONE 0 Z=0 R=2.0 Av=0.2 Fd=1.6 Fv=1.5 Ag=0.2		FULL OF PRODUCT: 279,910 LBS	
	EARTHQUAKE DESIGN PER 95-4503-1FCDS		CAPACITY: 5542 CUBIC FEET	
	EXTERNAL COATING NONE		SHIPPING WEIGHT: 11,608 LBS <input checked="" type="checkbox"/> WITH <input type="checkbox"/> WITHOUT (INTERNAL)	
	INSULATION NONE		WIND SHEAR AT BASE: 16,975 LBS	
	FIREPROOFING NONE		WIND MOMENT AT BASE: 372,759 FT-LBS	
	PLATFORM AND LADDER CLIPS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO PLATFORMS AND LADDERS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		EARTHQUAKE SHEAR AT BASE: 3358 LBS	
	PIPE SUPPORT AND GUIDE CLIPS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO PIPE SUPPORTS AND GUIDES: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		EARTHQUAKE MOMENT AT BASE: 73,756 FT-LBS	
	INSULATION SUPPORTS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO FIREPROOFING SUPPORTS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
	STEAMOUT PRESSURE: PSIG TEMPERATURE: °F			

SPECIFIC DESIGN DATA AND NOTES	
NOTES: 1. REFER TO DWG. PCB-2E17-V787 FOR TABLE OF CONNECTIONS AND GENERAL NOTES FOR THIS ITEM. 2. THE FOLLOWING ADDITIONAL SHEET NOS. ARE ALSO APPLICABLE TO THIS ITEM: SHEETS V788 THRU V790. 3. MATERIAL HANDLED: DESCRIPTION: PELLETS BULK DENSITY: 38 - 41 LBS/CU. FT. ANGLE REPOSE: 25° - 27° COEFFICIENT FRICTION: 0.6	
ALL DIMENSIONS SHOWN ON THESE DRAWINGS ARE MINIMUM VALUES AND MUST BE VERIFIED BY THE VESSEL VENDOR. ALL DIMENSIONS AND THICKNESSES MUST BE CHECKED BY THE VENDOR FOR THE SPECIFIED DESIGN CONDITIONS. THE FABRICATOR OF THIS VESSEL IS RESPONSIBLE FOR THE MECHANICAL DESIGN IN ACCORDANCE WITH THE REFERENCED CODE.	
REQ. NO.	MANUFACTURER:
REQ. NO.	MANUFACTURER:
REQ. NO. 6422-01D1-D615-01	MANUFACTURER: JANSSENS AND DIEPERINK
3	2 23FEB98 6422-01D1-D615-01 CONSTRUCTION
2	1 22OCT97 6422-01D1-D615-01 FABRICATION RELEASE
1	0 01JUL97 6422-01D1-D615-01 INQUIRY
ISSUE	REV DATE REQ./P.O. ISSUED FOR
	DRAWING ISSUE RECORD

NO.	REVISION DESCRIPTION	BY	CHK	APP	DATE
2	SEE RRR-002	BJL	RS	WEA	23FEB98
1	SEE RRR-001	BJL	RS	WEA	22OCT97

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DESIGNED	RS	DRAWN	BJL	SCALE	NTS
CHECKED	RS	ISSUED FOR	FABRICATION 22OCT97		
APPROVED	WEA	ISSUED FOR	CONSTRUCTION 23FEB98		
DATED	01JUL97	ITEM NUMBER	95-4503A		

THE M. W. KELLOGG COMPANY

PHILLIPS PETROLEUM COMPANY
PASADENA, TEXAS

HCC K-RESIN TRAIN IV EXPANSION
BLEND SILO
ELEVATION
10220587

HC-1237-A15117	AREA	6422	K	PCB-2E17	V-786	- 2
AFE UNIT	DRAWING NUMBER	SHT. NO.	REV			

H G F E D C B A

642201 - EQUIP - J:\642201\equip\v787.dgn (18-Feb-98 3:13 PM) LOWBA I J07A J

TABLE OF CONNECTIONS

1. UNLESS OTHERWISE NOTED THE DIMENSIONS FROM THE FACE OF FLANGE TO CENTERLINE OF THE VESSEL SHALL BE:

- ___ FT. ___ INCH FOR 1" TO 8" NOZZLES
- ___ FT. ___ INCH FOR 10" AND LARGER NOZZLES
- ___ FT. ___ INCH FOR MANWAYS

2. ELEVATIONS IN TABLE ARE TO CENTERLINE OF CONNECTION UNLESS NOTED OTHERWISE.

FLANGE TYPE DESIGNATION:

- 1 = SLIP ON FLANGE
- 2 = WELD NECK FLANGE
- 3 = LONG WELDING NECK FLANGE
- 4 = LAP JOINT FLANGE
- 5 = STUDDING OUTLET

SPECIFIC NOTES TO TABLE OF CONNECTIONS

ALL NOTES LISTED HEREUNDER SHALL APPLY ONLY IF CALLED FOR BY NUMBER IN THE TABLE OF CONNECTIONS.

- 1 USE THIS INFORMATION FOR QUOTATION PURPOSES ONLY
- 2 SUPPLY BLIND FLANGE, BOLTS, AND GASKET
- 3 DIMENSION IS GIVEN TO FACE OF FLANGE
- 4 17" I.D. MINIMUM MANHOLE
- 5 HILL SIDE CONNECTION
- 6 COUPLING TO BE SCREWED TYPE
- 7 COUPLING TO BE SOCKET WELD TYPE
- 8 WITH INTERNAL 4" PIPE AND 90° ELL.
- 9 WITH INTERNAL 4" PIPE AND SUPPORT
- 10 SEE SHT. #V788
- 11 JIG SET (+0" / -1/16")
- 12 FLUSH MOUNT
- 13 VENDOR TO PROVIDE 'ISOMATIC' PRESSURE/VACUUM RELIEF VALVE, PART NO. M6-103-1; WELD RING MATERIAL = ALUMINUM WITH T-304 MESH SCREEN REQUIRED. SET PRESSURE AT 16 OZ. VACUUM AT 0.5 OZ.
- 14
- 15

GENERAL NOTES

- A. MATERIAL STRESSES SHALL BE IN ACCORDANCE WITH THE ANSI B96.1 WELDED ALUMINUM ALLOY STEEL STORAGE TANKS LATEST EDITION OR ASME, SECTION VIII, DIV. 1.
- B. ALL PLATE AND PIPE COMPONENTS, INCLUDING LIFTING LUGS MUST HAVE MATERIAL TRACEABILITY (MTRS).
- C. SHELL CIRCUMFERENTIAL SEAMS PLUS THE LONGITUDINAL AND CIRCUMFERENTIAL SEAMS IN THE CONE ARE TO BE GROUND SMOOTH AND FLUSH. INTERNAL SHELL LONGITUDINAL SEAMS ARE TO BE GROUND SMOOTH BUT NOT NECESSARILY FLUSH.
- D. ALL MATERIAL AND WELD ATTACHMENTS SHOWN OR REFERRED TO ON THIS DRAWING SHALL BE FURNISHED BY VESSEL VENDOR UNLESS OTHERWISE NOTED.
- E. ALL INTERNALS SHALL BE SHOP INSTALLED PER THE PPCO PATENT DRAWINGS.
- F. ALL PLATE FLANGES SHALL BE ANSI B16.5 150 CLASS DRILLING. FLANGES ARE TO BE FLAT FACED AND MACHINED TO A 125 RMS (MIN.) / 250 RMS (MAX.) FINISH. PLATE FLANGES 2" TO 6" TO BE 0.5" THICK AFTER MACHINING. PLATE FLANGES 8" TO 12" TO BE 0.75" THICK AFTER MACHINING. PLATE FLANGES OVER 12" TO BE 1.0" THICK AFTER MACHINING.
- G. ALL INTERNAL AND EXTERNAL ATTACHMENTS SHALL BE CONTINUOUSLY SEAL WELDED TO THE BLENDER SILO UNLESS OTHERWISE SHOWN ON THE DRAWING.
- H. ALL INTERNAL MEMBERS/COMPONENTS WITH CROSS-SECTION PERPENDICULAR TO THE FLOW OF PRODUCT WILL BE SHAPED, ORIENTATED OR BEVELED TO MINIMIZE ABRASION AND RETENTION OF PRODUCT.
- I. NOZZLE NECKS UP TO 12" TO BE SCH. 40 PIPE. NOZZLE NECKS 12" AND ABOVE TO BE STD. WT. PIPE.
- J. TEST PROCEDURE:
 - (1) PRESSURIZE TO 1/4 LB. SOAP ALL PRESSURE CONTAINMENT WELDS AND VISUALLY EXAMINE FOR LEAKS.
 - (2) GRADUALLY INCREASE PRESSURE UNTIL 1.5 PSI IS ATTAINED. HOLD AT 1.5 PSI FOR A MINIMUM OF THIRTY (30) MINUTES AND OBSERVE ANY VARIANCE IN GAUGE READINGS.
 - (3) LOWER PRESSURE TO 1/4 LB. RE-SOAP ALL PRESSURE CONTAINMENT WELDS AND VISUALLY EXAMINE FOR LEAKS.
- K. SUBSTITUTIONS OF MATERIALS WILL NOT BE ALLOWED WITHOUT M.W. KELLOGG'S PRIOR APPROVAL.
- L. ALL CONNECTIONS ARE RADIAL UNLESS SHOWN OR NOTED OTHERWISE. LOCATIONS SHOWN IN MAIN ELEVATION ARE DIAGRAMATIC ONLY.

REV	SYMBOL	ANSI SIZE	ANSI RATING	FACING	FLANGE TYPE	SERVICE	ORIENTATION	DIMENSION FROM REF. T.L.	NOTES
	A	6	150	F.F.	PL.	PELLET INLET	270°	44'-8"	
	B	8	150	F.F.	PL.	PELLET INLET	90°	44'-8"	
	C	14	150	F.F.	PL.	FILTER	135°	44'-8"	
	E	4	150	R.F.	PL.	AIR	90°	(-15'-6"	10
	F	2	150	F.F.	PL.	AIR	270°	(-14'-6"	10
	G	12	150	F.F.	PL.	PELLETS / AIR	CTR. BTM.	(-14'-6"	
	H1	5	150	F.F.	PL.	BLEND TUBE	45°	44'-8"	2
	H2	5	150	F.F.	PL.	BLEND TUBE	105°	44'-8"	2
	H3	5	150	F.F.	PL.	BLEND TUBE	165°	44'-8"	2
	H4	5	150	F.F.	PL.	BLEND TUBE	225°	44'-8"	2
	H5	5	150	F.F.	PL.	BLEND TUBE	285°	44'-8"	2
	H6	5	150	F.F.	PL.	BLEND TUBE	345°	44'-8"	2
	MH1	20	SPC'L.	F.F.	PL.	MANHOLE	255°	44'-6"	13
	X1	4	150	F.F.	PL.	MOUNT FOR CONN. 'F'	270°	(-14'-6"	10

NO.	REVISION DESCRIPTION	DATE	BY	CHK	APP
3	2	23FEB98	6422-01D1-D615-01		CONSTRUCTION
2	1	22OCT97	6422-01D1-D615-01		FABRICATION RELEASE
1	0	01JUL97	6422-01D1-D615-01		INQUIRY
ISSUE	REV	DATE	REQ./P.O.		ISSUED FOR

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DESIGNED RS	DRAWN BJJ	SCALE NTS
CHECKED RS	ISSUED FOR FABRICATION	22OCT97
APPROVED WEA	ISSUED FOR CONSTRUCTION	23FEB98
DATED 01JUL97		

THE M. W. KELLOGG COMPANY

PHILLIPS PETROLEUM COMPANY
PASADENA, TEXAS

HCC K-RESIN TRAIN IV EXPANSION
BLEND SILO
TABLE OF CONNECTIONS AND GENERAL NOTES

HC-1237-A15117 AFE UNIT 95-4503A ITEM NUMBER 46-0700

6422	K	PCB-2E17	V-787	- 2
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