DWG. NO. K5-01-E1-PD-5V-T

120-C AMMONIA UNITIZED CHILLER			
		SHELL	TUBE
DES./OPER.TEMP	°C	65; -29/41; -17.8	65; -29/-17.8; 34.6
DES./OPER.PRESS	kg/cm2G	170/150.9	170/149.37
INSULATION/THICK	mm	COLD/-	COLD/-
MATERIAL		CS	CS SEAMLESS
DIMENSION (ID SHELLxL)	mm	4700x19594	
SURFACE AREA	m2	1694	

NOTES

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING 4A, 4B.
2. LV-1021/1022/1023 TO BE LOCATED AT GRADE AS NEAR TO 120-CF AS POSSIBLE TO AVOID CAVITATION.
3. FIRST GATE VALVE TO BE MINIMUM DISTANCE FROM 120-CF1 AND NORMALLY CLOSED. SECOND 2" VALVE NEAR GRADE WILL BE LEFT OPEN AS COLLECTED TO DRUM.
4. REFER TO WRITE-UP CONTROL SYSTEMS ENGINEERING FOR INTERLOCK DESCRIPTION.

120-CF4 4TH STAGE REFRIGERANT FLASH DRUM		
DES./OPER.TEMP.	°C	65(MAX.) ; -29(MIN.)/-
DES./OPER.PRESS.	kg/cm2G	15.8/6.9
INSULATION/THICK.	mm	COLD/-
MATERIAL		CS
DIMENSION (ID x (TL-TL))	mm	4700x4300
VOLUME	m3	BV

120-CF3 3RD STAGE REFRIGERANT FLASH DRUM		
DES./OPER.TEMP.	°C	65(MAX.) ; -29(MIN.)/-2.2
DES./OPER.PRESS.	kg/cm2G	15.8/3
INSULATION/THICK.	mm	COLD/-
MATERIAL		CS
DIMENSION (ID x (TL-TL))	mm	4700x6700
VOLUME	m3	BV

120-CF2 2ND STAGE REFRIGERANT FLASH DRUM		
DES./OPER.TEMP.	°C	65(MAX.) ; -29(MIN.)/-17.8
DES./OPER.PRESS.	kg/cm2G	15.8/1.1
INSULATION/THICK.	mm	COLD/-
MATERIAL		CS
DIMENSION (ID x (TL-TL))	mm	4700x4200
VOLUME	m3	BV

120-CF1 1ST STAGE REFRIGERANT FLASH DRUM		
DES./OPER.TEMP.	°C	65(MAX.) ; -40(MIN.)/-33
DES./OPER.PRESS.	kg/cm2G	15.8/0.02
INSULATION/THICK.	mm	COLD/-
MATERIAL		CS
DIMENSION (ID x (TL-TL))	mm	4700x4394
VOLUME	m3	BV

REV.	DESCRIPTION	DRWN	CHKD	DES'D	CHK'D	APV'D	APV'D	AUTH	ISSUE	DATE
B/5	RE-ISSUED FOR CONSTRUCTION (AFC-3)	TS	ABA		DU	HGM	ANS		HK	US	5V	14/11/13
A/5	RE-ISSUED FOR CONSTRUCTION (AFC-2)	TS	ABA		DU	HGM	AH		HK	US	5V	28/06/13
5/5	RE-ISSUED FOR CONSTRUCTION (AFC-1)	TS	ABA		DU	HGM	AH		HK	US	5V	10/04/13
4/5	ISSUED FOR CONSTRUCTION (AFC)	EB	ABA		DU	RK	AH		SML	US	5V	25/11/12
3/5	RE-ISSUED FOR APPROVAL (AFD-1)	EB	ABA		DU	RK	U		SML	US	5V	29/08/12
2/5	ISSUED FOR APPROVAL (AFD)	EB	ABA		DU	RK	U		SML	US	5V	22/06/12
1/5	ISSUED FOR DETAIL DESIGN (AFP-2)	EB	ABA		JHK	YSK	BOP		HJN	SML	5V	14/05/12

REVISIONS

PROJECT NAME : KALTIM-5 PROJECT
2500 MTPD AMMONIA AND 3500 MTPD UREA
BONTANG, EAST KALIMANTAN, INDONESIA

CLIENT NAME : PUPUK KALTIM
PT. PUPUK KALIMANTAN TIMUR

KBR Engineering Services by KBR Technical Services, Inc.

ABBR. FOR ISSUE
C=CLIENT
L=LICENSOR
S=SITE
V=VENDOR

CONTRACTOR : KT KALTIMTARYA PERSADA TEKNIK, Toyo Engineering Corporation

ISSUE MARK : 14/NOV/13

CONTRACTOR WORK NUMBER : 10107 / BA096300 / 11-018-01

PIPING & INSTRUMENT FLOW DIAGRAM
AMMONIA REFRIGERATION

SCALE | DWG. NO. K5-01-E1-PD-5V-T

DOC. NO. K5-01-E1-PD-023-T | SHEET 023/073 | REV.8