

제 2011 - 84243 호



안 전 인 증 서

극동호이스트(주)

(425-833)경기도 안산시 성곡동630-2 반월공단 B-607-14

위 사업장에서 제조하는 아래의 품목이 산업안전보건법 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

_____ 품 목 _____

호이스트

_____ 형식,모델(용량,등급)/인증번호 _____

KDC1T-L (1Ton) /11-AQ2AC-01748

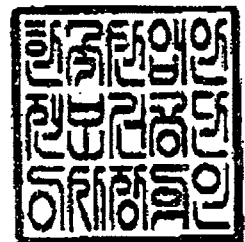
_____ 인 증 기 준 _____

노동부 고시 제2010 - 12호 (위험기계,기구 의무안전인증 고시)

_____ 인 증 조 건 _____

2011 년 06 월 27 일

한국산업안전보건공단 이사장





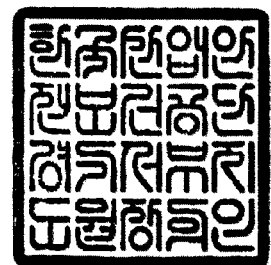
심사결과통지서

신청인	사업장명	극동호이스트(주)	사업장관리번호 (사업자등록번호)	134-81-013350 134-81-01335
	소재지	(425 - 833) 경기도 안산시 성곡동630-2 반월공단 B-607-14		
	대표자성명	최성찬		
안전인증대상 기계·기구명		호이스트		
형식(규격)		KDC1T-L	용량(등급)	1 Ton
인증심사원		강성두 변명수 		

산업안전보건법 제 34조 및 같은 법 시행규칙 제58조의4에 따라 실시한 서면심사
결과가 적합함을 통지합니다.

2011 년 04 월 22 일

한국산업안전보건공단 경기서부지도원장



동일 형식 일람 표

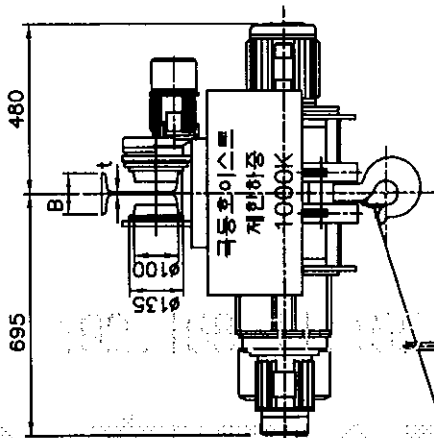
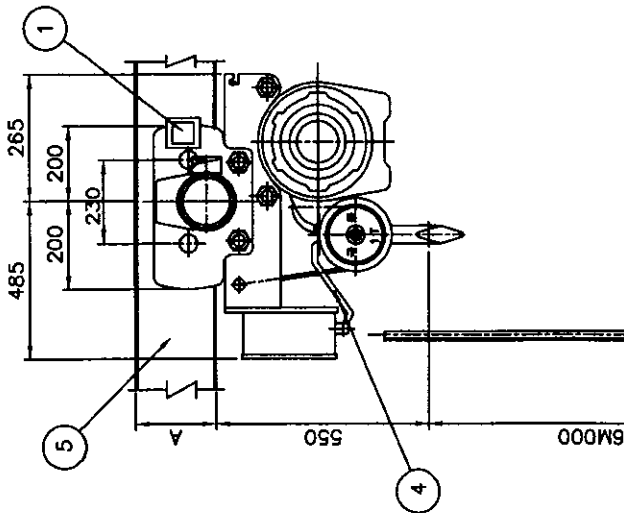
사업장명		극동호이스트㈜		개정일자 및 번호		인증번호		비고
형식 및 모델		동일 형식 인정범위 및 내역						
형식	모델		권상속도(m/min)	회행속도(m/min)	양정(m)		회행방식	
	KDC1T-L6-L		고속:12M/MIN CREEP:1.2M/MIN	고속:24M/MIN 저속:16M/MIN	6		모터구동식	
	KDC1T-L9-L				9			
KDC1T-L								



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SPECIFICATION			
RATER LOAD		1000	KG
TESTING LOAD		1250	KG
LIFT		6	M
RATING		30	MIN
HOISTING	SPEED	12/1.2 M/MIN	
	MOTOR	2.4/0.4 KW x 4 P	
TRAVERSING	HIGH	SPEED	24 M/MIN
		MOTOR	0.4 KW x 4 P
	LOW	SPEED	16 M/MIN
		MOTOR	0.2 KW x 6 P
WIRE ROPE		(6x19) Ø6 x 4 FALLS	
POWER SOURCE		AC3Ø 220V(380,440,460,480) 60Hz	
COLOR		10 B 3/5	
WEIGHT		275 KG	

5	I-BEAM	SS400	-				TABLE 참조
4	UPPER LIMIT S/W	SS400	1				
3	SAFETY LATCH	SS400	1				
2	EMERGENCY S/W	—	1				
1	LOAD LIMITER	—	1				
NO.	DESCRIPTIONS	MTL	SET QTY	UNIT	TOTAL		REMARKS
					WEIGHT KG.		
PROJECT					DATE		
TITLE		KDC1 - H6 - L			SCALE		
DRAWN		ARRANGEMENT DRAWING FOR HOIST			A3 / 20 /		
		DESIGNED	CHECKED	APPROVED	REF DRAWING		
 극동호이스트 주식회사 KUK DONG HOIST CO., LTD.		SHEET NO.		DRAWING NO.			
				KDC1 - 6000			

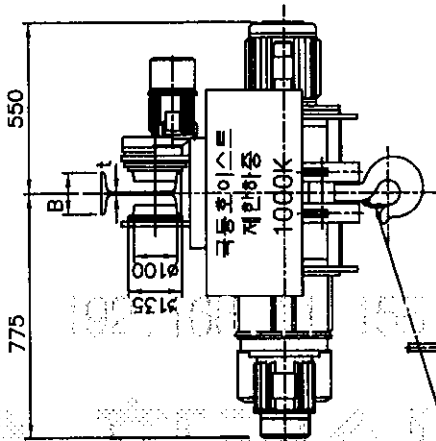
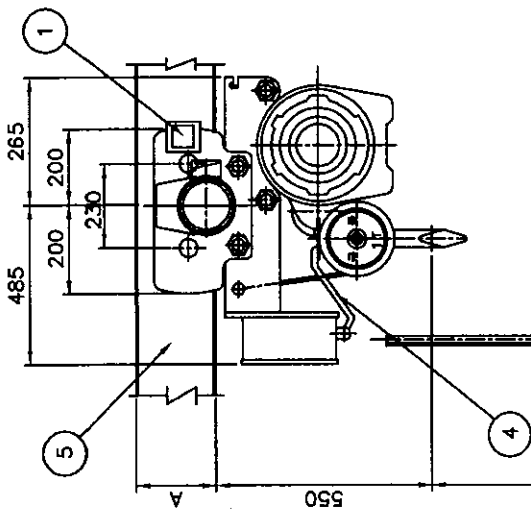


TRAVERSING I-BEAM		I _x (Cm ⁴)	Z _x (Cm ³)	SUPPORT LENGTH
A x B x t				
I 200 x 100 x 7		2180	218	MAX. 4.0 M
I 250 x 125 x 7.5		5180	414	MAX. 6.2 M
I 300 x 150 x 10		12700	849	MAX. 9.3 M
I 350 x 150 x 9		15200	871	MAX. 10.2 M
I 400 x 150 x 10		24100	1220	MAX. 11.0 M

PUSH BUTTON S/W

SPECIFICATION			
RATED LOAD	1000	KG	
TESTING LOAD	1250	KG	
LIFT	9	M	
RATING	30	MIN	
HOISTING	SPEED	12/1.2 M/MIN	
	MOTOR	2.4/0.4 KW x 4 P	
TRAVERSING	HIGH	SPEED	24 M/MIN
		MOTOR	0.4 KW x 4 P
	LOW	SPEED	16 M/MIN
		MOTOR	0.2 KW x 6 P
WIRE ROPE	(6x19) Ø6 x 4 FALLS		
POWER SOURCE	AC3ø 220V(380,440,460,480) 60Hz		
COLOR	10 B 3/5		
WEIGHT	325 KG		

5	I-BEAM	SS400	-			TABLE 원조
4	UPPER LIMIT S/W	SS400	1			
3	SAFETY LATCH	SS400	1			
2	EMERGENCY S/W	—	1			
1	LOAD LIMITER	—	1			
NO.	DESCRIPTIONS	MT'L	SET QTY	UNIT	TOTAL WEIGHT KG.	REMARKS
PROJECT						DATE
						19 . . .
TITLE		KDCYL - H9 - L				SCALE
		ARRANGEMENT DRAWING FOR HOIST				A3 / 20 /
DRAWN	DESIGNED	CHECKED	APPROVED			REF DRAWING
 극동호이스트 주식회사 KUK DONG HOIST CO., LTD.			SHEET NO. 		DRAWING NO. KDCYL - 9000	



TRAVERSING I-BEAM A x B x t	I _x (Cm ⁴)	Z _x (Cm ³)	SUPPORT LENGTH
I 200 x 100 x 7	2180	218	MAX. 4.0 M
I 250 x 125 x 7.5	5180	414	MAX. 6.2M
I 300 x 150 x 10	12700	849	MAX. 9.3 M
I 350 x 150 x 9	15200	871	MAX. 10.2 M
I 400 x 150 x 10	24100	1220	MAX. 11.0 M

사
KCS
업안전보

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DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS	SYMBOLS		DESCRIPTION	SYMBOLS		DESCRIPTION	SYMBOLS	
				MAKE	BREAK		MAKE	BREAK			
3 PHASE SOURCE, CAP. ROTOR INDUCTION MOTOR		NO FUSE BREAKER 2 PHASE		MAGNETIC & RELAY CONTACTOR		PUSHBUTTON SWITCH 1-BUTTON 2-STEP TYPE		MAKE	BREAK	SYMBOLS	
3 PHASE WOUND ROTOR INDUCTION MOTOR		NO FUSE BREAKER 3 PHASE		ON DELAY TIME CONTACTOR		TOGGLE SWITCH OR SELECTOR SWITCH		MAKE	BREAK	SYMBOLS	
DC MAG. BRAKE DISK TYPE		EARTH LEAKAGE BREAKER 2 PHASE		OFF DELAY TIME CONTACTOR							
THRUSTOR BRAKE		EARTH LEAKAGE BREAKER 3 PHASE		ECOR OR THERMAL RELAY CONTACTOR							
AC-DC MAG. BRAKE		TRANSFORMER		THERMOSTAT							
SC BRAKE		CURRENT TRANSFORMER		LIMIT SWITCH							
EC BRAKE		POTENTIAL TRANSFORMER		PUSHBUTTON SWITCH							
RECTIFIER		FUSE		EMERGENCY PUSHBUTTON SWITCH							
LOAD LIMITER ELECTRICAL TYPE		FUSE WITH CONTACTOR		KEY SWITCH							
ELECTRONIC OVER CURRENT RELAY		THRUSTOR UNIT		FOOT SWITCH							

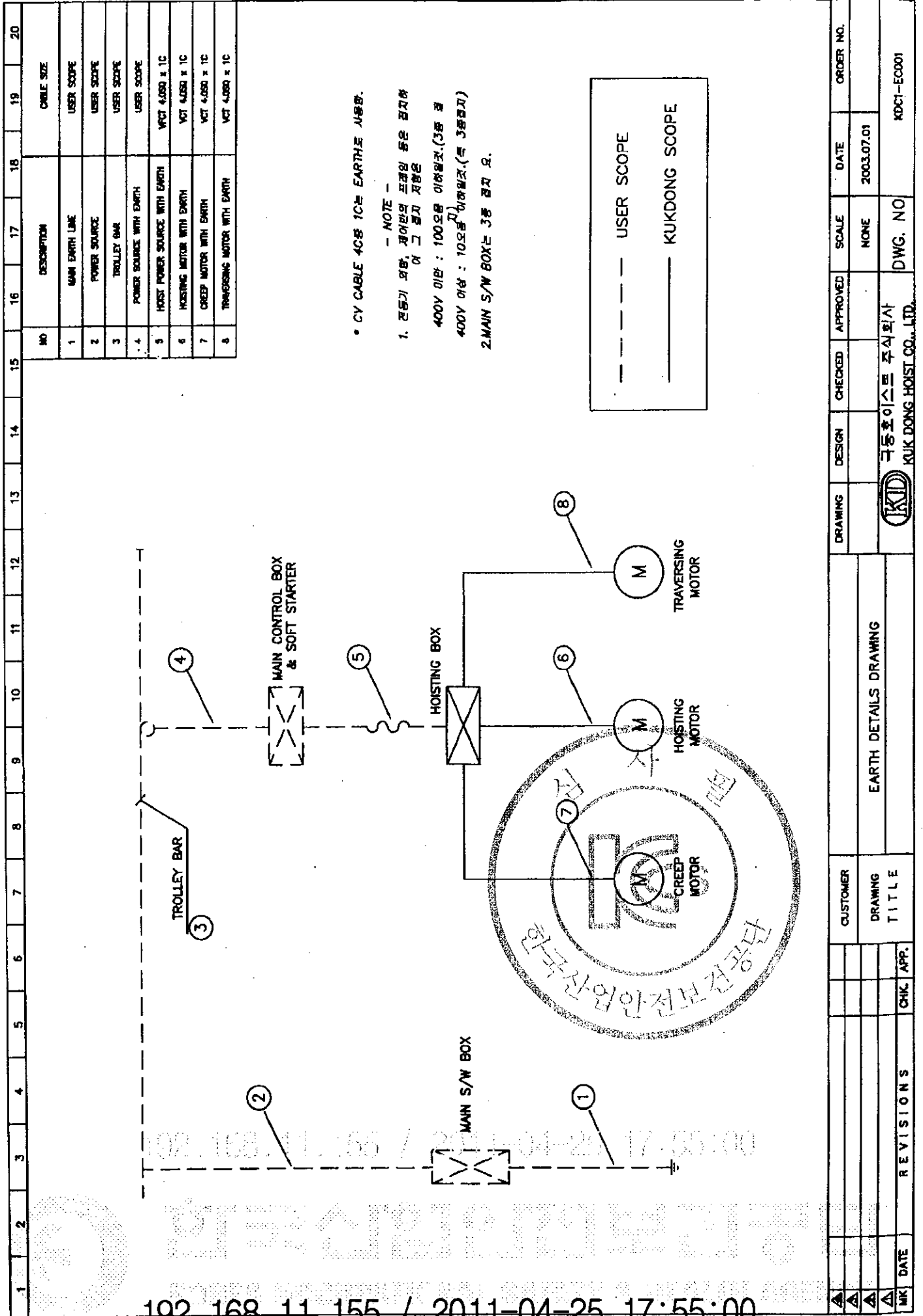
DATE	REVISIONS	CHK.	APP.	 극동호이스트 주식회사 KUK DONG HOIST CO., LTD.	SYMBOL LIST 1/2	 극동호이스트 주식회사 KUK DONG HOIST CO., LTD.	DWG. NO	KDSM0001
DATE	REVISIONS	CHK.	APP.				DWG. NO	KDSM0001
DATE	REVISIONS	CHK.	APP.				DWG. NO	KDSM0001
DATE	REVISIONS	CHK.	APP.				DWG. NO	KDSM0001
DATE	REVISIONS	CHK.	APP.				DWG. NO	KDSM0001

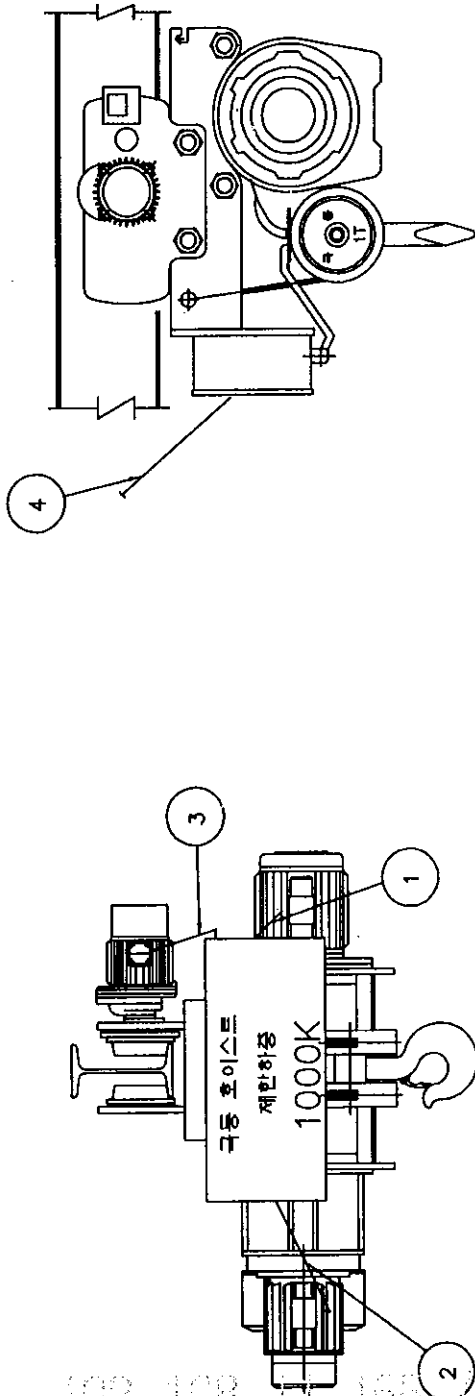
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ADP'S NO.																			

ELECTRICAL SYMBOL LIST

DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS
WIRE INTERNAL TO ENCLOSURE	—	CONTROLLER OR REMOTE CONTROLLER CONTACTOR		SOLENOID COIL		FLOOD LIGHTING	
WIRE EXTERNAL TO ENCLOSURE	---	UPPER LIMIT SWITCH (LS-I)		RESISTOR		RECEPTACLE	
WIRE NOT CONNECTED	+	THERMAL RELAY		VARIABLE RESISTOR			
WIRE CONNECTED	+	PILOT(SIGNAL) LAMP		SLIP RING			
TERMINAL	⊙	ROTARY LAMP		CABLE REEL			
GROUND (EARTH)	⊥	WARNING SIREN		SPACE HEATER			
PLUG & RECEPTACLE	⋈	BUZZER		SURGE ABSORBER			
MAGNETIC CONTACTOR COIL		ANALOG METER		LOAD CELL			
AUX. RELAY COIL		VOLT METER		BALLAST WITH RECEPTACLE			
TIMER COIL		FLUORESCENCE LAMP		FAN			

△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
CUSTOMER										DRAWING									
DRAWING TITLE										SYMBOL LIST 2/2									
REVISIONS										DWG. NO									
DATE																			
CHK																			
APP																			
KUK DONG HOIST CO., LTD.										KDSM0002									





본 도면은 EARTH를 명기하기 위한 도면으로서
설계 배치와 다를 수 있으며 HOIST 본체와의
EARTH용 CABLE은 REFERENCE

*3중 접지공사 100Ω 이하 (AC 3PH 400V 미만)
*4중 접지공사 10Ω 이하 (AC 3PH 400V 이상)

	NO	CABLE			REMARK
		TYPE	SIZE	TYPE	
1	VCT	220V 4.0sqx4c	380V 4.0sqx5c	440V,460V,480V 4.0sqx5c	HOISTING MOTOR WITH EARTH
2	VCT	4.0sqx4c	4.0sqx5c	4.0sqx5c	CREEP MOTOR WITH EARTH
3	VCT	4.0sqx4c+2.5sqx3c	4.0sqx4c+2.5sqx3c	4.0sqx4c+2.5sqx3c	T/S MOTOR WITH EARTH
4	VFCT	4.0sqx4c	4.0sqx4c	4.0sqx4c	MAIN POWER WITH EARTH

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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극동 호이스트
제한하중
1000K

IN DOOR

OUT DOOR

NOTE

- PROTECTION DEGREE ;
 - A. INDOOR TYPE : DUST PROOF
 - B. OUT DOOR TYPE : SPLASH PROOF
- FINAL PAINTING COLOR (MANSELL NO.)
 - A. IN SIDE : 10B 3/5
 - B. OUT SIDE : 10B 3/5
- PAINTING THICKNESS : ABOVE 40 μ m
- APPLICATION VOLTAGE : 220V, 380V, 440V, 460V, 480V
- 제어용 전선 : 2.5sq KIV, H/V
- 외관 기법 구조는 다음과 같다.
 - 1) 외관 기법시 종전부 부분이 차단되도록 한다.
 - 2) 외관 기법 후 충전되어있는 부분은 IP2X 이상의 직접 접촉 방호가 되어있을것.

NO	DESCRIPTION	MT'L	REMARKS
1	PANEL CASE	SPC	1.6t
2	PANEL COVER	SPC	1.6t
3	HINGE	PUR'	
4	CLAMP	PUR'	
5	SPONGE	PUR'	

SELECTION	HOIST CAPACITY	DESCRIPTION	IN DOOR		OUT DOOR		REMARK	
			A	B	A	B		
1	TON	NORMAL	320	150	640	320	150	660
		CREEP	320	150	640	320	150	660

DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
				NONE		

극동호이스트 주식회사

KUK DONG HOIST CO., LTD.

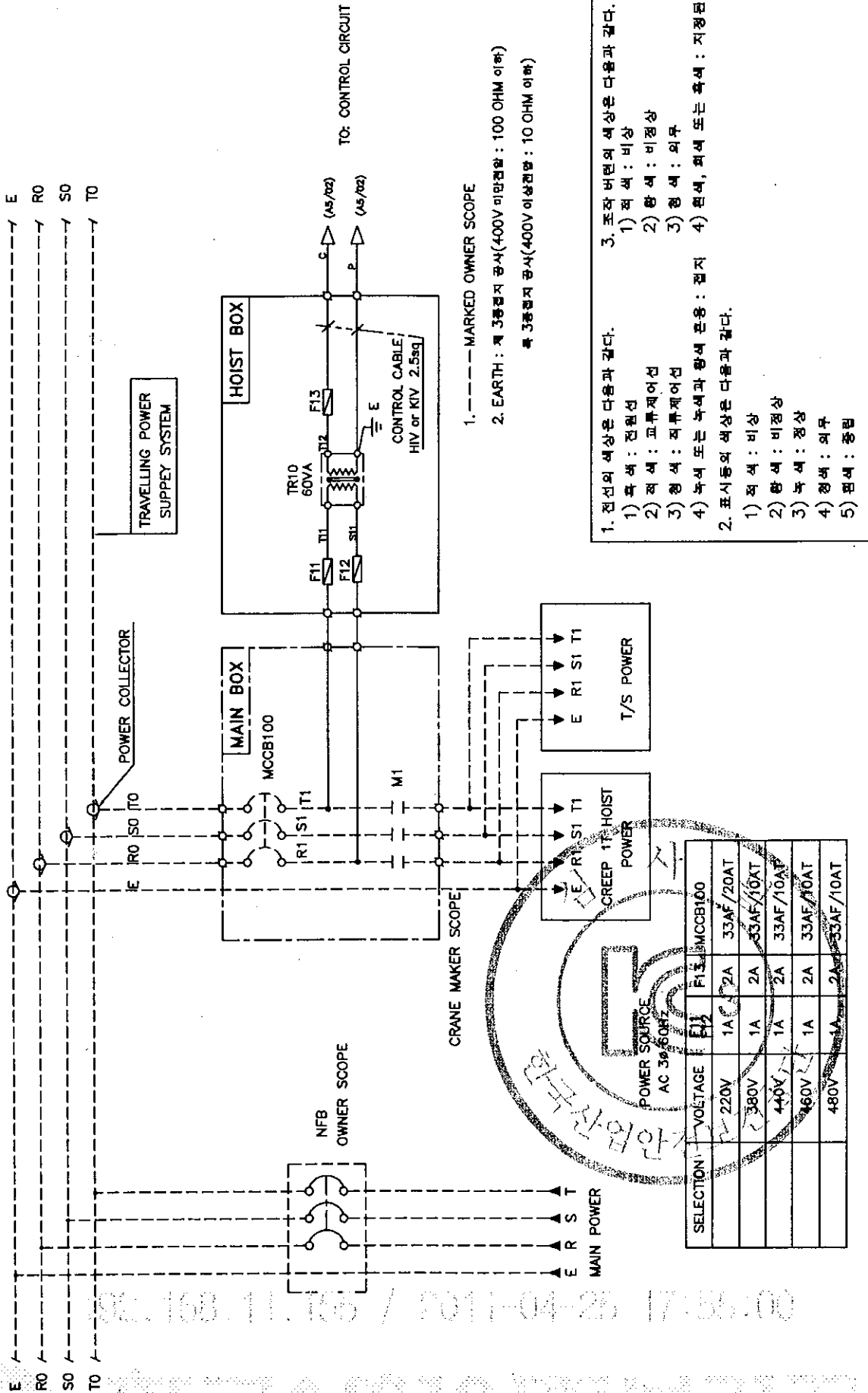
HOISTING CONTROL BOX

LAY-OUT

DWG. NO

KDC01EB00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER CIRCUIT																			
TRAVELLING POWER SUPPLY SYSTEM																			
ADR'S NO.																			A1



DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
				NONE		
KUK DONG HOIST CO., LTD.						KDC01E001
KUK DONG HOIST CO., LTD.						
MAIN POWER CIRCUIT 1						
DIAGRAM						
DATE	REVISIONS	CHK.	APP.			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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ADR'S NO.

NO	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
1	CHASSIS PLATE		1	아 연 도 금
2	CABLE DUCT	-	1	
3	N.F.B	33AF/20AT	1	HOISTING
4	MAGNET CONTACTOR	DOC-22P	1	MAIN MAG.
5	MAGNET CONTACTOR	DOC-22P	2	HOISTING
6	MAGNET CONTACTOR	DOC-22P	2	CREEP HOIST
7	SILICON RECTIFIER	SR-30	1	HOISTING
8	SILICON RECTIFIER	SR-30	1	CREEP HOIST
9	E.O.C.R	SS-30	1	HOISTING
10	E.O.C.R	SS-05	1	CREEP HOIST
11	FUSE	1 A	2	
12	FUSE	2 A	1	
13	TRANSFORMER	220V/110V(120V), 60VA	1	
14	UPPER LIMITER	AC 600V, 75A	1	LS-1,2
15	TERMINAL BLOCK	60A,15A		
16	EARTH TERMINAL	3tx20x50	1	

NOTE 1. 전선의 색상은 다음과 같다.

1) 흑색 : 교류 및 직류 전원선

2) 적색 : 교류 제어선

3) 파랑색 : 외부 전원에서 공급되는 연동장치 제어회로

4) 녹색 또는 노색과 황색 혼용 : 접지선

2. CABLE MATERIAL : KIV OR EQUIVALENT

MIN SIZE : 2.5sq

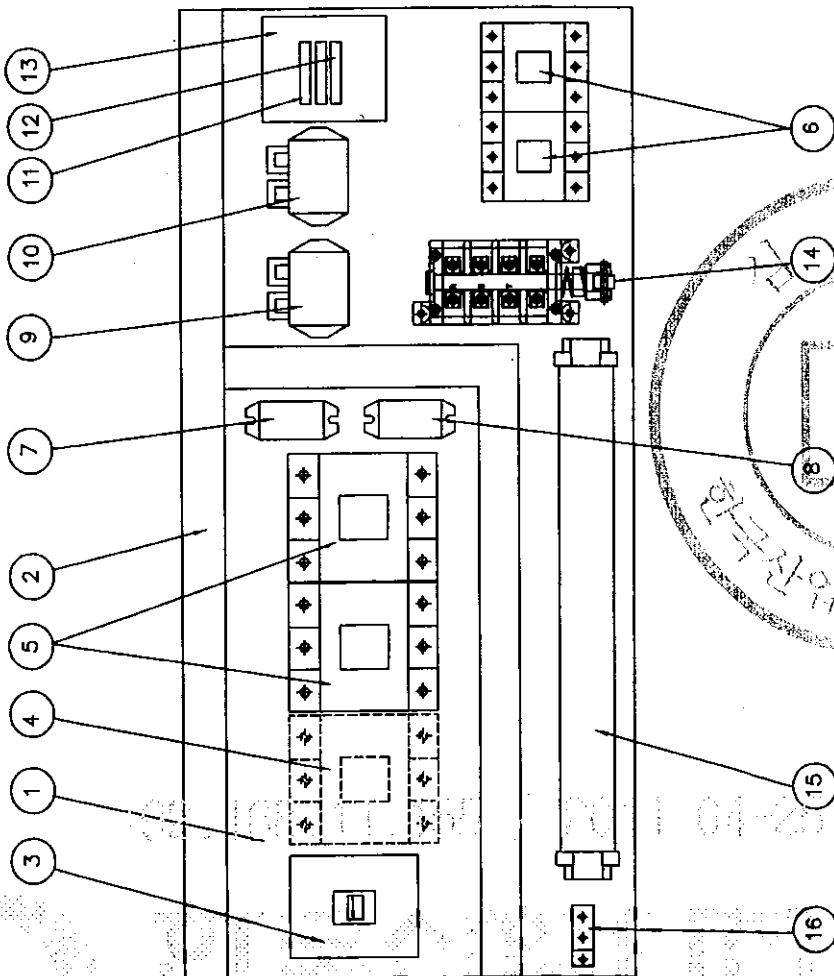
3. 제어용 전선 : 2.5mm KIV,HIV

4. 제파시 다소 변경 될수있음.

5. 외함 기방구조는 다음과 같을것.

1) 외함 기방시 중전부분이 차단되도록 할것.

2) 외함 기방후 중전되어있는 부분은 IP2X 이상의 직접 접촉 방호가 되어있을것.



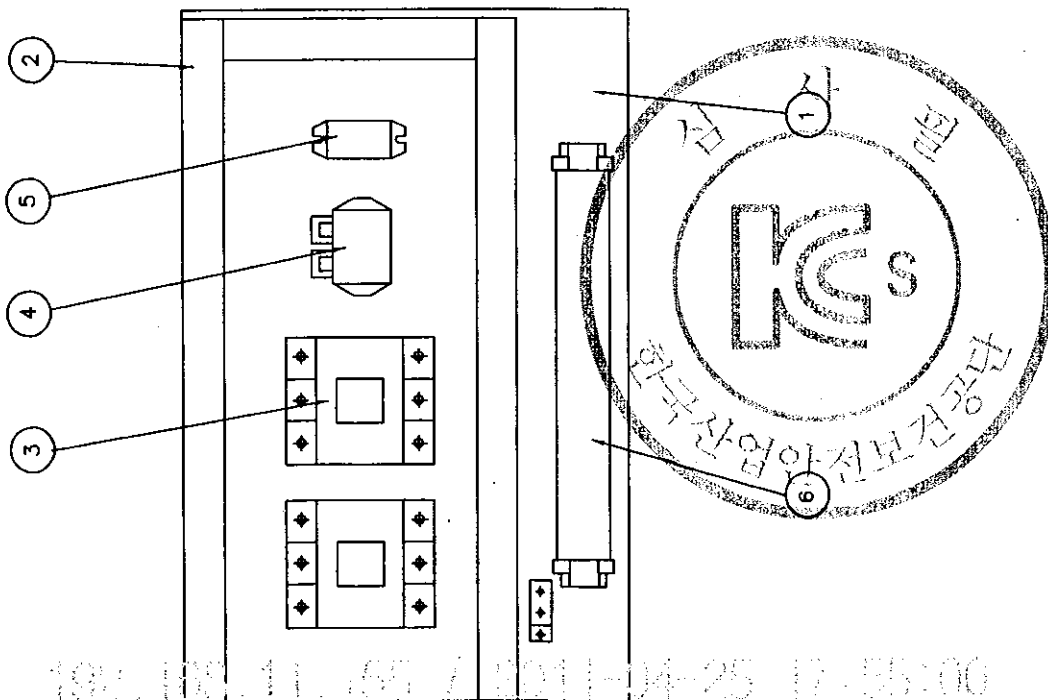
NOTE

1. UPPER LIMIT LS-1,LS-2의 직접 회로,전류 용량, AC 600V, 75A

2. POWER SOURCE : AC-3φ 220V 60HZ

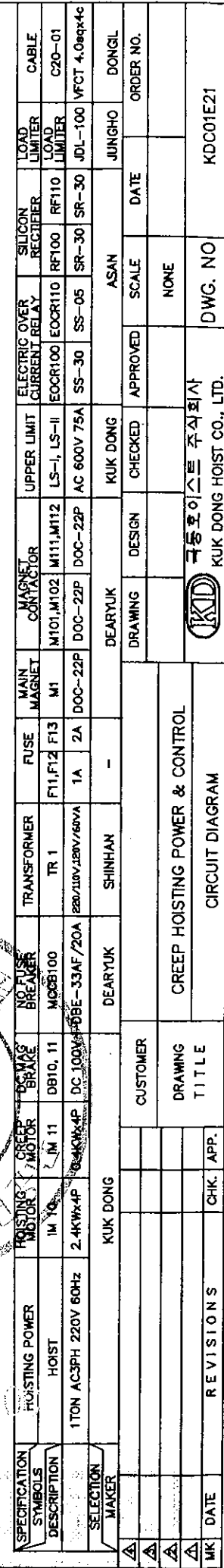
3. EARTH TERMINAL RESISTANCE 0.018Ω

DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
				NONE		
DRAWING TITLE	CUSTOMER	CHK.	APP.	REV.	DWG. NO	KDC1BA21
CREEP HOIST CONTROL BOX						
ARRANGEMENT DRAWING						
DATE	REVISIONS					

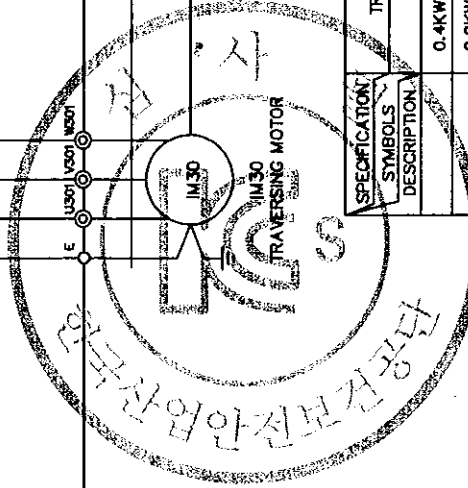


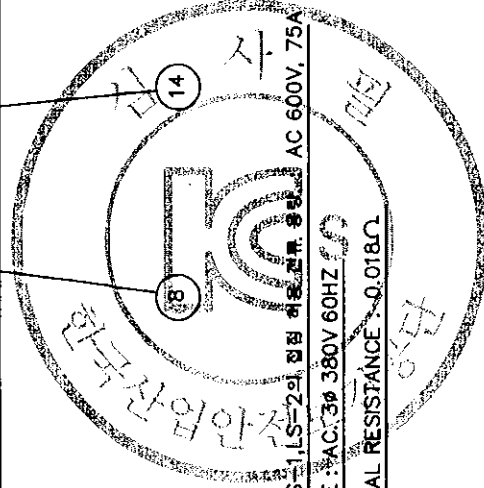
NO	DESCRIPTION	SPEC	Q'TY	REMARK
1	CHASSIS PLATE	-	1	아 연 도 금
2	CABLE DUCT	-	1	
3	MAGNET CONTACTOR	DOC-22P	2	TRAVERSING
4	E.O.C.R	SS-05	1	TRAVERSING
5	SILICON RECTIFIER	SR-30	1	TRAVERSING
6	TERMINAL BLOCK	25A , 15A	1	TRAVERSING

[illegible]



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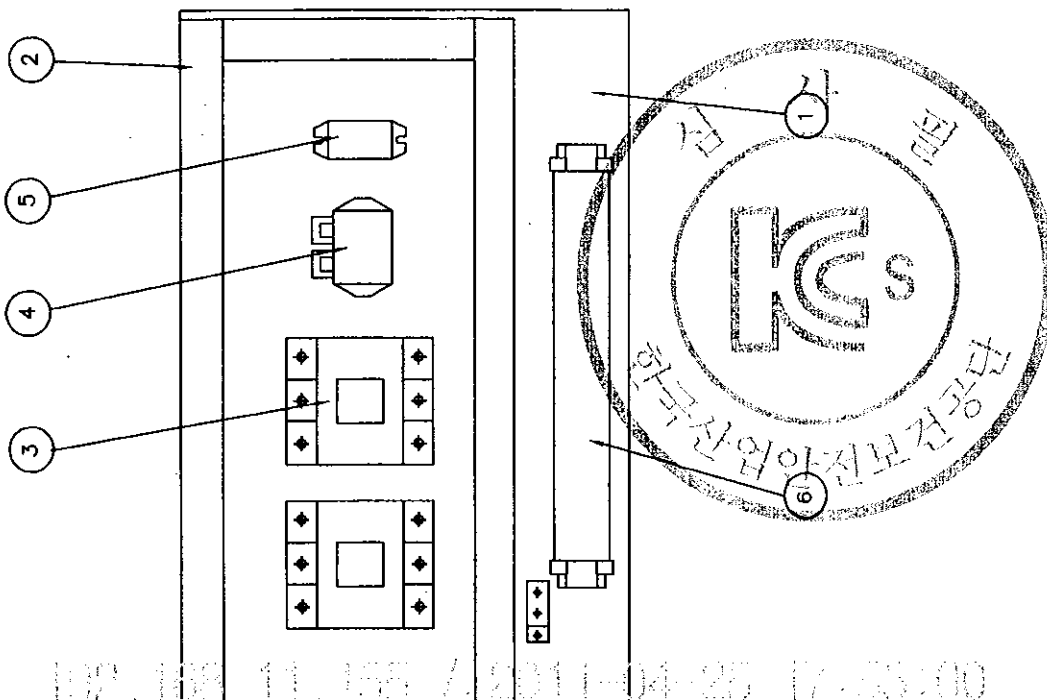
[illegible]



1. UPPER LIMIT LS-1, LS-2의 입력 허용 전류. 용량 AC 600V, 75A
2. POWER SOURCE : AC, 3 ϕ 380V 60HZ
3. EARTH TERMINAL RESISTANCE : 0.018 Ω

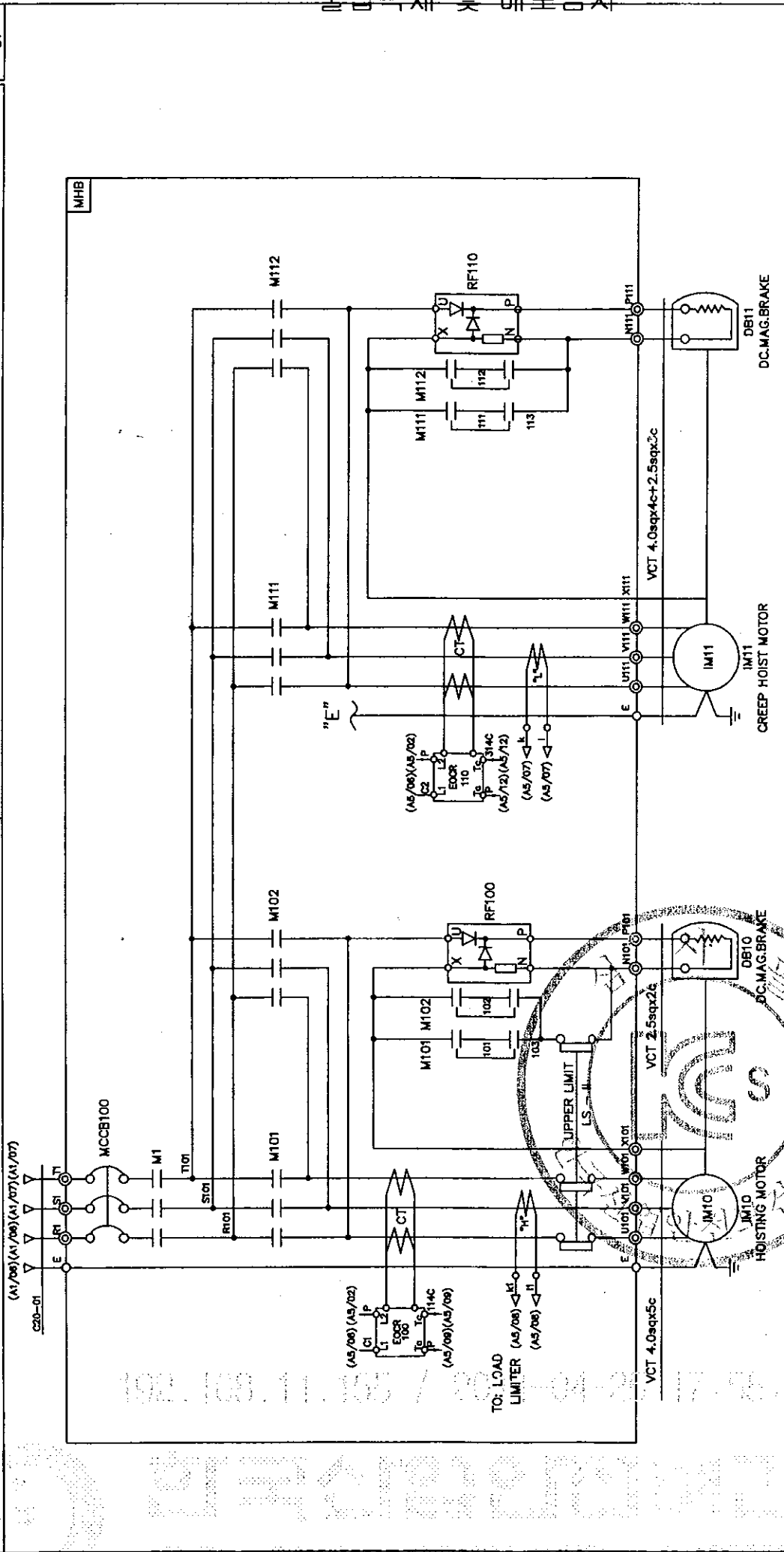
2) 의뢰가 많고 응징되어 있는 부분은 P2X 이상의 정점 간에 많은 차이가 되어 있음

☒												
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WK	DATE		REVISIONS		CHK.	APP.						
							CUSTOMER		DRAWING			
									TITLE			
							CREEP HOIST CONTROL BOX					
							ARRANGEMENT DRAWING					
				DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.		
								NONE				
								DWG. NO	KDC1BA31			



NO	DESCRIPTION	SPEC	Q'TY	REMARK
1	CHASSIS PLATE	-	1	아 연 토 금
2	CABLE DUCT	-	1	
3	MAGNET CONTACTOR	DOC-22P	2	TRAVERSING
4	E.O.C.R	SS-05	1	TRAVERSING
5	SILICON RECTIFIER	SR-30	1	TRAVERSING
6	TERMINAL BLOCK	25A , 15A	1	TRAVERSING

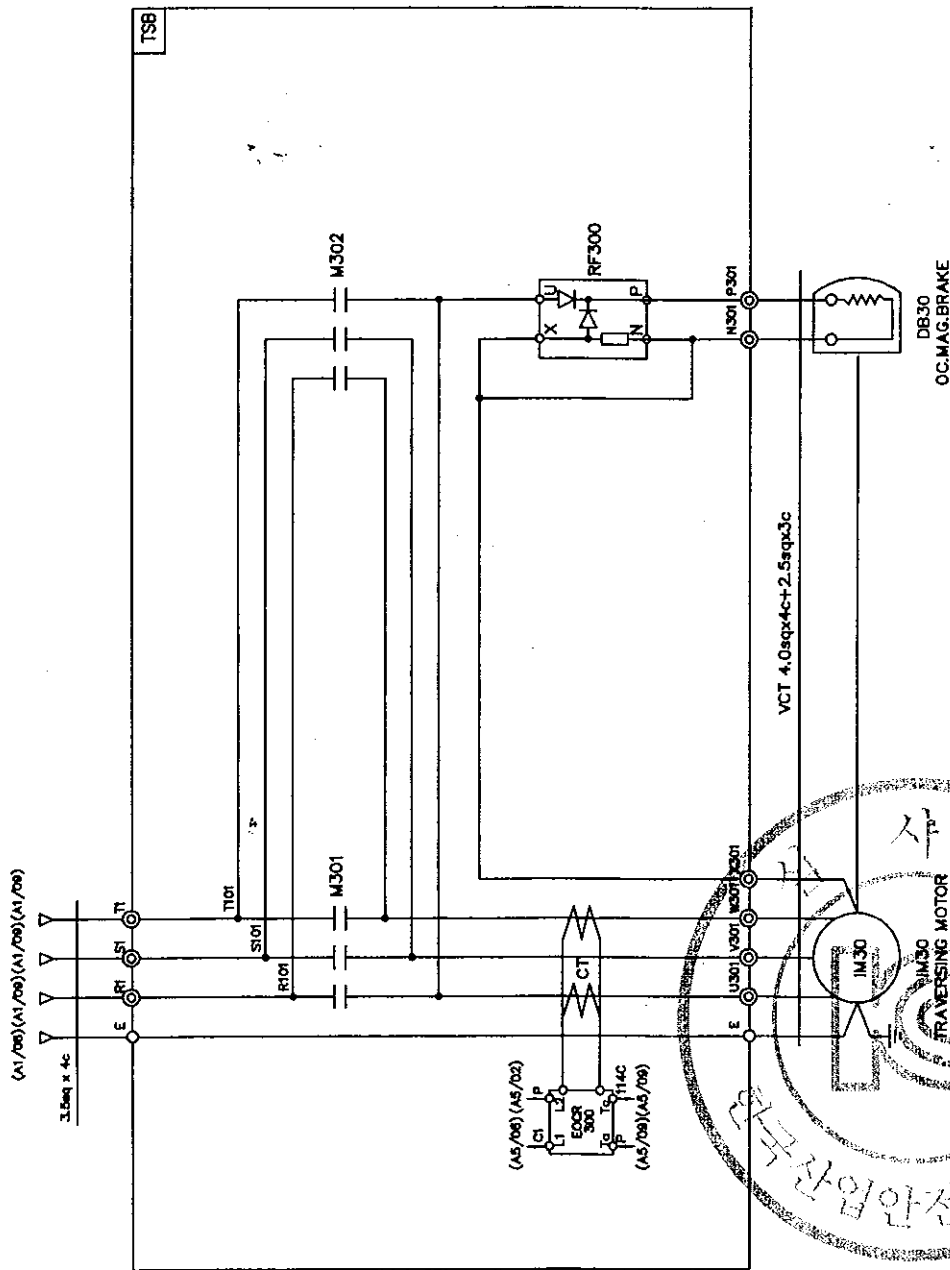
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SPECIFICATION SYMBOLS	HOISTING POWER	HOISTING MOTOR	CREEP MOTOR	DC MAG. BRAKE	NO FUSE BREAKER	TRANSFORMER	FUSE		MAIN MAGNET	MAGNET CONTACTOR	UPPER LIMIT	ELECTRIC OVER CURRENT RELAY	SILICON RECTIFIER	LOAD LIMITER	CABLE	
							F11,F12	F13								
DESCRIPTION	HOIST	IM 11	DB10, 11	MQCB100	TR 1		F11,F12	M1	M101,M102	M111,M112	LS-I, LS-II	EOCR100	EOCR110	RF100	RF110	C20-01
	1TON AC 3PH 380V 60Hz	2.4KW x 4P	300Wx4P	DC 100V	DBE-33AF/10A	380V/210V/120V, 50VA	1A	2A	DOC-22P	DOC-22P	AC 600V 75A	SS-30	SS-05	SR-30	JDL-100	VFC7 4.0sqx4c
SELECTION																
MAKER	KUKDONG		DEARYUK	SHINHAN	-		DEARYUK		KUKDONG	ASAN		JUNGHO	DONGIL			
CUSTOMER	DRAWING		TITLE		CREEP HOISTING POWER CONTROL CIRCUIT		DRAWING		DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.		
	REVISIONS		CHK.	APP.	DIAGRAM		DWG. NO		KDC01E31		KUK DONG HOIST CO., LTD.		KDC01E31			

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POWER CIRCUIT																			
TRAVERSING MOTION																			
ADR'S NO.																			C1



SPECIFICATION		SYMBOLS DESCRIPTION		TRAVERSING MOTOR		DC MAG. BRAKE		MAGNET CONTACTOR		SILICON RECTIFIER		ELECTRIC OVER CURRENT RELAY		LIMIT SWITCH	
IM 30		0.4KW x 4P AC 3PH 380V 60Hz		DB 30		DC 100V		M301, M302		RF 300		EOCR 300		LS-301, LS-302	
IM 30		0.2KW x 6P AC 3PH 380V 60Hz		DC 100V		DC 100V		DOC-22P AC 110V		SR-30 AC 220V/DC 100V		SS-05		HY - W904	
SELECTION MAKER		KUKDONG		DEARYUK		ASAN		ASAN		ASAN		ASAN		ASAN	
CUSTOMER		DRAWING		DESIGN		CHECKED		APPROVED		SCALE		DATE		ORDER NO.	
DRAWING TITLE		TRAVERSING POWER CONTROL CIRCUIT		NONE		NONE		NONE		NONE		NONE		NONE	
MK		DATE		REVISIONS		CHK		APP		DWG. NO		KDC01E33			

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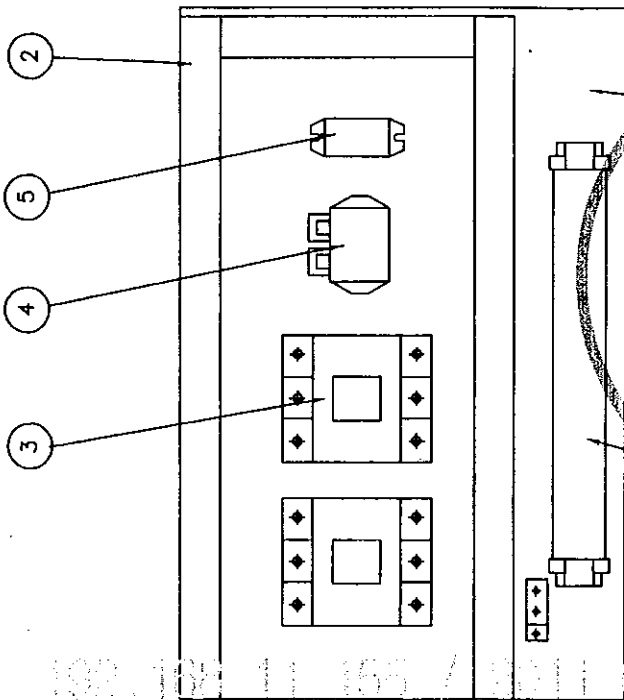
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																			ADR'S NO.

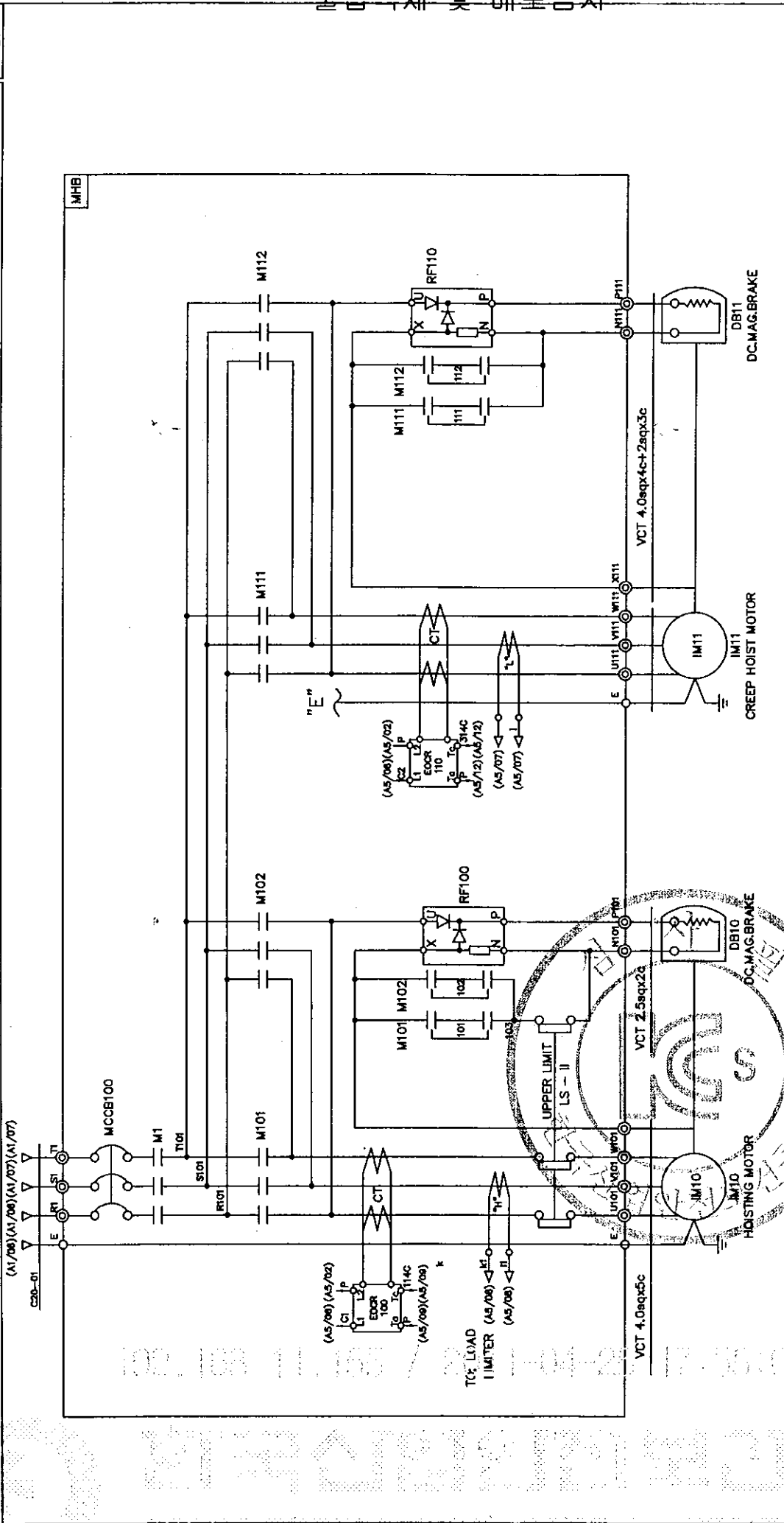


NO	DESCRIPTION	SPEC	Q'TY	REMARK
1	CHASSIS PLATE	-	1	아 연 도 금
2	CABLE DUCT	-	1	
3	MAGNET CONTACTOR	DOC-22P	2	TRAVERSING
4	E.O.C.R	SS-05	1	TRAVERSING
5	SILICON RECTIFIER	SR-30	1	TRAVERSING
6	TERMINAL BLOCK	25A, 15A	1	TRAVERSING

MK	DATE	REVISIONS	CHK.	APP.	CUSTOMER	DRAWING TITLE		DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
						TRAVERSING POWER CONTROL BOX ARRANGEMENT DRAWING						NONE		
					 KCS KUK DONG HOIST CO., LTD.					DWG. NO		KDC1bt42		

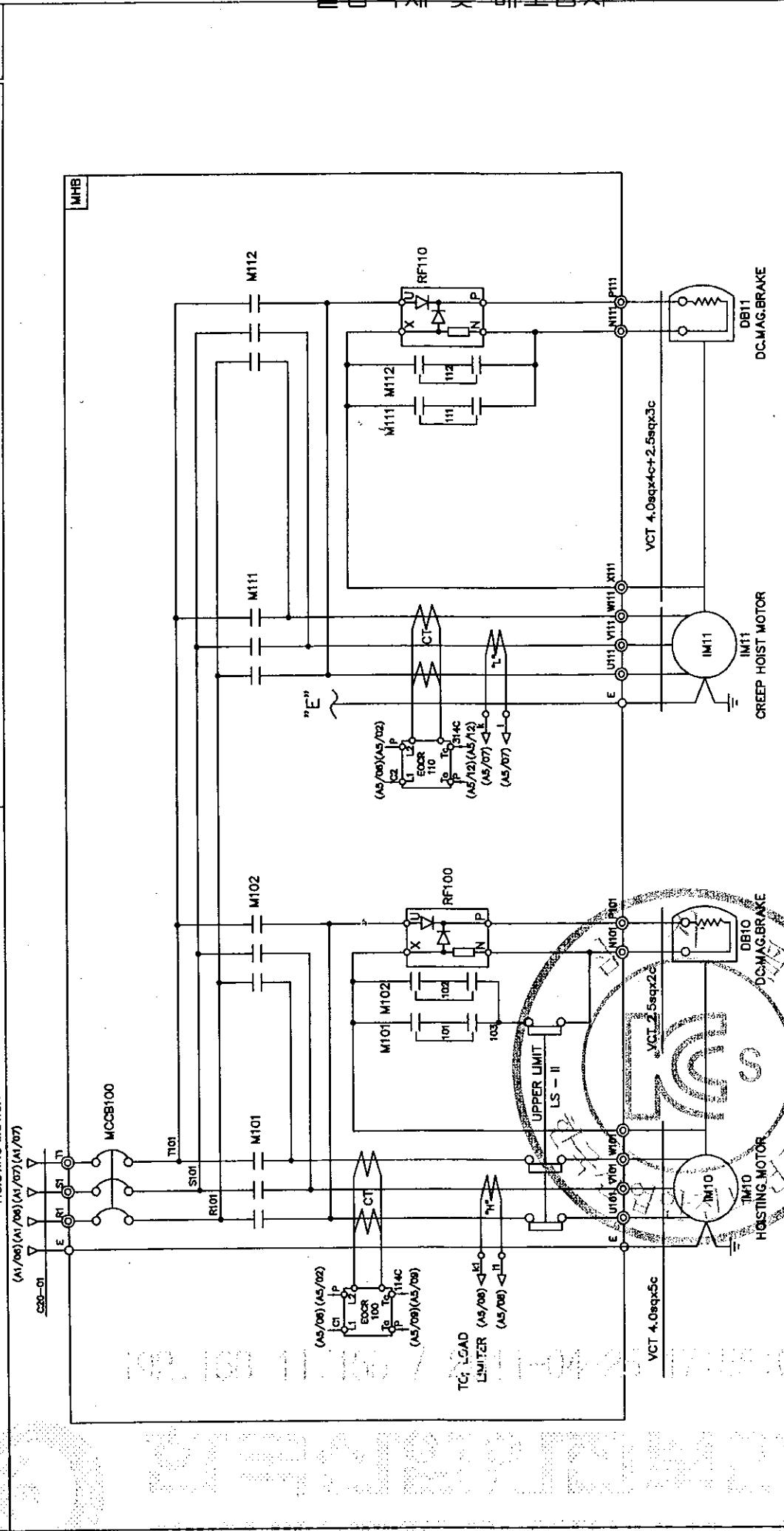
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POWER CIRCUIT										CREEP HOIST MOTION									
HOISTING MOTION										CREEP HOIST MOTION									
C20-01										MHB									
(A1/06)(A1/08)(A1/07)(A1/07)										ADR'S NO.									
B1										B1									



SPECIFICATION SYMBOLS DESCRIPTION	HOISTING POWER	HOISTING MOTOR	HOISTING MOTOR	DC MAG. BRAKE	NO FUSE BREAKER	TRANSFORMER	FUSE	MAIN MAGNET	MAGNET CONTACTOR	UPPER LIMIT	ELECTRIC OVER CURRENT RELAY	SILICON RECTIFIER	LOAD LIMITER	CABLE					
	HOIST	IM 10	IM 11	DB10, 11	MOCB100	TR 1	F11,F12 F13	M1	M101,M102 M111,M112	LS-I, LS-II	EOCR100	RF100	RF110	C20-01					
	1TON AC 3PH 440V 60Hz	2.4KW x 4P	0.4KW x 4P	DC 100V	DBE-33AF/10A	440/110V/120V/80VA	1A 2A	DOC-22P	DOC-22P	AC 600V 75A	SS-30	SS-05	SR-30	VFCT 4sqgx4c					
	SELECTION	KUKDONG				DEARYUK	SHINHAN	-	DEARYUK				KUKDONG	ASAN		JUNGHO	DONGIL		
MK DATE	REVISIONS	CHK.	APP.	CUSTOMER		CREEP HOISTING POWER CONTROL CIRCUIT										DWG. NO		KDC01E41	
				DRAWING TITLE		KUKDONG HOIST CO., LTD.										KUK DONG HOIST CO., LTD.		KDC01E41	
				KDK															

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POWER CIRCUIT										CREEP HOIST MOTION									
HOISTING MOTION										CREEP HOIST MOTION									
C20-01										MHB									
(A1/08)(A1/08)(A1/07)(A1/07)										B1									
ADR'S NO.										B1									



SPECIFICATION SYMBOLS	HOISTING POWER		HOISTING MOTOR		CREEP MOTOR		DC MAG. BRAKE		NO FUSE BREAKER		TRANSFORMER		FUSE		MAGNET CONTACTOR		UPPER LIMIT		ELECTRIC OVER CURRENT RELAY		SILICON RECTIFIER		LOAD LIMITER		CABLE	
	HOIST		IM-10		IM 11		DB10-AT		MCCB100		TR 1		F11,F12 F13		M101,M102 M111,M112		LS-I, LS-II		EOCR100		RF100		LOAD LIMITER		C20-01	
DESCRIPTION	1TON AC 3PH 440V 60Hz		2.4KW 4P		0.4KWx4P		DC 100V		DBE-33AF/10A		440/110V/120V,80VA		1A 2A		DOC-22P		AC 600V 75A		SS-30		SR-30		JDL-100		VFCT 4.0sqx4c	
SELECTION/MAKER			KUKDONG						DEARYUK		SHINHAN		-		DEARYUK		KUKDONG		APPROVED		SCALE		DATE		ORDER NO.	
					CUSTOMER										DRAWING		DESIGN		CHECKED							
					DRAWING																NONE					
					TITLE																					
					REVISIONS																					
MK	DATE		CHK.		APP.																DWG. NO				KDC01E42	
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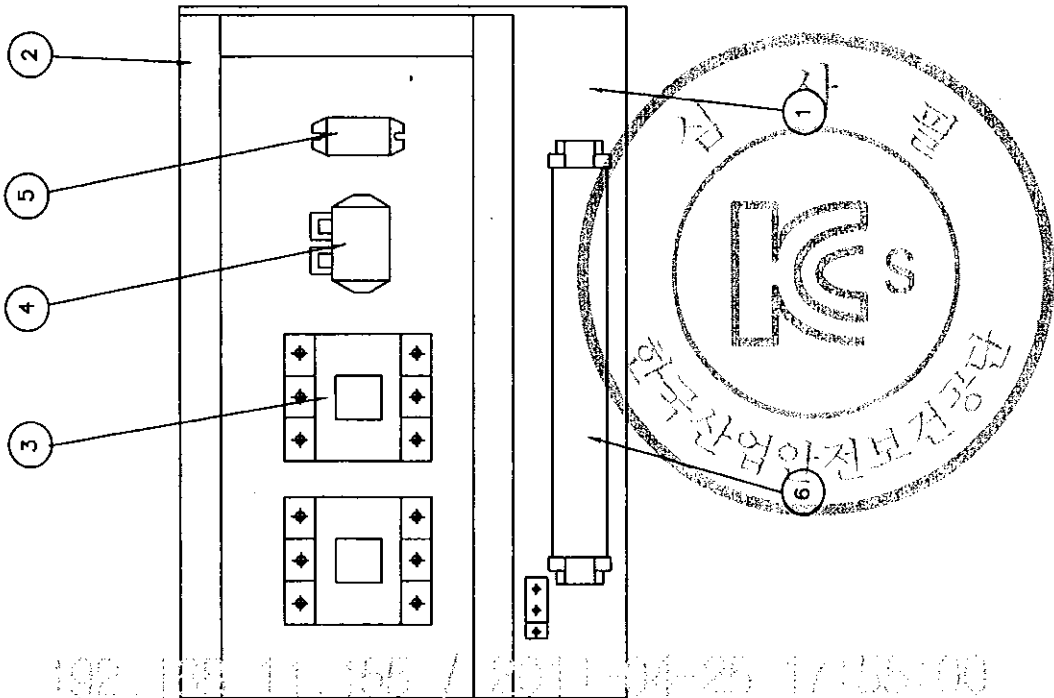
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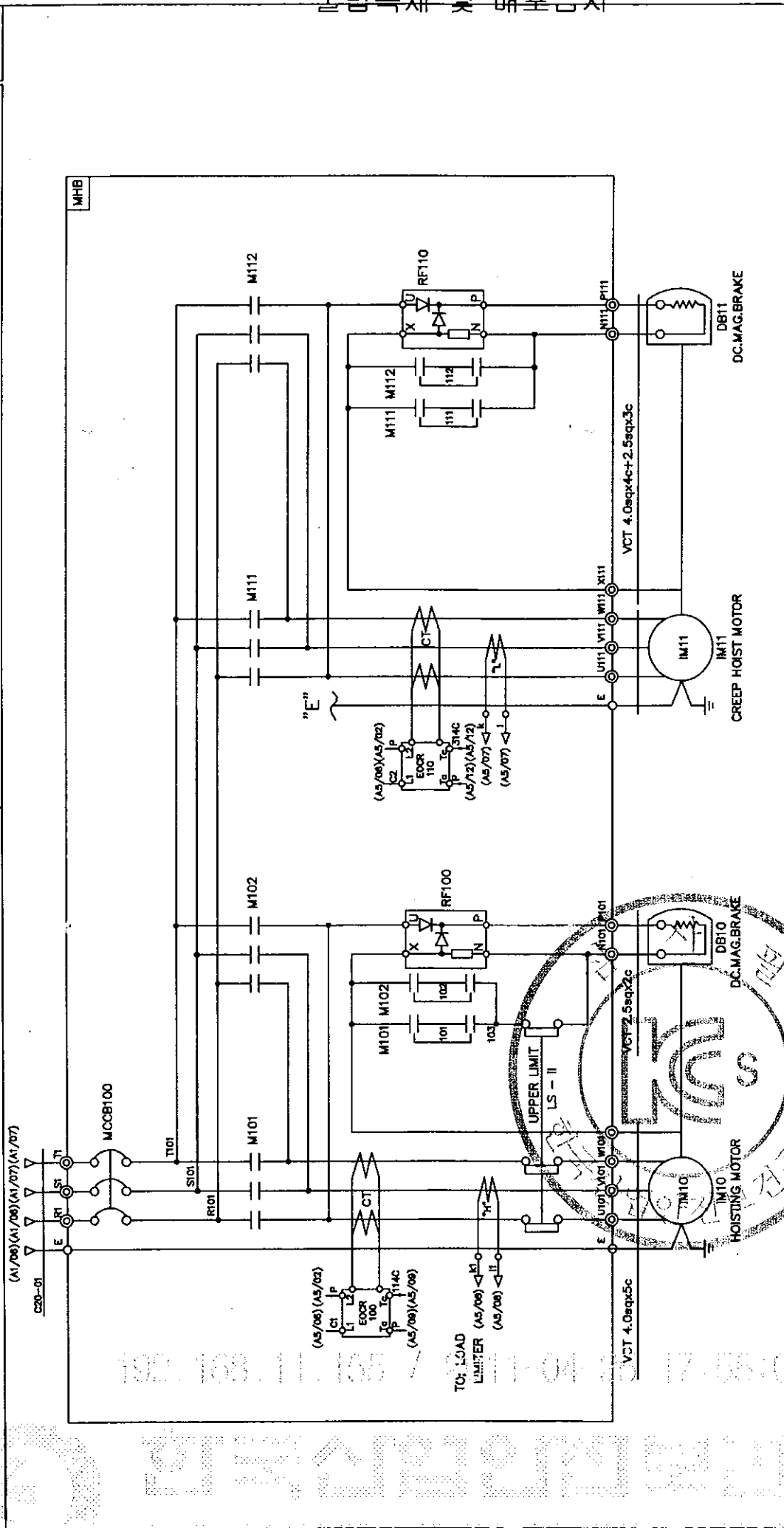


NO	DESCRIPTION	SPEC	Q'TY	REMARK
1	CHASSIS PLATE	-	1	아 연 도 금
2	CABLE DUCT	-	1	
3	MAGNET CONTACTOR	DOC-22P	2	TRAVERSING
4	E.O.C.R	SS-05	1	TRAVERSING
5	SILICON RECTIFIER	SR-30	1	TRAVERSING
6	TERMINAL BLOCK	25A , 15A	1	TRAVERSING

DRAWING		DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
TRAVERSING POWER CONTROL BOX					NONE		
ARRANGEMENT DRAWING		KDC			KDC1bt52		
KUK DONG HOIST CO., LTD.		KUK DONG HOIST CO., LTD.			KDC1bt52		
DATE	REVISIONS	CHK.	APP.				

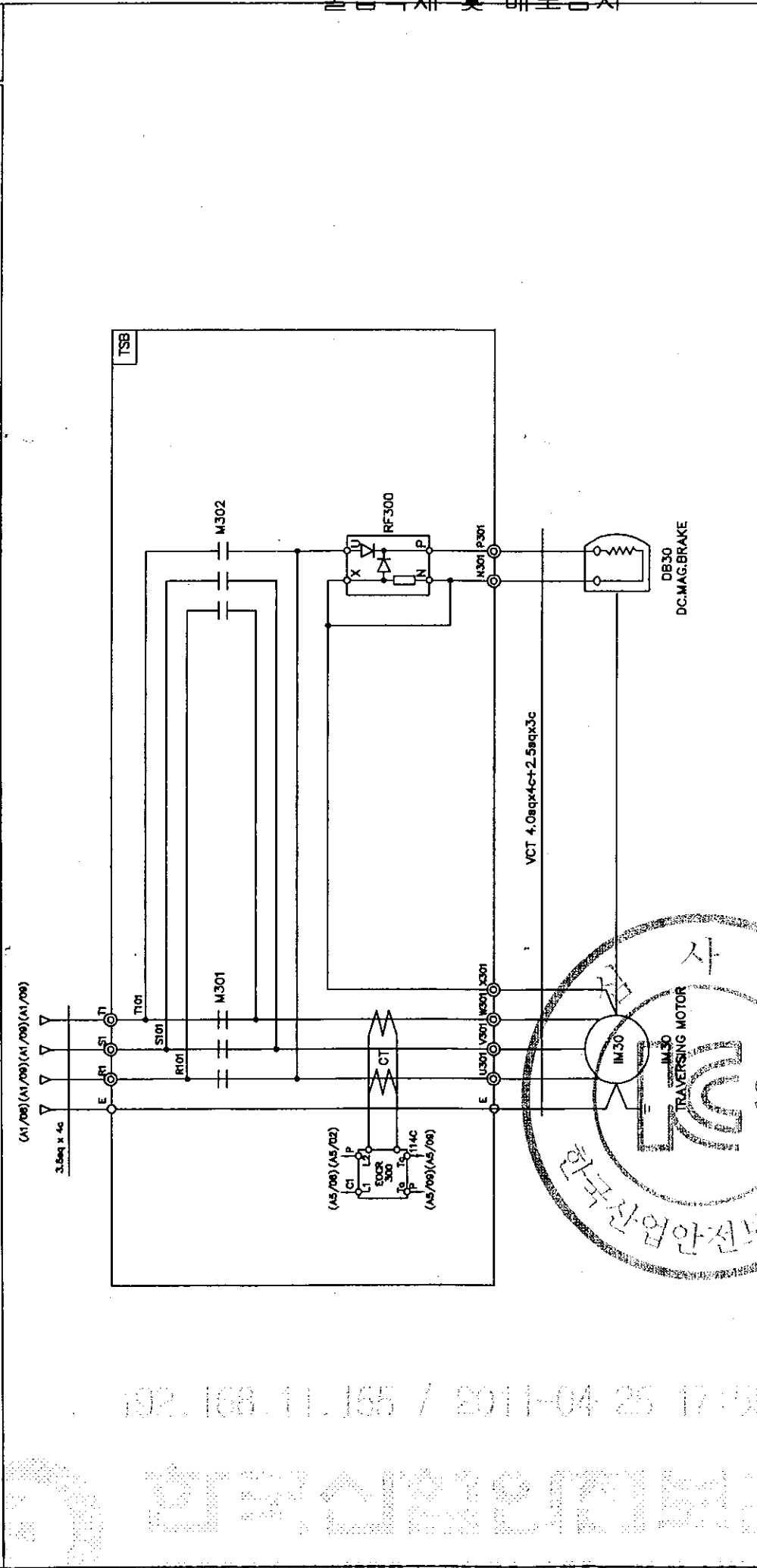
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POWER CIRCUIT										CREEP HOIST MOTION									
HOISTING MOTION										CREEP HOIST MOTION									
C20-01										MHB									
(A1/08)(A1/08)(A1/07)(A1/07)										ADR'S NO.									
B1										B1									



SPECIFICATION SYMBOLS	HOISTING POWER	HOISTING MOTOR	DC VOLTAGE	NO FUSE BREAKER	TRANSFORMER	FUSE	MAGNET CONTACTOR	UPPER LIMIT	ELECTRIC OVER CURRENT RELAY	SILICON RECTIFIER	LOAD LIMITER	CABLE	
	HOIST	IM-10	IM 11	DB10-11	TR 1	F11, F12	M101, M102	LS-I, LS-II	EOCR100	RF100	LOAD LIMITER	C20-01	
DESCRIPTION	1TON AC 3PH 460V 60Hz 2.4KW 24P 0.4KW 4P												
SELECTION MAKER	KUKDONG			DAERYUK	SHINHAN	-		KUKDONG	ASAN	JUNGHO			DONGIL
REVISIONS	CHK.	APP.	CUSTOMER		DRAWING		DESIGN	CHECKED	APPROVED	SCALE	DATE		ORDER NO.
			CREEP HOISTING POWER CONTROL CIRCUIT							NONE			
			TITLE										
DATE	REVISIONS		CHK.	APP.	DIAGRAM				DWG. NO		KDC01E56		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER CIRCUIT																			
TRAVERSING MOTION																			
ADR'S NO.																			CI



SPECIFICATION SYMBOLS	DESCRIPTION	TRAVERSING MOTOR	DC MAG. BRAKE	MAGNET CONTACTOR	SILICON RECTIFIER	ELECTRIC OVER CURRENT RELAY	LIMIT SWITCH
IM 30	0.4KW x 4P AC 3PH 460V 60Hz	IM 30	DB 30	M301, M302	RF 300	EOCR 300	LS-301, LS-302
IM 30	0.2KW x 6P AC 3PH 460V 60Hz	IM 30	DC 100V	DCG-22P AC 110V	SR-30 AC 220V/DC 100V	SS-05	HY - W904
IM 30	0.2KW x 6P AC 3PH 460V 60Hz	IM 30	DC 100V	DCG-22P AC 110V	SR-30 AC 220V/DC 100V	SS-05	HY - W904
SELECTION							
DAERYUK							
KUKDONG							
CUSTOMER							
DRAWING TITLE							
TRAVERSING POWER CONTROL CIRCUIT							
DIAGRAM							
DWG. NO							
ORDER NO.							
KDC01E57							

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ADR'S NO.																		
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NO	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
1	CHASSIS PLATE		1	아 연 도 금
2	CABLE DUCT	-	1	
3	N.F.B	33AF/10AT	1	HOISTING
4	MAGNET CONTACTOR	DOC-22P	1	MAIN MAG.
5	MAGNET CONTACTOR	DOC-22P	2	HOISTING
6	MAGNET CONTACTOR	DOC-22P	2	CREEP HOIST
7	SILICON RECTIFIER	SR-30	1	HOISTING
8	SILICON RECTIFIER	SR-30	1	CREEP HOIST
9	E.O.C.R	SS-30	1	HOISTING
10	E.O.C.R	SS-05	1	CREEP HOIST
11	FUSE	1 A	2	
12	FUSE	2 A	1	
13	TRANSFORMER	220V/110V(120V), 60VA	1	
14	UPPER LIMITER	AC 600V, 75A	1	LS-1,2
15	TERMINAL BLOCK	60A,15A		
16	EARTH TERMINAL	3tx20x50	1	

NOTE 1. 전선의 색상은 다음과 같다.

- 1) 흑색 : 교류 및 직류 전원선
- 2) 적색 : 교류 제어선
- 3) 주황색 : 외부 전원에서 공급되는 연동장치 제어회로
- 4) 녹색 또는 녹색과 황색 혼용 : 접지선

2. CABLE MATERIAL : KIV OR EQUIVALENT

MIN SIZE : 2.5sq

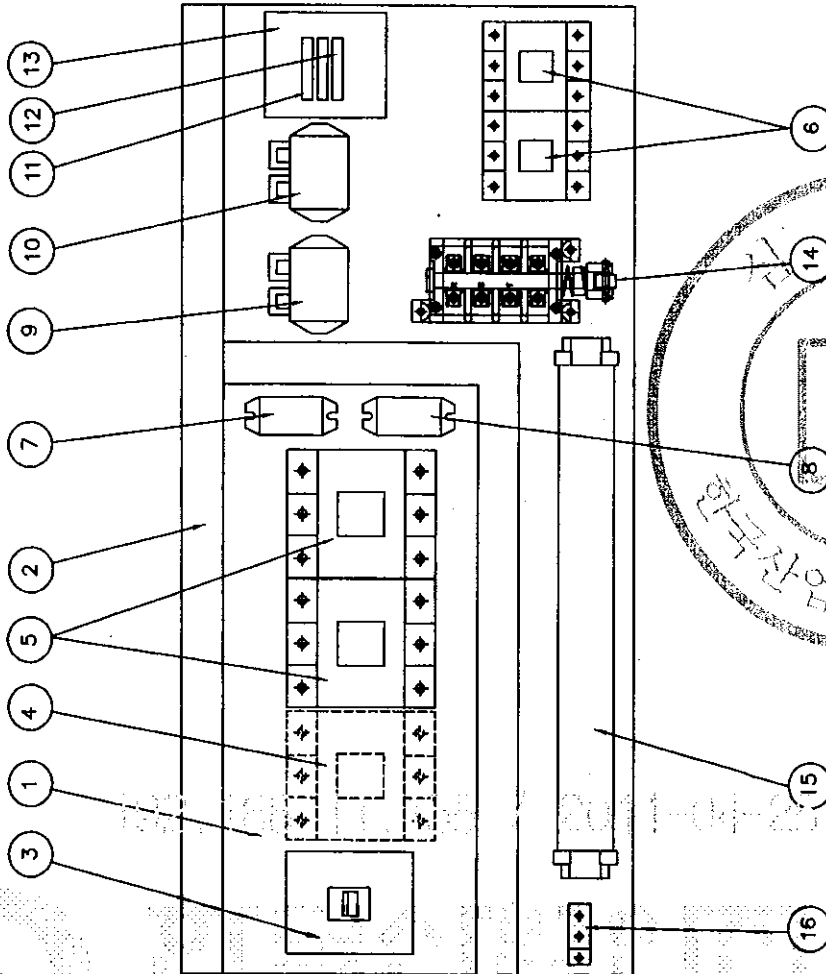
3. 제어용 전선 : 2.5mm KIV,HIV

4. 제작시 다소 변경 될수있음.

5. 외함 거방구조는 다음과 같을것.

1) 외함 거방시 용전부분이 차단되도록 할것.

2) 외함 거방후 용전되어있는 부분은 IP2X 이상의 직접 접촉 방호가 되어있을것.



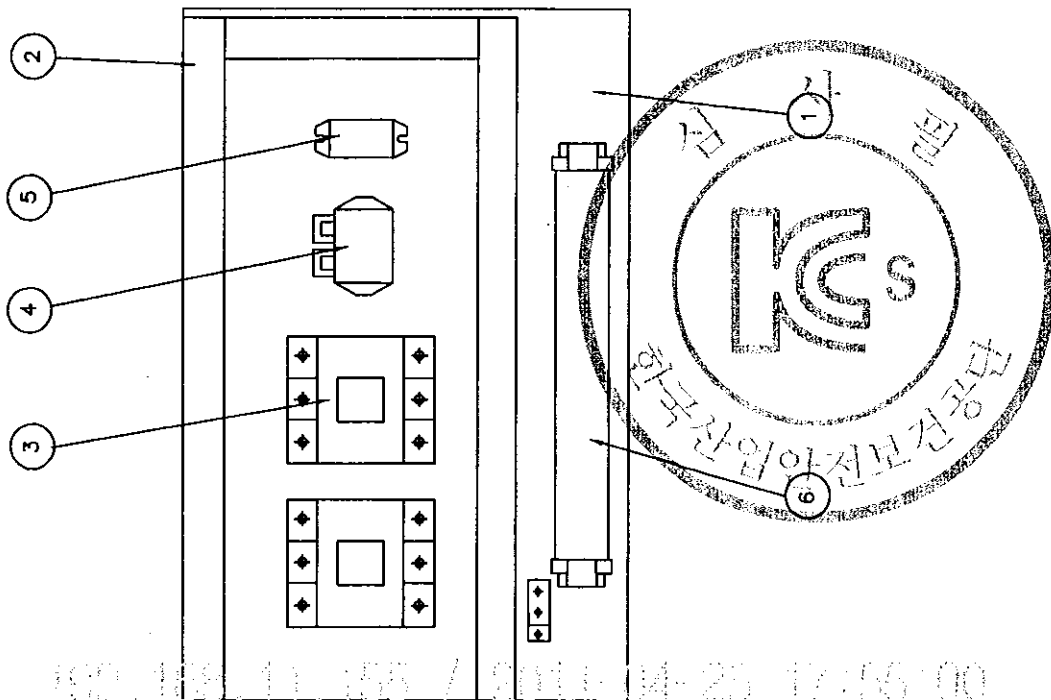
NOTE

1. UPPER LIMIT LS-1,LS-2의 점접 허용전류 용량, AC 600V, 75A

2. POWER SOURCE : AC 3φ 480V 60HZ SS

3. EARTH TERMINAL RESISTANCE : 0.018Ω

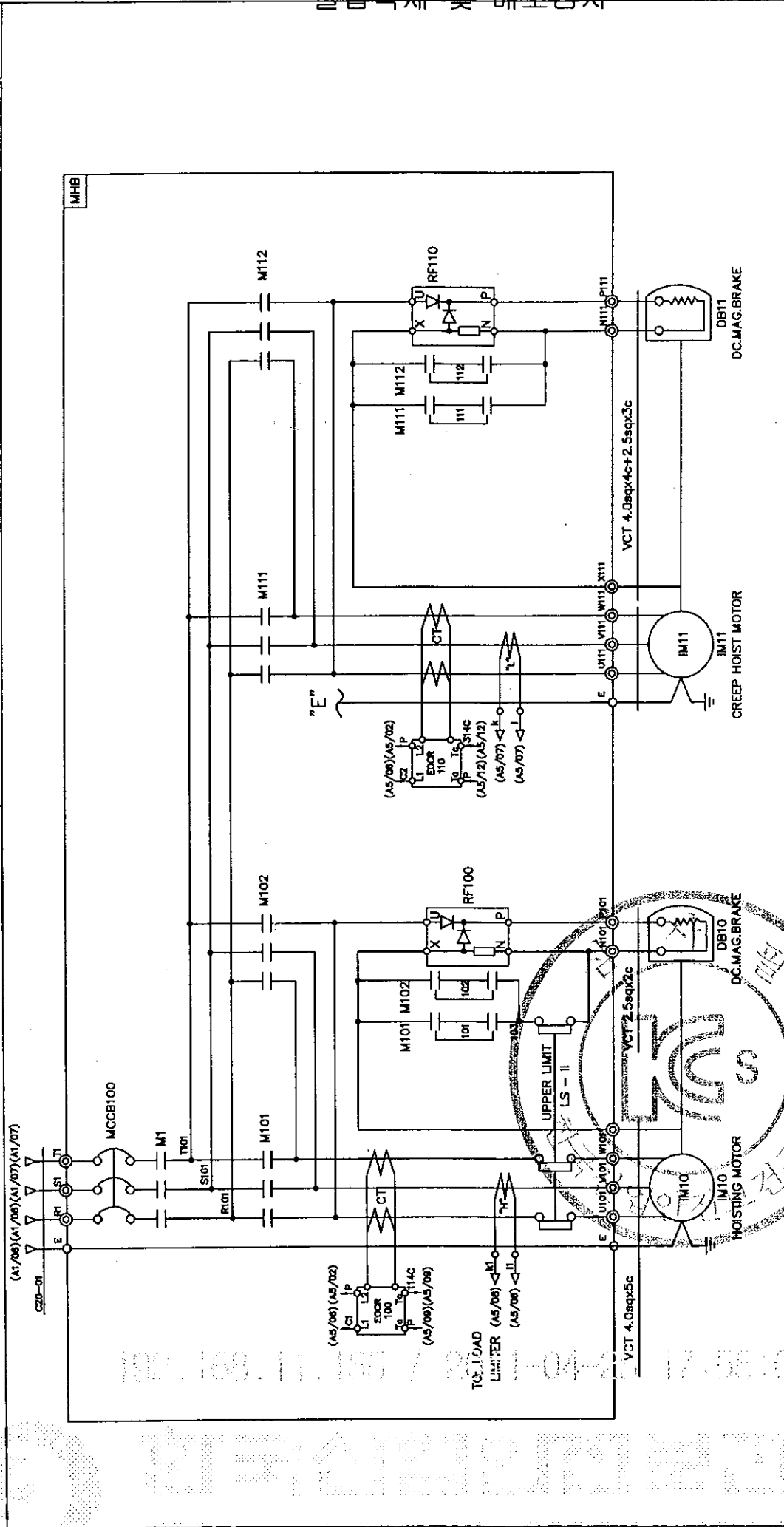
DRAWING		DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
					NONE		
CREEP HOIST CONTROL BOX							
ARRANGEMENT DRAWING							
DATE	REVISIONS	CHK	APP.				
				DWG. NO KDC1BA61			



NO	DESCRIPTION	SPEC	Q'TY	REMARK
1	CHASSIS PLATE	-	1	아 연 도 금
2	CABLE DUCT	-	1	
3	MAGNET CONTACTOR	DOC-22P	2	TRAVERSING
4	E.O.C.R	SS-05	1	TRAVERSING
5	SILICON RECTIFIER	SR-30	1	TRAVERSING
6	TERMINAL BLOCK	25A , 15A	1	TRAVERSING

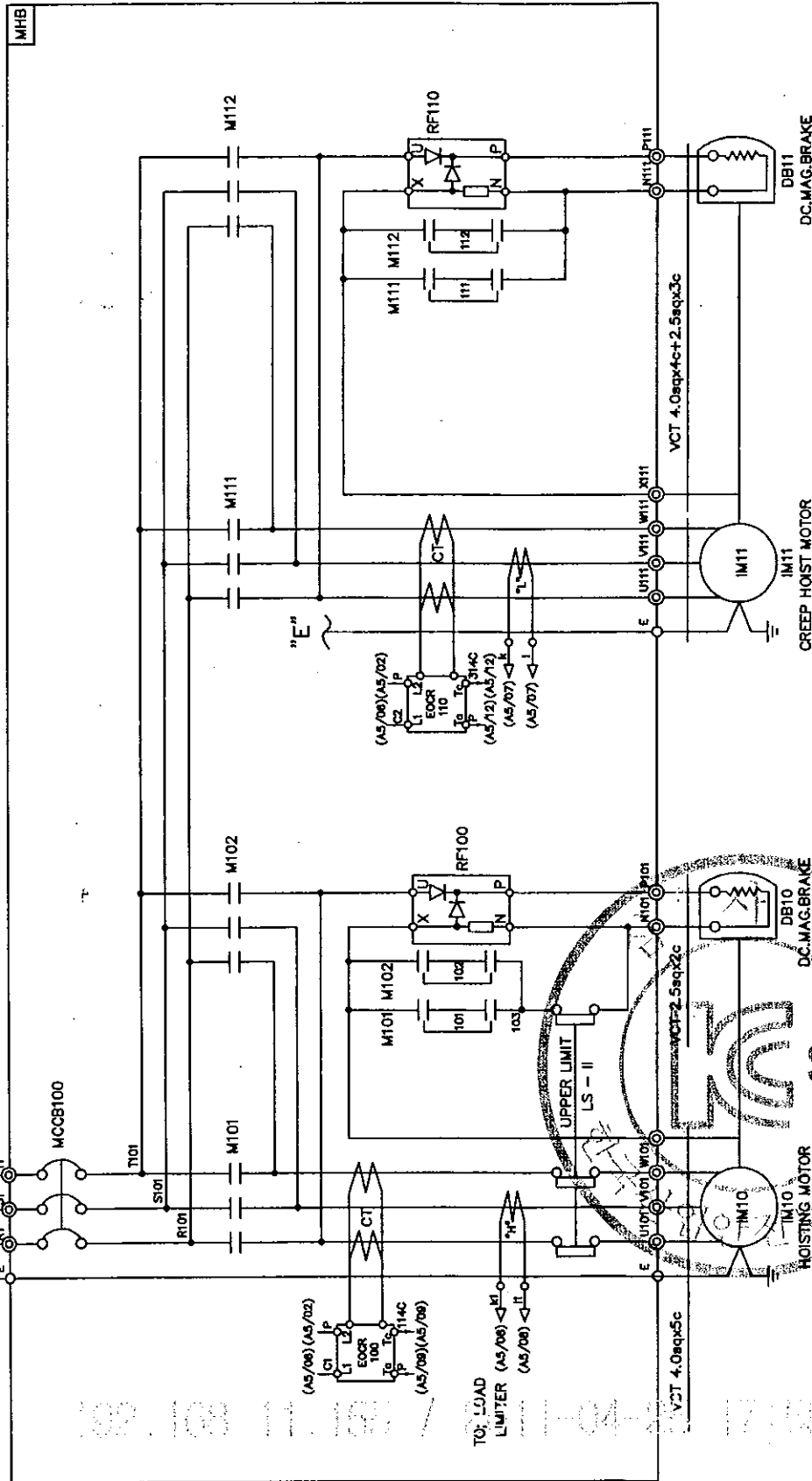
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER CIRCUIT										CREEP HOIST MOTION									
HOISTING MOTION										CREEP HOIST MOTION									
C20-01										B1									



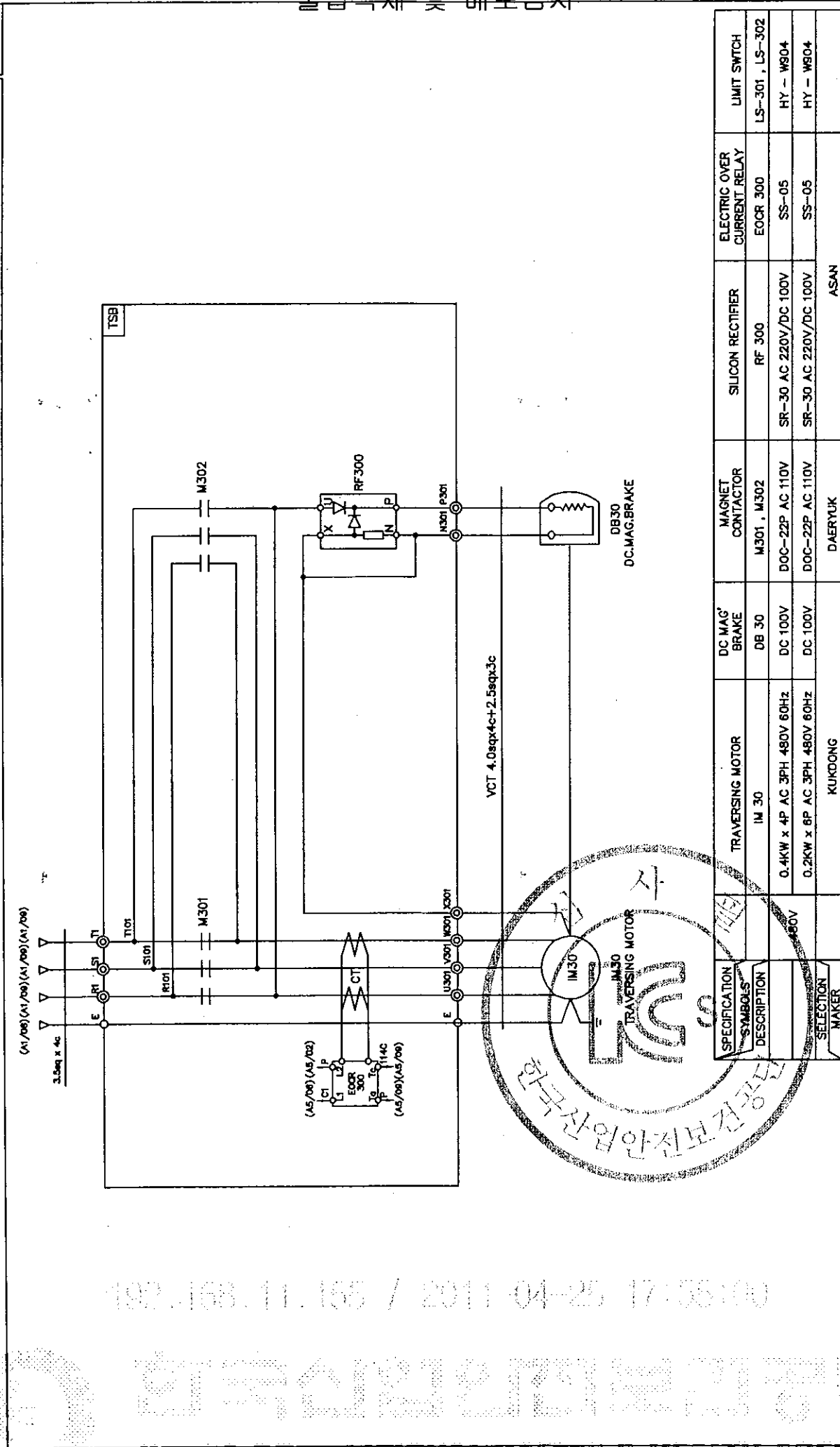
SPECIFICATION SYMBOLS	DESCRIPTION	HOISTING POWER	HOISTING MOTOR	DC MAG. BRAKE	TRANSFORMER	FUSE	MAIN MAGNET	MAGNET CONTACTOR	UPPER LIMIT	ELECTRIC OVER CURRENT RELAY	SILICON RECTIFIER	LOAD LIMITER	CABLE
1TON AC 3PH 480V 60Hz	HOIST	2.4KW x 4P 12-100V-4P DC-100V	IM 10	DB10, 11	TR 1	F1, F12	M1	M101, M102	LS-I, LS-II	SS-30	RF100	LD-100	C20-01
SELECTION MAKER													
KUKDONG													
CUSTOMER													
DRAWING TITLE													
CREEP HOISTING POWER CONTROL CIRCUIT													
DIAGRAM													
DRAWING													
DESIGN													
CHECKED													
APPROVED													
SCALE													
DATE													
JUNGHO													
DONGIL													
KDC01E65													
DWG. NO													
KUKDONG HOIST CO., LTD.													

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER CIRCUIT										CREEP HOIST MOTION									
HOISTING MOTION										CREEP HOIST MOTION									
C20-01										MHB									
(A1/06)(A1/06)(A1/07)(A1/07)										ADR'S NO.									
										B1									



SPECIFICATION SYMBOLS	HOISTING POWER HOIST	HOISTING MOTOR IM10	CREEP MOTOR IM11	DC MAG. BRAKE DB10	DC MAG. BRAKE DB11	NO FUSE BREAKER MCCB100	TRANSFORMER TR 1	FUSE F1, F2	MAGNET CONTACTOR M101, M102	UPPER LIMIT LS-I, LS-II	ELECTRIC OVER CURRENT RELAY EOCR100	SILICON RECTIFIER RF100	LOAD LIMITER JDL-100	CABLE C20-01
DESCRIPTION	1TON AC 3PH 480V 60Hz	2.2kW 4P 0.4KV 4P	2.2kW 4P 0.4KV 4P	DC 100V	DC 100V	DBE-33AF/10A	480/110V/20V/80VA	1A 2A	DOC-22P	AC 600V 75A	SS-30	SR-30	JDL-100	VFCT 4sqx4c
SELECTION MAKER	KUKDONG	DAERYUK	SHINHAN	DAERYUK	KUKDONG	DAERYUK	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG
CUSTOMER	KUKDONG	DAERYUK	SHINHAN	DAERYUK	KUKDONG	DAERYUK	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG
DRAWING TITLE	CREEP HOISTING POWER CONTROL CIRCUIT	DAERYUK	SHINHAN	DAERYUK	KUKDONG	DAERYUK	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG
CHK. APP.	KUKDONG	DAERYUK	SHINHAN	DAERYUK	KUKDONG	DAERYUK	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG	KUKDONG
DATE	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25	2011-04-25
REV. NO.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DWG. NO.	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66
ORDER NO.	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66	KDC01E66

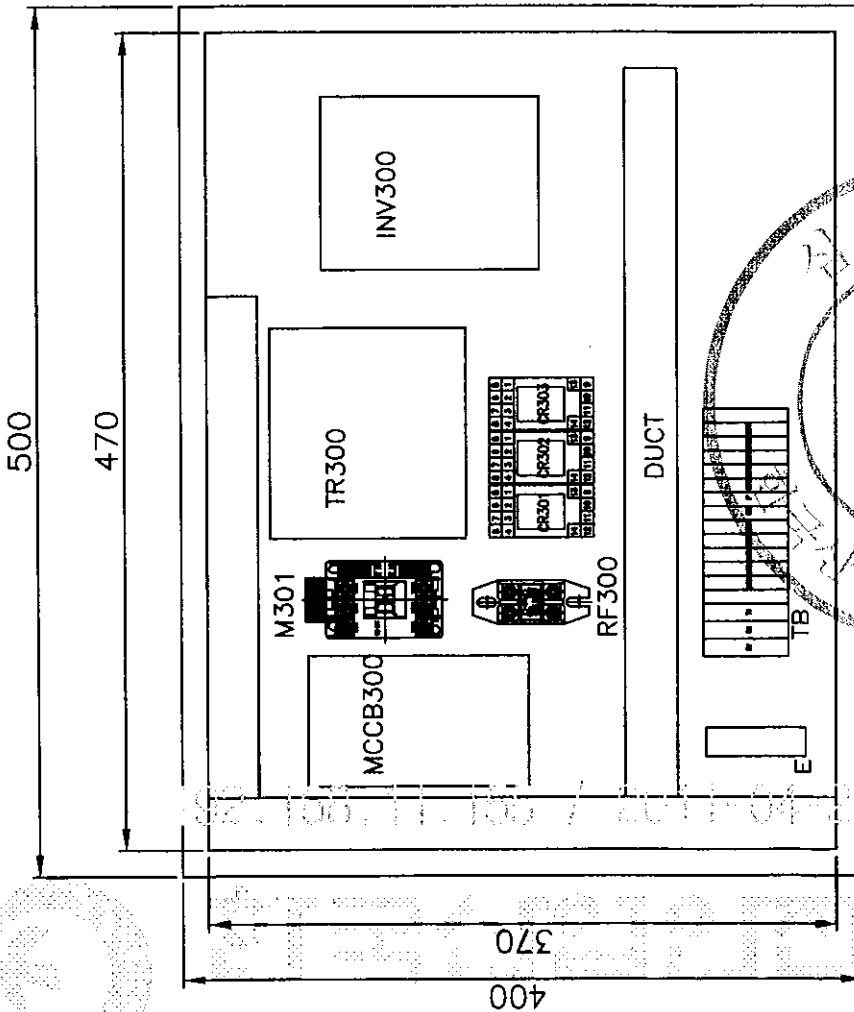
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
POWER CIRCUIT																			ADR'S NO.
TRAVERSING MOTION																			CI



SPECIFICATION SYMBOLS		TRAVERSING MOTOR		DC MAG. BRAKE		MAGNET CONTACTOR		SILICON RECTIFIER		ELECTRIC OVER CURRENT RELAY		LIMIT SWITCH	
DESCRIPTION		IM 30		DB 30		M301, M302		RF 300		EOCR 300		LS-301, LS-302	
SELECTION		0.4KW x 4P AC 3PH 480V 60Hz		DC 100V		DOC-22P AC 110V		SR-30 AC 220V/DC 100V		SS-05		HY - W804	
MAKER		KUKDONG		DC 100V		DOC-22P AC 110V		SR-30 AC 220V/DC 100V		SS-05		HY - W804	
CUSTOMER		DAERYUK		ASAN		DAERYUK		ASAN		ASAN		ASAN	
DRAWING TITLE		TRAVERSING POWER CONTROL CIRCUIT		CHECKED		DESIGN		APPROVED		SCALE		DATE	
REVISIONS		DIAGRAM		NONE		NONE		NONE		NONE		NONE	
DATE		CHK.		APP.		DWG. NO.		KDC01E67		ORDER NO.			

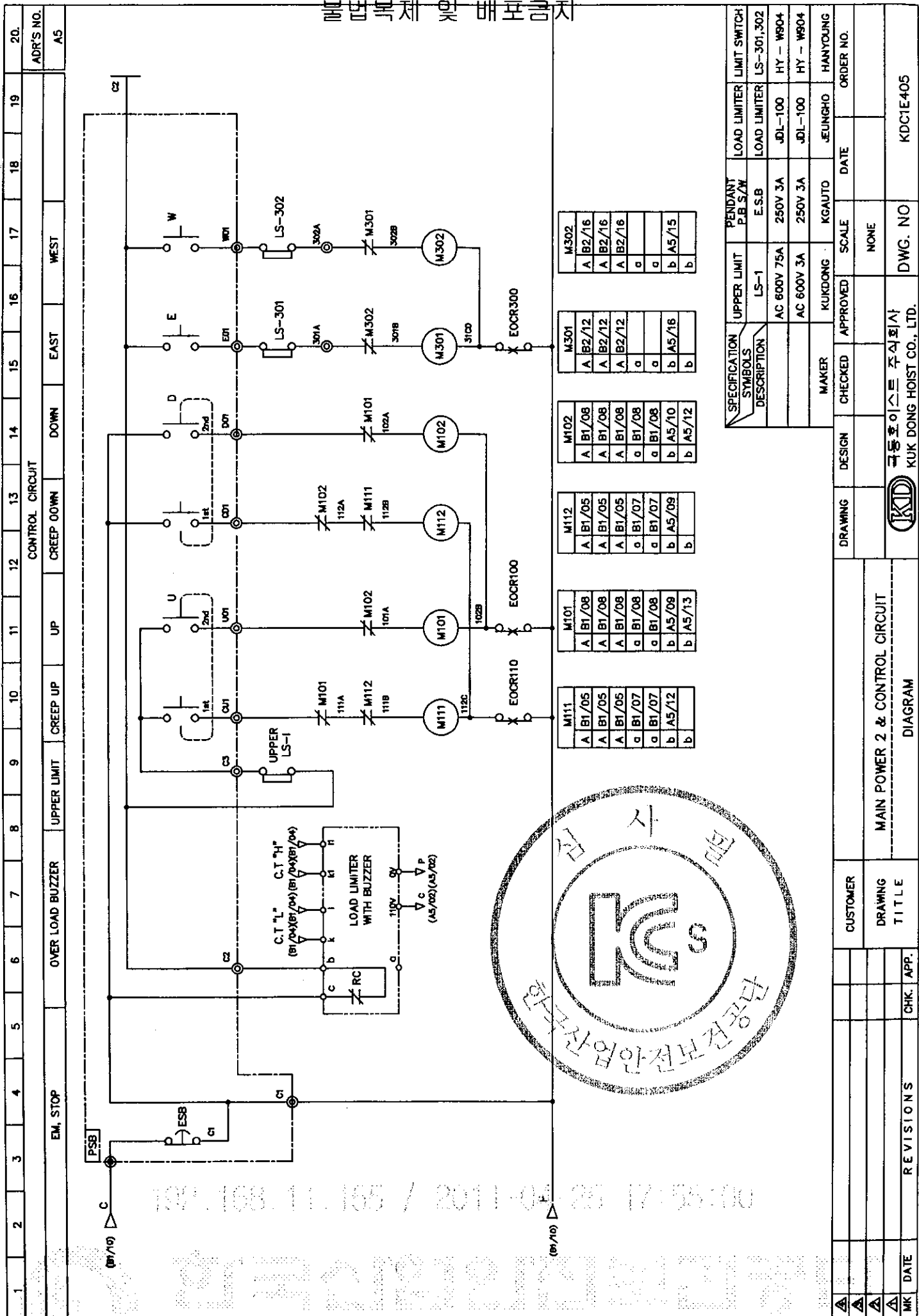
192.168.11.155 / 2011-04-25 17:58:00

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[illegible]

11	EARTH BUS BAR	PUR	1		
10	DUCT	PUR	1		
9	TERMINAL BLOCK	PUR	1		
8	INVERTER	PUR	1		
7	TR	PUR	1		
6	RELAY & SOCKET	PUR	1		
5	RF	PUR	1		
4	MC	PUR	1		
3	MCCB	PUR	1		





SPECIFICATION SYMBOLS	DESCRIPTION	UPPER LIMIT	PENDANT P.B.S/W	LOAD LIMITER	LIMIT SWITCH
		LS-1	E.S.B	LDL-100	LS-301,302
		AC 800V 75A	250V 3A	HY - W804	HY - W804
		AC 600V 3A	250V 3A	HY - W804	HY - W804
MAKER	KUKDONG	KGAUTO	JEUNGHO	HANYOUNG	

DESIGN	CHECKED	APPROVED	SCALE	DATE	ORDER NO.
			NONE		

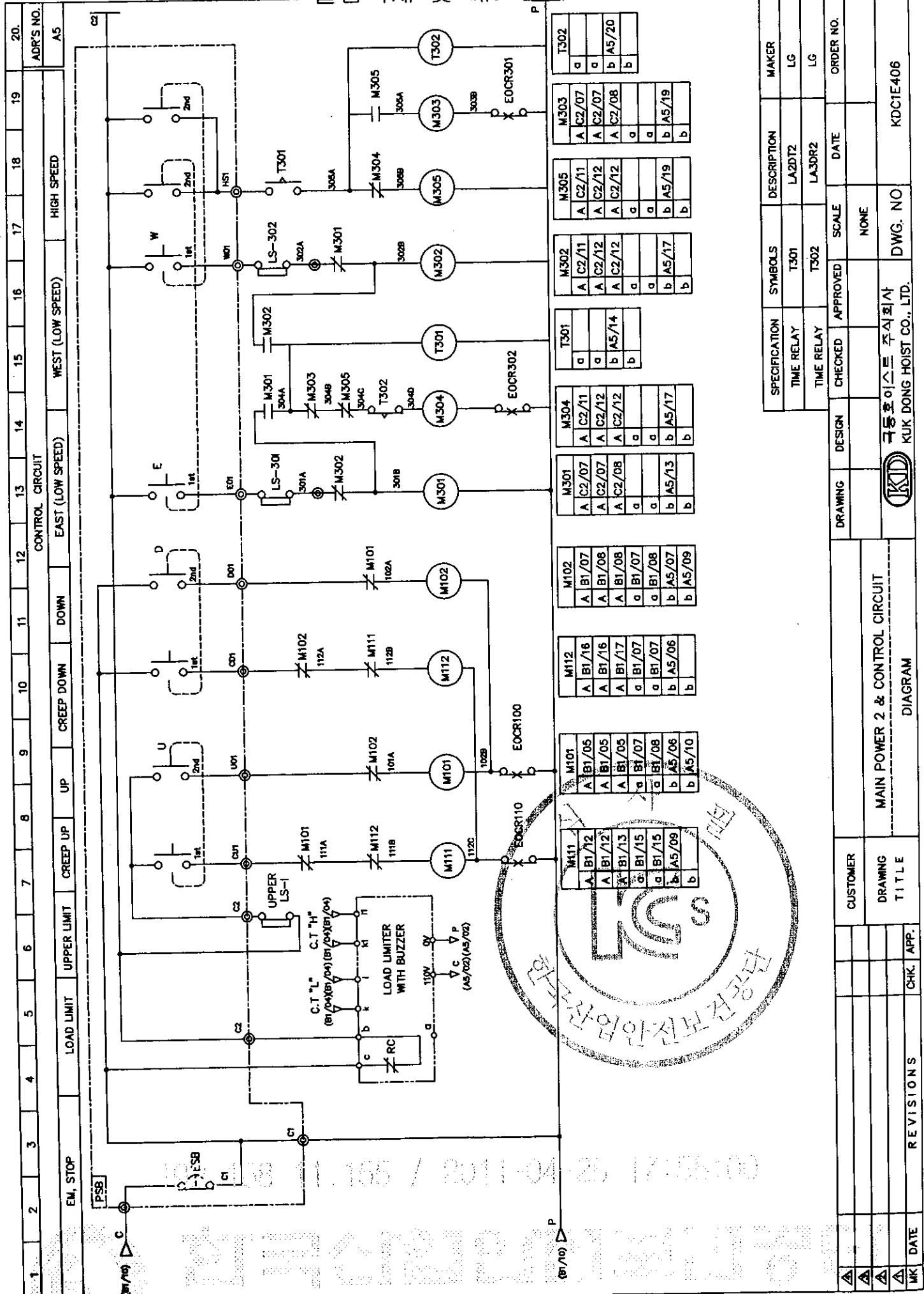
DWG. NO	KDC1E405
Customer	국동호이스트 주식회사 KUK DONG HOIST CO., LTD.

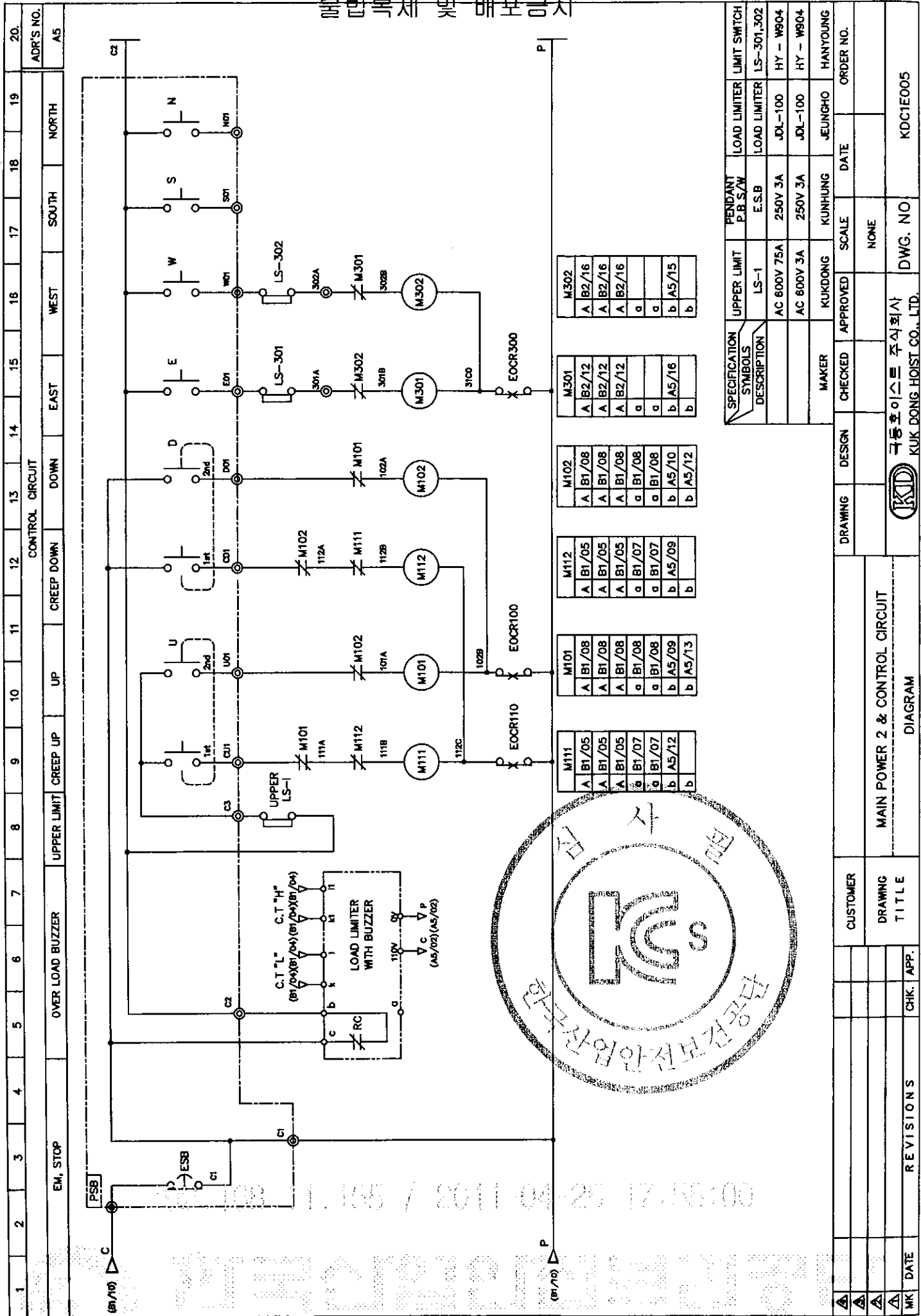


REVISIONS	DATE	CHK.	APP.

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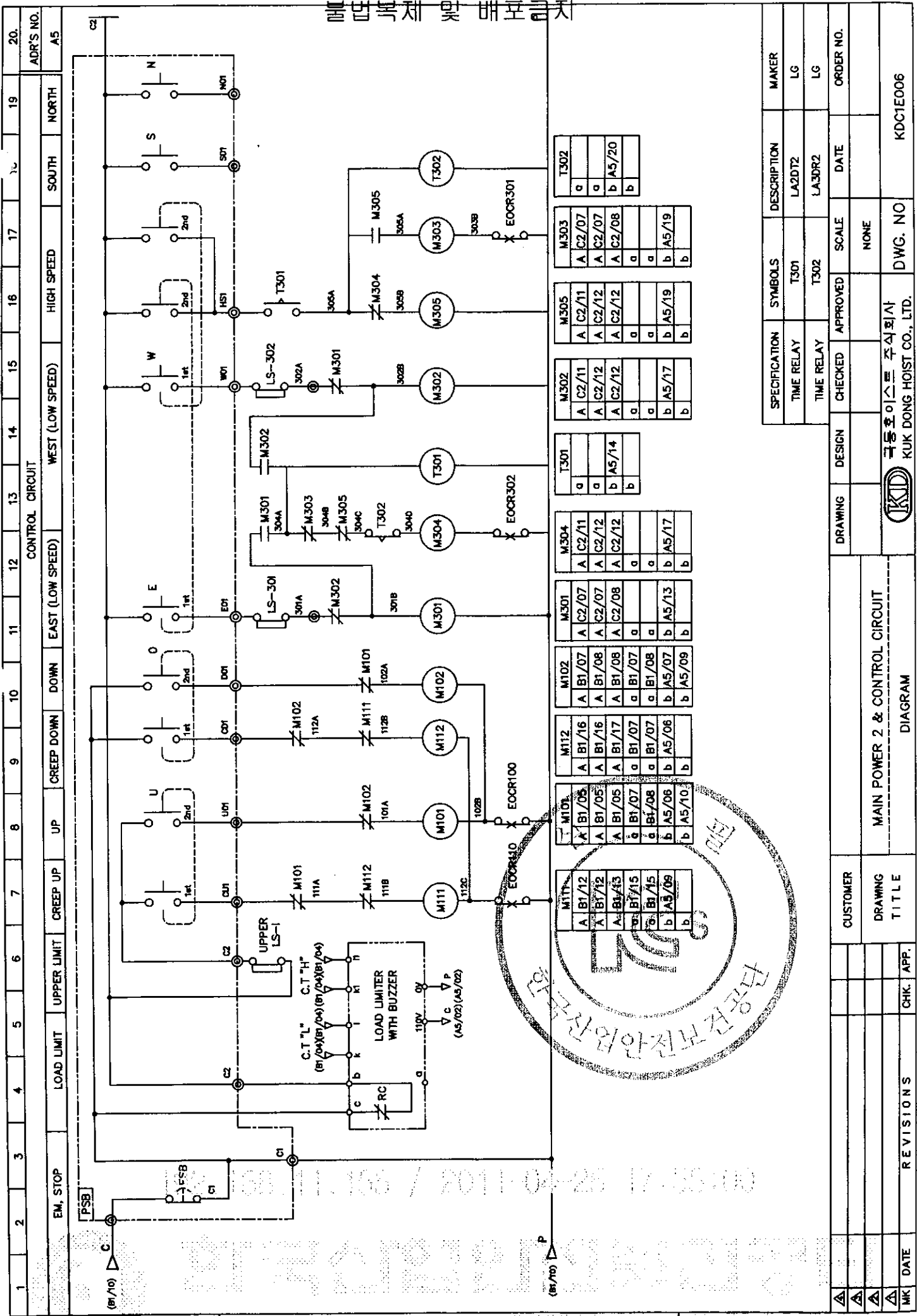
192.168.11.155 / 2011-04-25 17:55:00





SPECIFICATION SYMBOLS DESCRIPTION	UPPER LIMIT	PENDANT P.B.S/W	LOAD LIMITER	LIMIT SWITCH
	LS-1	E.S.B	LOAD LIMITER	LS-301,302
	AC 600V 75A	250V 3A	JDL-100	HY - W904
	AC 600V 3A	250V 3A	JDL-100	HY - W904
MAKER	KUKDONG	KUNHUNG	JEUNGHO	HANYOUNG
CHECKED	APPROVED	SCALE	DATE	ORDER NO.
		NONE		
호이스트 주식회사 HOISTS HOIST CO., LTD.			KDCIE005	
DWG. NO.				

[illegible]

[illegible]

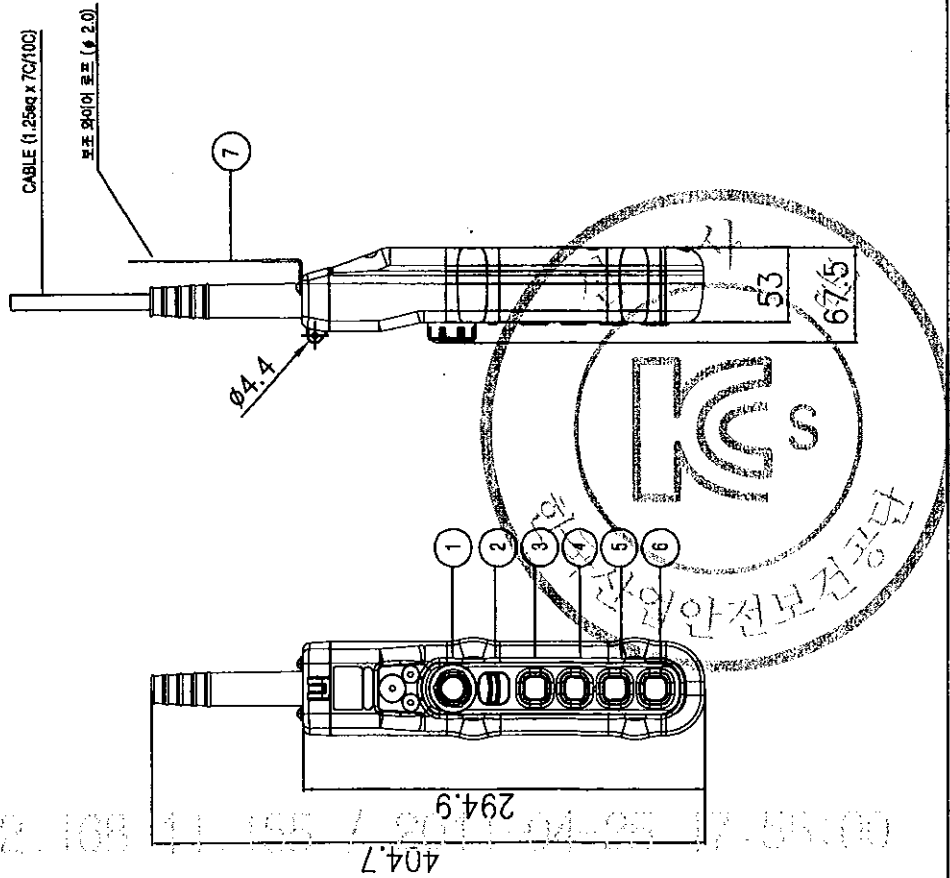
색상	구분	조작버튼	표시등
적색		비상	비상
황색		비정상	비정상
녹색		정상	정상
청색		의무	의무
흰색, 회색 - 흑색		지정된의미없음	기타

* MATERIAL : POLYCARBOBATE(PLASTIC)

* BODY COLOR : YELLOW, BLACK

* IP : 55 이상

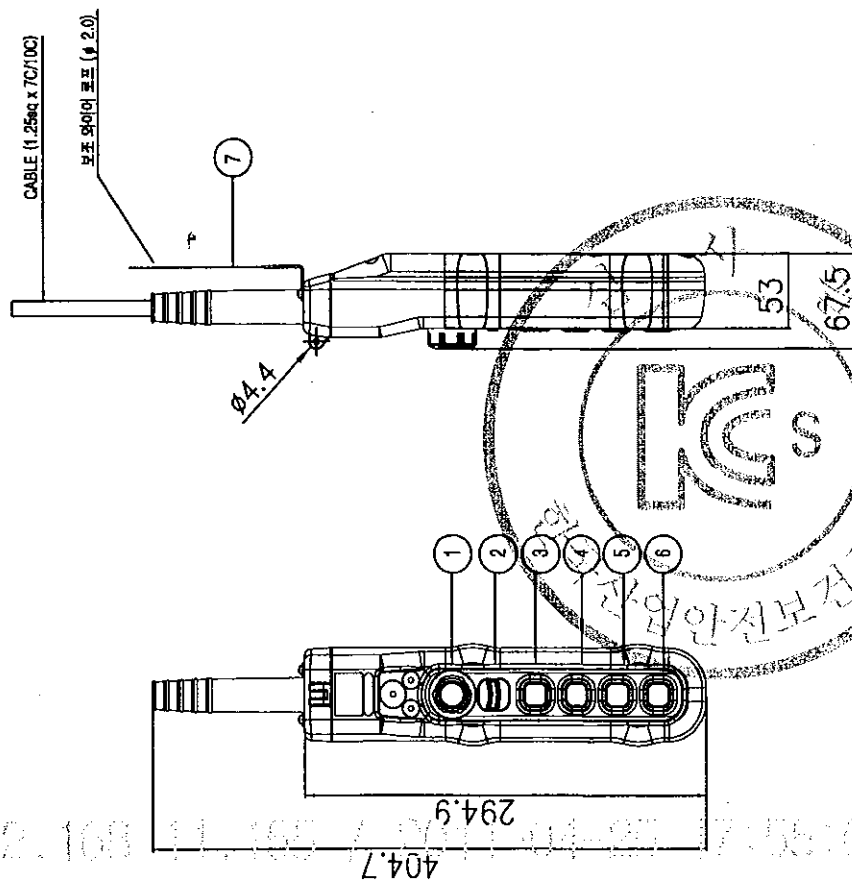
NO	SYMBOL	TYPE	SPEC.	COLOR
1	E.B.S	PUSH LOCK TURN RESET TYPE	250VAC x 6A	RED
2	SPARE			BLACK
3	상	PUSH BUTTON(2STEP)		
4	하	PUSH BUTTON(2STEP)		
5	동(전)	PUSH BUTTON		
6	서(후)	PUSH BUTTON		
7	보조 와이어	ø 2.0		



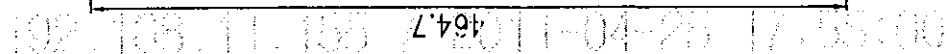
A	CUSTOMER		DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE
	DRAWING TITLE		PENDANT PUSH BUTTON SWITCH LAY OUT					
DATE	REVISIONS	CHK.	APP.	DWG. NO				
				KUK DONG HOIST CO., LTD.				

* MATERIAL : POLYCARBONATE(PLASTIC)
* BODY COLOR : YELLOW, BLACK
* IP : 55 이상

NO	SYMBOL	TYPE	SPEC.	COLOR
1	E.B.S	PUSH LOCK TURN RESET TYPE	250VAC x 6A	BLACK
2	SPARE			
3	상	PUSH BUTTON(2STEP)		
4	하	PUSH BUTTON(2STEP)		
5	동(전)	PUSH BUTTON(2STEP)		
6	서(후)	PUSH BUTTON(2STEP)		
7	보조 와이어	ø 2.0		

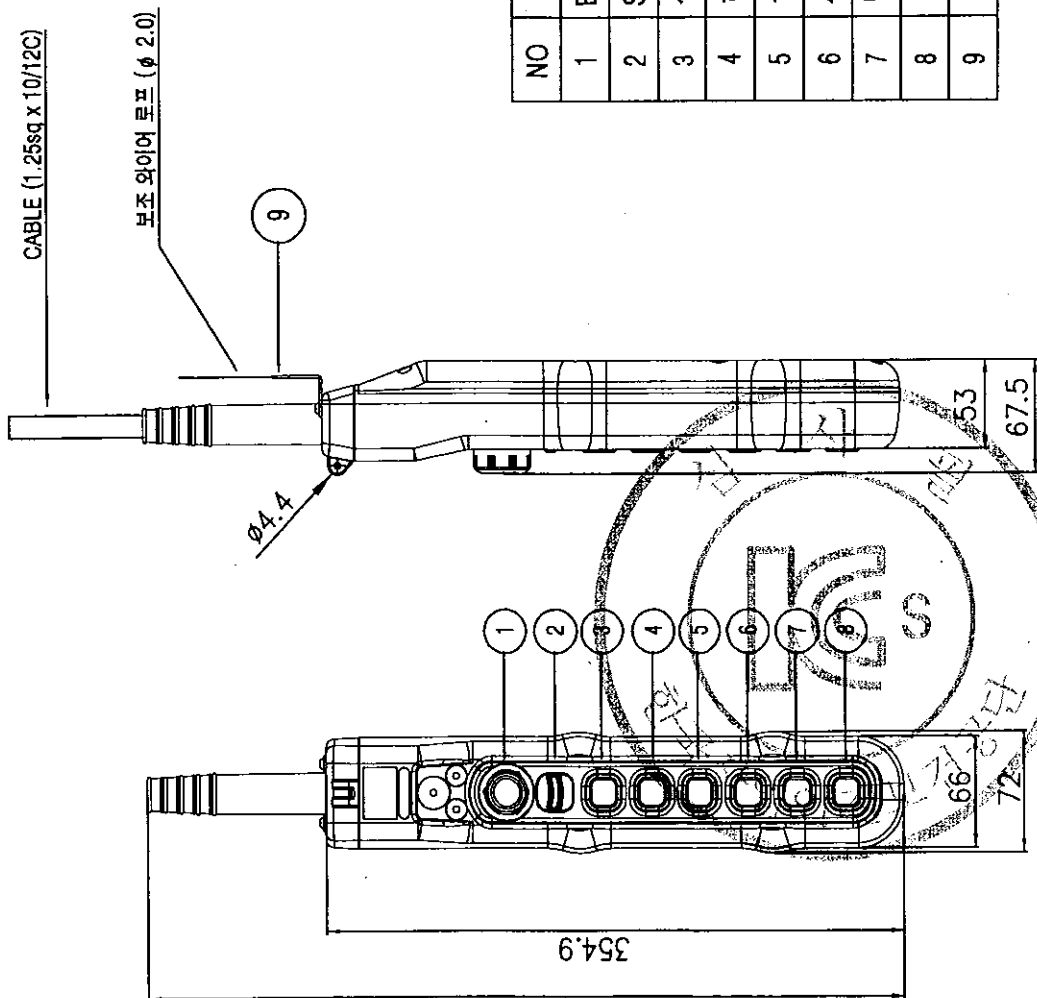


				CUSTOMER	DRAWING TITLE	DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE
					PENDANT PUSH BUTTON SWITCH						
					LAY OUT						
MK	DATE	REVISIONS	CHK.	APP.		KDK	KUK DONG HOIST CO., LTD.	NWG. NO			



* MATERIAL : POLYCARBONATE(PLASTIC)
* BODY COLOR : YELLOW, BLACK
* IP : 55 이상

[illegible]



구분	조작버튼	표시등
색상		
적색	비상	비상
황색	비정상	비정상
녹색	정상	정상
청색	의무	의무
흰색, 회색 - 흑색	지정된의미없음	기타

* MATERIAL : POLYCARBONATE(PLASTIC)

* BODY COLOR : YELLOW, BLACK

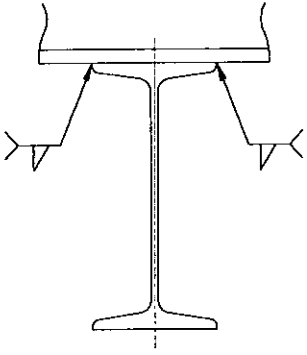
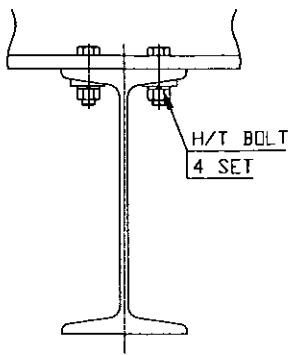
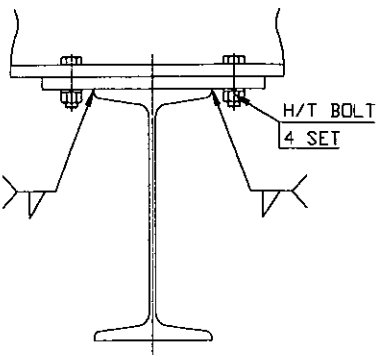
* IP : 55 이상

NO	SYMBOL	TYPE	SPEC.	COLOR
1	E.B.S	PUSH LOCK TURN RESET TYPE	250VAC x 6A	RED
2	SPARE			BLACK
3	상	PUSH BUTTON(2STEP)		
4	하	PUSH BUTTON(2STEP)		
5	병 (좌)	PUSH BUTTON(2STEP)		
6	서 (우)	PUSH BUTTON(2STEP)		
7	남 (전)	PUSH BUTTON		
8	북 (후)	PUSH BUTTON		
9	보조 WIRE	φ 2.0		

Δ	CUSTOMER	DRAWING	DESIGN	CHECKED	APPROVED	SCALE	DATE
Δ		PENDANT PUSH BUTTON SWITCH					
Δ		LAY OUT					
MK	DATE	REVISIONS	CHK.	APP.	DWG. NO		

I-4. I-BEAM의 고정방법 및 사양

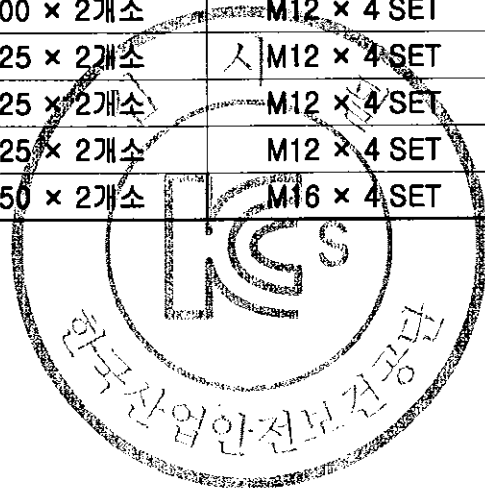
1. I-BEAM의 고정방법

용접구조	BOLT 체결구조	복합구조
	 H/T BOLT 4 SET	 H/T BOLT 4 SET

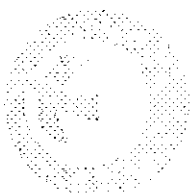
2. 기본조건 및 사양

- * 동하중에 의한 용접이음의 허용응력 (필릿용접 효율 80% 포함) : 560 kg/cm²
- * H/T BOLT의 허용 인장응력 : 2500kg/cm²

정격하중 (TON)	용접구조 (mm)		BOLT 체결구조
	용접두께	최소 용접길이	최소 BOLT SIZE
→ 1.0	6	100 × 2개소	M12 × 4 SET
2.0	6	125 × 2개소	M12 × 4 SET
2.8	6	125 × 2개소	M12 × 4 SET
3.0	6	125 × 2개소	M12 × 4 SET
5.0	8	150 × 2개소	M16 × 4 SET

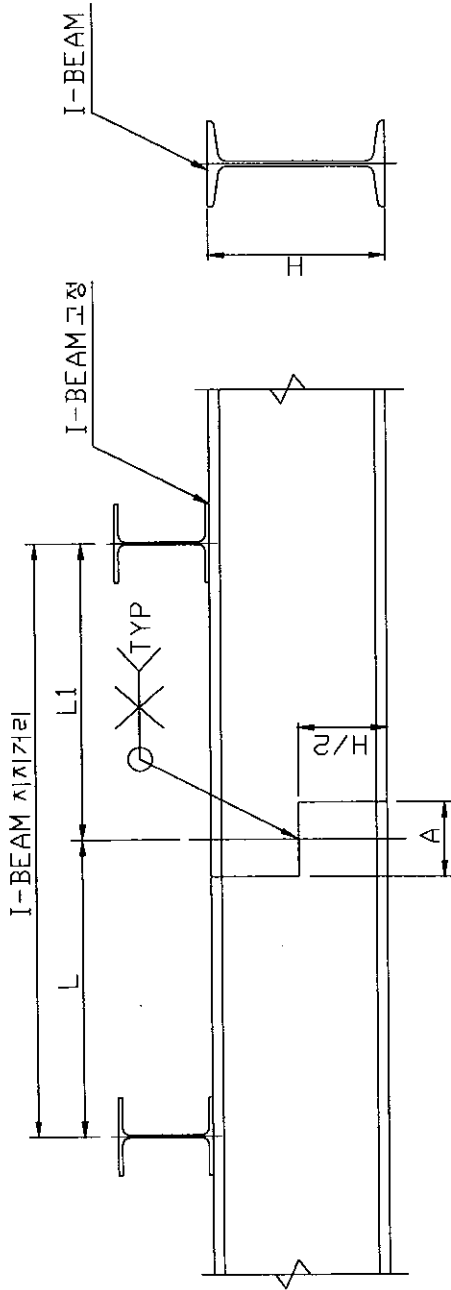


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3. I-BEAM의 연결방법



- * I-BEAM의 용접 연결부위는 I-BEAM 고정 지점과 동일 선상에 위치하지 않도록 한다(단위 : mm)
- * 고정 지점 사이 중앙에 용접 연결부위가 일치하지 않도록 한다.



사용 I-BEAM	A	H	H/2	최대 지지거리				
				1 T	2 T	2.8 T	3 T	5 T
200×100×t7/10	200	200	100	4000				
250×125×t7.5/12.5	200	250	125	6200	4200	3800	3200	
300×150×t10/18.5	300	300	150	9300	6500	5800	5800	4600
350×150×t9/15	300	350	175	10200	7300	6500	6000	5000
400×150×t10/18	300	400	200	11000	8900	8000	7700	6300
450×175×t11/20	300	450	225		10500	9900	9900	8000

단, 사용 I-BEAM은 MODEL별 기술사항서의 BEAM 폭을 참조 할 것

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• I-BEAM 고정 방법 중 용접 구조의 용접 강도

$$\text{용접부 강도 } \sigma = 1.14 \times \frac{\text{I-BEAM 자중} + 1.25 \times (\text{정격하중} + \text{Hoist 자중})}{0.707 \times \text{용접두께} \times \text{용접길이}} \leq 560 \text{ kg/cm}^2$$



I-BEAM 규격	BEAM 자중 (kg/m)	용접 두께 (cm)	최소 용접길이 (cm)	1 T		2 T		2.8 T		3 T		5 T	
				HOIST 자중 (KG)	용접강도 (kg/cm ²)	HOIST 자중 (KG)	용접강도 (kg/cm ²)	HOIST 자중 (KG)	용접강도 (kg/cm ²)	HOIST 자중 (KG)	용접강도 (kg/cm ²)	HOIST 자중 (KG)	용접강도 (kg/cm ²)
200×100×7/10	26.0	0.6	10×2	275	217.6								
250×125×7.5/12.5	38.3	0.6	12.5×2	275	175.4	755	374.3	785	485.8	785	512.7		
300×150×10/18.5	65.6	0.6	15.0×2	275	148.6	755	314.4	785	407.3	785	429.7	895	499.5
350×150×9/15	58.5	0.6	15.0×2	275	148.0	755	313.7	785	406.7	785	429.1	895	499.0
400×150×10/18	72.0	0.8	15.0×2	275	149.2	755	314.9	785	407.9	785	430.3	895	499.9
450×175×11/20	91.7	0.8	17.5×2			755	316.7	785	409.6	785	370.3	895	501.2

사, 사용 I-BEAM은 MODEL 별 기술사항서의 BEAM 쪽을 참조 할 것

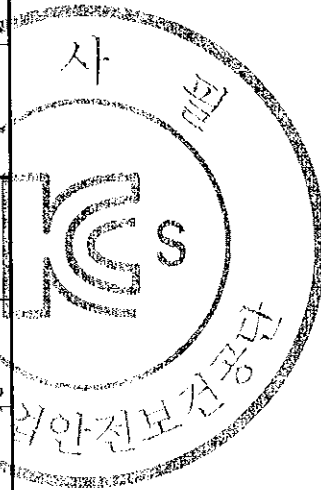
본 도면은 설계 및 배포금지

★ I-BEAM 고정 방법 중 BOLT 고정 강도

$$\text{BOLT 강도 } \sigma = 1.14 \frac{\text{I-BEAM 자중} + 1.25 \times (\text{정격하중} + \text{Hoist 자중})}{\text{BOLT 단면적} \times \text{BOLT 수}} \leq 2500 \text{ kg/cm}^2$$



I-BEAM 규격	BEAM 자중 (kg/m)	BOLT 규격	BOLT 수	BOLT 단면적 (cm ²)	1 T		2 T		2.8 T		3 T		5 T	
					HOIST 자중 (KG)	BOLT강도 (kg/cm ²)	HOIST 자중 (KG)	BOLT강도 (kg/cm ²)	HOIST 자중 (KG)	BOLT강도 (kg/cm ²)	HOIST 자중 (KG)	BOLT강도 (kg/cm ²)	HOIST 자중 (KG)	BOLT강도 (kg/cm ²)
200×100×7/10	26.0	M12	4	1.13	275	408.5								
250×125×7.5/12.5	38.3	M12	4	1.13	275	411.6	755	878.2	785	1139.9	785	1202.9		
300×150×10/18.5	65.6	M12	4	1.13	275	418.5	755	885.1	785	1146.8	785	1209.8	700	1019.6
350×150×19/15	58.5	M12	4	1.13	275	416.7	755	883.3	785	1145.0	785	1208.0	700	1018.6
400×150×10/18	72.0	M16	4	2.01	275	236.2	755	498.5	785	645.6	785	681.1	700	1020.5
250×175×11/20	91.7	M16	4	2.01			755	501.3	785	648.4	785	683.9	700	1023.3



제출 서류 및 배포 금지

I-5. I-BEAM의 최대 지지거리

5-1. 굽힘 MOMENT 계산

1. 수직하중에 의한 굽힘 MOMENT

$$\text{BEAM 자중에 의한 MOMENT : } M_s = \frac{M \times \text{I-BEAM 자중} \times (\text{지지거리})^2}{8} \quad \text{kg-cm}$$

$$M_s = \frac{1.05 \times 26 \times 400^2}{8} = 5460 \quad \text{kg-cm}$$

$$\text{이동하중에 의한 MOMENT : } M_d = F \times \frac{(\text{정격하중} + \text{호이스트 자중}) \times \text{지지거리}}{4} \quad \text{kg-cm}$$

$$M_d = 1.254 \times \frac{(1000 + 275) \times 400}{4} = 159885 \quad \text{kg-cm}$$

$$\star \text{ 호이스트 자중} = 275 \text{ KG} \quad \text{용 량 : } 1000 \text{ KG}$$

$$\star \text{ DYNAMIC COEFFICIENT : } F = 1.254$$

$$\star \text{ STATIC COEFFICIENT : } M = 1.05$$

$$\text{굽힘 MOMENT 합계 : } \Sigma M_v = M_s + M_d = 5460 + 159885 = 165345 \quad \text{kg-cm}$$

2. 풍하중에 의한 굽힘 MOMENT

$$\text{풍하중에 의한 MOMENT : } M_w = \frac{\text{풍하중}(W) \times \text{지지거리}}{2}$$

$$M_w = \frac{31.52 \times 400}{2} = 6303 \quad \text{kg-cm}$$

$$\begin{aligned} \text{풍하중 : } W &= \text{속도압}(q) \times \text{속도계수}(C) \times \text{압력을 받는 면적}(A) \text{ (kg)} \\ &= 23.66 \times 1.2 \times 1.11 = 31.52 \text{ (kg)} \end{aligned}$$

$$\text{속도압 : } q = 8.5 \times \sqrt[4]{h} \text{ (kg/m}^2\text{)} = 8.5 \times \sqrt[4]{60} = 23.66 \text{ (kg/m}^2\text{)}$$

$$\text{속도계수 : } C = 1.2 \text{ (크레인 제작기준 참조)}$$

$$\begin{aligned} \text{풍압을 받는 면적 } A &= \text{I-BEAM의 면적} + \text{HOIST의 면적 (m}^2\text{)} \\ &= 0.8 + 0.310 = 1.110 \text{ (m}^2\text{)} \end{aligned}$$

$$\star \text{ 호이스트의 풍압을 받는 면적 } \approx 0.8 \text{ m}^2$$

I-BEAM 규격	BEAM 자중 (kg/m)	최 대 지지거리 (cm)	M _s (kg-cm)	M _d (kg-cm)	ΣM _v (kg-cm)	W (kg)	M _w (kg-cm)	A (m ²)
200×100×t7/10	26	400	5460	159885	165345	31.52	6303	1.11
250×125×t7.5/12.5	38.3	620	19323	247822	267145	51.39	15930.8	1.81
300×150×t10/18.5	65.6	930	74468	371733	446201	88.30	41059.1	3.11
350×150×t13/15	58.5	1020	79883	407707	487590	105.33	53720.5	3.71
400×150×t10/18	72.0	1100	114345	439684	554029	139.40	76672.6	4.91

단, 사용 I-BEAM은 MODEL별 기술사양서의 BEAM 폭을 참조 할 것

5-2. 굽힘 응력 계산

1. 수직하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_v &= \frac{\text{수직 굽힘 MOMENT 합계 : } \Sigma M_v}{\text{단면 계수 : } Z_x} \quad (\text{kg/cm}^2) \\ &= \frac{165345}{218} = 758.5 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_w &= \frac{\text{풍하중에 의한 굽힘 MOMENT : } M_w}{\text{단면 계수 : } Z_y} \quad (\text{kg/cm}^2) \\ &= \frac{6303.0}{27.7} = 227.5 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$* \Sigma \sigma = \sigma_v + \sigma_w \leq 0.8 \times 1449 = 1159 \text{ kg/cm}^2$$

I-BEAM 규격	단면 계수 Zx	단면 계수 Zy	ΣM_v (kg-cm)	M_w (kg-cm)	σ_v (kg/cm ²)	σ_w (kg/cm ²)	$\Sigma \sigma$ (kg/cm ²)
200×100×t7/10	218	27.7	165345	6303.0	758.5	227.5	986.0
250×125×t7.5/12.5	415	56.2	267145	15930.8	643.7	283.5	927.2
300×150×t10/18.5	849	118	446201	41059.1	525.6	348.0	873.5
350×150×t9/15	871	95.4	487590	53720.5	559.8	563.1	1122.9
400×150×t10/18	1220	118	554029	76672.6	454.1	649.8	1103.9

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

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5-3. I-BEAM 처짐(DEFLECTION)

1. I-BEAM 자중에 의한 처짐

$$\begin{aligned} * \delta_s &= \frac{5 \times \text{I-BEAM 자중} \times \text{지지거리}^3}{384 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{5 \times 26 \times 400^3}{384 \times 2100000 \times 2170} = 0.048 \quad (\text{cm}) \end{aligned}$$

2. 이동하중에 의한 처짐 (DEFLECTION)

$$\begin{aligned} * \delta_d &= \frac{(\text{정격하중} + \text{호이스트자중}) \times \text{지지거리}^3}{48 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{(1000 + 275) \times 400^3}{48 \times 2100000 \times 2170} = 0.373 \quad (\text{cm}) \end{aligned}$$

3. 판정

1) 이동하중에 의한 처짐판정(하단표기)

$$\begin{aligned} \frac{\text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} &< \frac{1}{1000} \\ &= \frac{0.373}{400} = \frac{1}{1072} < \frac{1}{1000} \end{aligned}$$

2) 처짐량 합계에 의한 처짐판정 (하단표기)

$$\begin{aligned} \frac{\text{I-BEAM 자중에 의한 처짐} : \delta_s + \text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} &< \frac{1}{800} \\ &= \frac{0.048+0.373}{400} = \frac{1}{951} < \frac{1}{800} \end{aligned}$$

I-BEAM 규격	단면2차 MOMENT I _x	BEAM 자중 (kg/m)	δ _s (cm)	δ _d (cm)	이동하중에 의한 처짐 판정	처짐량 합계에 의한 처짐판정
200×100×t7/10	2170	26	0.048	0.373	1 / 1072	1 / 951
250×125×t7.5/12.5	5180	38.3	0.109	0.582	1 / 1065	1 / 897
300×150×t10/18.5	12700	65.6	0.2576	0.801	1 / 1161	1 / 878
350×150×t9/15	15200	58.5	0.2532	0.883	1 / 1155	1 / 898
400×150×t10/18	24100	72	0.2463	0.699	1 / 1575	1 / 1164

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

I-6. I-BEAM의 최대 지지거리

6-1. 굽힘 MOMENT 계산

1. 수직하중에 의한 굽힘 MOMENT

$$\text{BEAM 자중에 의한 MOMENT : } M_s = \frac{M \times \text{I-BEAM 자중} \times (\text{지지거리})^2}{8} \quad \text{kg-cm}$$

$$M_s = \frac{1.05 \times 38.3 \times 620^2}{8} = 19323 \quad \text{kg-cm}$$

$$\text{이동하중에 의한 MOMENT : } M_d = F \times \frac{(\text{정격하중} + \text{호이스트 자중}) \times \text{지지거리}}{4} \quad \text{kg-cm}$$

$$M_d = 1.254 \times \frac{(1000 + 275) \times 620}{4} = 247822 \quad \text{kg-cm}$$

$$\star \text{ 호이스트 자중} = 275 \text{ KG} \quad \text{용 량 : } 1000 \text{ KG}$$

$$\star \text{ DYNAMIC COEFFICIENT : } F = 1.254$$

$$\star \text{ STATIC COEFFICIENT : } M = 1.05$$

$$\text{굽힘 MOMENT 합계 : } \Sigma M_v = M_s + M_d = 19323 + 247822 = 267145 \quad \text{kg-cm}$$

2. 풍하중에 의한 굽힘 MOMENT

$$\text{풍하중에 의한 MOMENT : } M_w = \frac{\text{풍하중}(W) \times \text{지지거리}}{2}$$

$$M_w = \frac{51.39 \times 620}{2} = 15930.8 \quad \text{kg-cm}$$

$$\begin{aligned} \text{풍하중 : } W &= \text{속도압}(q) \times \text{속도계수}(C) \times \text{압력을 받는 면적}(A) \text{ (kg)} \\ &= 23.66 \times 1.2 \times 1.81 = 51.39 \text{ (kg)} \end{aligned}$$

$$\text{속도압 : } q = 8.5 \times \sqrt[4]{h} \text{ (kg/m}^2\text{)} = 8.5 \times \sqrt[4]{60} = 23.66 \text{ (kg/m}^2\text{)}$$

$$\text{속도계수 : } C = 1.2 \text{ (크레인 제작기준 참조)}$$

$$\begin{aligned} \text{풍압을 받는 면적 } A &= \text{I-BEAM의 면적} + \text{HOIST의 면적 (m}^2\text{)} \\ &= 1.5 + 0.310 = 1.81 \text{ (m}^2\text{)} \end{aligned}$$

$$\star \text{ 호이스트의 풍압을 받는 면적 } \approx 0.8 \text{ m}^2$$

I-BEAM 규격	BEAM 자중 (kg/m)	최 대 지지거리 (cm)	M _s (kg-cm)	M _d (kg-cm)	ΣM _v (kg-cm)	W (kg)	M _w (kg-cm)	A (m ²)
200×100×t7/10	26	400	5460	159885	165345	31.52	6303.0	1.110
250×125×t7.5/12.5	38.3	620	19323	247822	267145	51.39	15930.8	1.81
300×150×t10/18.5	65.6	930	74468	371733	446201	88.30	41059.1	3.11
350×150×t9/15	58.5	1020	79883	407707	487590	105.33	53720.5	3.71
400×150×t10/18	72.0	1100	10395.0	439684	450079	151.07	83091	5.321

단, 사용 I-BEAM은 MODEL별 기술사양서의 BEAM 쪽을 참조 할 것

6-2. 굽힘 응력 계산

1. 수직하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_v &= \frac{\text{수직 굽힘 MOMENT 합계 : } \Sigma M_v}{\text{단면 계수 : } Z_x} \quad (\text{kg/cm}^2) \\ &= \frac{267145}{415} = 643.7 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_w &= \frac{\text{풍하중에 의한 굽힘 MOMENT : } M_w}{\text{단면 계수 : } Z_y} \quad (\text{kg/cm}^2) \\ &= \frac{15930.8}{56.2} = 283.5 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$* \Sigma \sigma = \sigma_v + \sigma_w \leq 0.8 \times 1449 = 1159 \text{ kg/cm}^2$$

I-BEAM 규격	단 면 계 수 Zx	단 면 계 수 Zy	ΣM_v (kg-cm)	M_w (kg-cm)	σ_v (kg/cm ²)	σ_w (kg/cm ²)	$\Sigma \sigma$ (kg/cm ²)
200×100×t7/10	218	27.7	165345	6303.0	758.5	227.5	986.0
250×125×t7.5/12.5	415	56.2	267145	15930.8	643.7	283.5	927.2
300×150×t10/18.5	849	118	446201	41059.1	525.6	348.0	873.5
350×150×t9/15	871	95.4	487590	53720.5	559.8	563.1	1122.9
400×150×t10/18	1220	118	450079	83090.6	368.9	704.2	1073.1

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

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6-3. I-BEAM 처짐(DEFLECTION)

1. I-BEAM 자중에 의한 처짐

$$\begin{aligned} * \delta_s &= \frac{5 \times \text{I-BEAM 자중} \times \text{지지거리}^3}{384 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{5 \times 38.3 \times 620^3}{384 \times 2100000 \times 5180} = 0.1093 \quad (\text{cm}) \end{aligned}$$

2. 이동하중에 의한 처짐 (DEFLECTION)

$$\begin{aligned} * \delta_d &= \frac{(\text{정격하중} + \text{호이스트자중}) \times \text{지지거리}^3}{48 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{(1000 + 275) \times 620^3}{48 \times 2100000 \times 5180} = 0.582 \quad (\text{cm}) \end{aligned}$$

3. 판 정

1) 이동하중에 의한 처짐판정(하단표기)

$$\begin{aligned} &\frac{\text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{1000} \\ &= \frac{0.582}{620} = \frac{1}{1065} < \frac{1}{1000} \end{aligned}$$

2) 처짐량 합계에 의한 처짐판정 (하단표기)

$$\begin{aligned} &\frac{\text{I-BEAM 자중에 의한 처짐} : \delta_s + \text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{800} \\ &= \frac{0.1093+0.582}{620} = \frac{1}{897} < \frac{1}{800} \end{aligned}$$

I-BEAM 규격	단면2차 MOMENT I _x	BEAM 자중 (kg/m)	δ _s (cm)	δ _d (cm)	이동하중에 의한 처짐 판정	처짐량 합계에 의한 처짐판정
200×100×t7/10	2170	26	0.048	0.373	1 / 1072	1 / 951
250×125×t7.5/12.5	5180	38.3	0.109	0.582	1 / 1065	1 / 897
300×150×t10/18.5	12700	65.6	0.2576	0.801	1 / 1161	1 / 878
350×150×t9/15	15200	58.5	0.2532	0.883	1 / 1155	1 / 898
400×150×t10/18	24100	72	0.2433	0.659	1 / 1575	1 / 1164

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

I-7. I-BEAM의 최대 지지거리

7-1. 굽힘 MOMENT 계산

1. 수직하중에 의한 굽힘 MOMENT

$$\text{BEAM 자중에 의한 MOMENT : } M_s = \frac{M \times \text{I-BEAM 자중} \times (\text{지지거리})^2}{8} \quad \text{kg-cm}$$

$$M_s = \frac{1.05 \times 65.6 \times 930^2}{8} = 74468 \quad \text{kg-cm}$$

$$\text{이동하중에 의한 MOMENT : } M_d = F \times \frac{(\text{정격하중} + \text{호이스트 자중}) \times \text{지지거리}}{4} \quad \text{kg-cm}$$

$$M_d = 1.254 \times \frac{(1000 + 275) \times 930}{4} = 371733 \quad \text{kg-cm}$$

$$\star \text{ 호이스트 자중} = 275 \text{ KG} \quad \text{용량 : } 1000 \text{ KG}$$

$$\star \text{ DYNAMIC COEFFICIENT : } F = 1.254$$

$$\star \text{ STATIC COEFFICIENT : } M = 1.05$$

$$\text{굽힘 MOMENT 합계 : } \Sigma M_v = M_s + M_d = 74468 + 371733 = 446201 \quad \text{kg-cm}$$

2. 풍하중에 의한 굽힘 MOMENT

$$\text{풍하중에 의한 MOMENT : } M_w = \frac{\text{풍하중}(W) \times \text{지지거리}}{2}$$

$$M_w = \frac{88.3 \times 930}{2} = 41059.1 \quad \text{kg-cm}$$

$$\begin{aligned} \text{풍하중 : } W &= \text{속도압}(q) \times \text{속도계수}(C) \times \text{압력을 받는 면적}(A) \text{ (kg)} \\ &= 23.66 \times 1.2 \times 3.11 = 88.30 \text{ (kg)} \end{aligned}$$

$$\text{속도압 : } q = 8.5 \times \sqrt[4]{h} \text{ (kg/m}^2\text{)} = 8.5 \times \sqrt[4]{60} = 23.66 \text{ (kg/m}^2\text{)}$$

$$\text{속도계수 : } C = 1.2 \text{ (크레인 제작기준 참조)}$$

$$\begin{aligned} \text{풍압을 받는 면적 } A &= \text{I-BEAM의 면적} + \text{HOIST의 면적 (m}^2\text{)} \\ &= 2.8 + 0.310 = 3.11 \text{ (m}^2\text{)} \end{aligned}$$

$$\star \text{ 호이스트의 풍압을 받는 면적 } \approx 0.8 \text{ m}^2$$

I-BEAM 규격	BEAM 자중 (kg/m)	최대 지지거리 (cm)	M _s (kg-cm)	M _d (kg-cm)	ΣM _v (kg-cm)	W (kg)	M _w (kg-cm)	A (m ²)
200×100×t7/10	26	400	5460	159885	165345	31.52	6303.0	1.359
250×125×t7.5/12.5	38.3	620	19323	247822	267145	63.34	19636.2	2.231
300×150×t10/18.5	65.6	930	74468	371733	446201	88.30	41059.1	3.11
350×150×t9/15	58.5	1020	79883	407707	487590	105.33	53720.5	3.71
400×150×t10/18	72.0	1100	114345	439684	554029	151.07	83091	5.321

단, 사용 I-BEAM은 MODEL별 기술사양서의 BEAM 쪽을 참조 할 것

7-2. 굽힘 응력 계산

1. 수직하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_v &= \frac{\text{수직 굽힘 MOMENT 합계 : } \Sigma M_v}{\text{단면 계수 : } Z_x} \quad (\text{kg/cm}^2) \\ &= \frac{446201}{849} = 525.6 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_w &= \frac{\text{풍하중에 의한 굽힘 MOMENT : } M_w}{\text{단면 계수 : } Z_y} \quad (\text{kg/cm}^2) \\ &= \frac{41059.1}{118} = 348.0 \quad (\text{kg/cm}^2) \end{aligned}$$

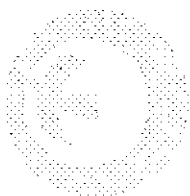
2. 풍하중에 의한 굽힘 응력

$$* \Sigma \sigma = \sigma_v + \sigma_w \leq 0.8 \times 1449 = 1159 \text{ kg/cm}^2$$

I-BEAM 규격	단 면 계 수 Zx	단 면 계 수 Zy	ΣM_v (kg-cm)	M_w (kg-cm)	σ_v (kg/cm ²)	σ_w (kg/cm ²)	$\Sigma \sigma$ (kg/cm ²)
200×100×t7/10	218	27.7	165345	6303.0	758.5	227.5	986.0
250×125×t7.5/12.5	415	56.2	267145	19636.2	643.7	349.4	993.1
300×150×t10/18.5	849	118	446201	41059.1	525.6	348.0	873.5
350×150×t9/15	871	95.4	487590	53720.5	559.8	563.1	1122.9
400×150×t10/18	1220	118	554029	83090.6	454.1	704.2	1158.3

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

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7-3. I-BEAM 처짐(DEFLECTION)

1. I-BEAM 자중에 의한 처짐

$$\begin{aligned} * \delta_s &= \frac{5 \times \text{I-BEAM 자중} \times \text{지지거리}^3}{384 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{5 \times 65.6 \times 930^3}{384 \times 2100000 \times 12700} = 0.258 \quad (\text{cm}) \end{aligned}$$

2. 이동하중에 의한 처짐 (DEFLECTION)

$$\begin{aligned} * \delta_d &= \frac{(\text{정격하중} + \text{호이스트자중}) \times \text{지지거리}^3}{48 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{(1000 + 275) \times 930^3}{48 \times 2100000 \times 12700} = 0.801 \quad (\text{cm}) \end{aligned}$$

3. 판 정

1) 이동하중에 의한 처짐판정(하단표기)

$$\begin{aligned} &\frac{\text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{1000} \\ &= \frac{0.801}{930} = \frac{1}{1161} < \frac{1}{1000} \end{aligned}$$

2) 처짐량 합계에 의한 처짐판정 (하단표기)

$$\begin{aligned} &\frac{\text{I-BEAM 자중에 의한 처짐} : \delta_s + \text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{800} \\ &= \frac{0.258 + 0.801}{930} = \frac{1}{878} < \frac{1}{800} \end{aligned}$$

I-BEAM 규격	단면2차 MOMENT I _x	BEAM 자중 (kg/m)	δ _s (cm)	δ _d (cm)	이동하중에 의한 처짐 판정	처짐량 합계에 의한 처짐판정
200×100×t7/10	2170	26	0.048	0.373	1 / 1072	1 / 951
250×125×t7.5/12.5	5180	38.3	0.1093	0.582	1 / 1065	1 / 897
300×150×t10/18.5	12700	65.6	0.2576	0.801	1 / 1161	1 / 878
350×150×t9/15	15200	58.5	0.2532	0.883	1 / 1155	1 / 898
400×150×t10/18	24100	72	0.2456	0.659	1 / 1575	1 / 1164

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

I-8. I-BEAM의 최대 지지거리

8-1. 굽힘 MOMENT 계산

1. 수직하중에 의한 굽힘 MOMENT

$$\text{BEAM 자중에 의한 MOMENT : } M_s = \frac{M \times \text{I-BEAM 자중} \times (\text{지지거리})^2}{8} \quad \text{kg-cm}$$

$$M_s = \frac{1.05 \times 58.5 \times 1020^2}{8} = 79883 \quad \text{kg-cm}$$

$$\text{이동하중에 의한 MOMENT : } M_d = F \times \frac{(\text{정격하중} + \text{호이스트 자중}) \times \text{지지거리}}{4} \quad \text{kg-cm}$$

$$M_d = 1.254 \times \frac{(1000 + 275) \times 1020}{4} = 407707 \quad \text{kg-cm}$$

$$\star \text{ 호이스트 자중} = 275 \text{ KG} \quad \text{용 량 : 1000 KG}$$

$$\star \text{ DYNAMIC COEFFICIENT : } F = 1.254$$

$$\star \text{ STATIC COEFFICIENT : } M = 1.05$$

$$\text{굽힘 MOMENT 합계 : } \Sigma M_v = M_s + M_d = 79883 + 407707 = 487590 \quad \text{kg-cm}$$

2. 풍하중에 의한 굽힘 MOMENT

$$\text{풍하중에 의한 MOMENT : } M_w = \frac{\text{풍하중}(W) \times \text{지지거리}}{2}$$

$$M_w = \frac{105.33 \times 1020}{2} = 53720.5 \quad \text{kg-cm}$$

$$\begin{aligned} \text{풍하중 : } W &= \text{속도압}(q) \times \text{속도계수}(C) \times \text{압력을 받는 면적}(A) \quad (\text{kg}) \\ &= 23.66 \times 1.2 \times 3.71 = 105.33 \quad (\text{kg}) \end{aligned}$$

$$\text{속도압 : } q = 8.5 \times \sqrt[4]{h} \quad (\text{kg/m}^2) = 8.5 \times \sqrt[4]{60} = 23.66 \quad (\text{kg/m}^2)$$

$$\text{속도계수 : } C = 1.2 \quad (\text{크레인 제작기준 참조})$$

$$\begin{aligned} \text{풍압을 받는 면적 } A &= \text{I-BEAM의 면적} + \text{HOIST의 면적} \quad (\text{m}^2) \\ &= 3.4 + 0.310 = 3.71 \quad (\text{m}^2) \end{aligned}$$

$$\star \text{ 호이스트의 풍압을 받는 면적 } \approx 0.8 \text{ m}^2$$

I-BEAM 규격	BEAM 자중 (kg/m)	최 대 지지거리 (cm)	M _s (kg-cm)	M _d (kg-cm)	ΣM _v (kg-cm)	W (kg)	M _w (kg-cm)	A (m ²)
200×100×t7/10	26	400	5460	159885	165345	31.52	6303.0	1.110
250×125×t7.5/12.5	38.3	620	19323.3	247822	267145	63.34	19636.2	2.231
300×150×t10/18.5	65.6	930	74468	371733	446201	88.30	41059.1	3.11
→ 350×150×t9/15	58.5	1020	79883	407707	487590	105.33	53720.5	3.71
400×150×t10/18	72.0	1100	10395.0	439684	554029	151.07	83091	5.321

단, 사용 I-BEAM은 MODEL별 기술사양서의 BEAM 폭을 참조 할 것

8-2. 굽힘 응력 계산

1. 수직하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_v &= \frac{\text{수직 굽힘 MOMENT 합계 : } \Sigma M_v}{\text{단면 계수 : } Z_x} \quad (\text{kg/cm}^2) \\ &= \frac{487590}{871} = 559.8 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_w &= \frac{\text{풍하중에 의한 굽힘 MOMENT : } M_w}{\text{단면 계수 : } Z_y} \quad (\text{kg/cm}^2) \\ &= \frac{53720.5}{95.4} = 563.1 \quad (\text{kg/cm}^2) \end{aligned}$$

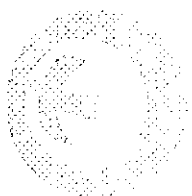
2. 풍하중에 의한 굽힘 응력

$$* \Sigma \sigma = \sigma_v + \sigma_w \leq 0.8 \times 1449 = 1159 \text{ kg/cm}^2$$

I-BEAM 규격	단 면 계 수 Zx	단 면 계 수 Zy	ΣM_v (kg-cm)	M_w (kg-cm)	σ_v (kg/cm ²)	σ_w (kg/cm ²)	$\Sigma \sigma$ (kg/cm ²)
200×100×t7/10	218	27.7	165345	6303.0	758.5	227.5	986.0
250×125×t7.5/12.5	415	56.2	267145	19636.2	643.7	349.4	993.1
300×150×t10/18.5	849	118	446201	41059.1	525.6	348.0	873.5
→ 350×150×t9/15	871	95.4	487590	53720.5	559.8	563.1	1122.9
400×150×t10/18	1220	118	554029	83090.6	454.1	704.2	1158.3

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

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8-3. I-BEAM 처짐(DEFLECTION)

1. I-BEAM 자중에 의한 처짐

$$\begin{aligned} * \delta_s &= \frac{5 \times \text{I-BEAM 자중} \times \text{지지거리}^3}{384 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{5 \times 58.5 \times 1020^3}{384 \times 2100000 \times 15200} = 0.253 \quad (\text{cm}) \end{aligned}$$

2. 이동하중에 의한 처짐 (DEFLECTION)

$$\begin{aligned} * \delta_d &= \frac{(\text{정격하중} + \text{호이스트자중}) \times \text{지지거리}^3}{48 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{(1000 + 275) \times 1020^3}{48 \times 2100000 \times 15200} = 0.883 \quad (\text{cm}) \end{aligned}$$

3. 판정

1) 이동하중에 의한 처짐판정(하단표기)

$$\begin{aligned} &\frac{\text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{1000} \\ &= \frac{0.883}{1020} = \frac{1}{1155} < \frac{1}{1000} \end{aligned}$$

2) 처짐량 합계에 의한 처짐판정 (하단표기)

$$\begin{aligned} &\frac{\text{I-BEAM 자중에 의한 처짐} : \delta_s + \text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{800} \\ &= \frac{0.253 + 0.883}{1020} = \frac{1}{898} < \frac{1}{800} \end{aligned}$$

I-BEAM 규격	단면2차 MOMENT I_x	BEAM 자중 (kg/m)	δ_s (cm)	δ_d (cm)	이동하중에 의한 처짐 판정	처짐량 합계에 의한 처짐판정
200×100×t7/10	2170	26	0.048	0.373	1 / 1072	1 / 951
250×125×t7.5/12.5	5180	38.3	0.1093	0.582	1 / 1065	1 / 897
300×150×t10/18.5	12700	65.6	0.2576	0.801	1 / 1161	1 / 878
⇒ 350×150×t9/15	15200	58.5	0.2532	0.883	1 / 1155	1 / 898
400×150×t10/18	24100	72	0.2463	0.609	1 / 1575	1 / 1164

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

I-9. I-BEAM의 최대 지지거리

9-1. 굽힘 MOMENT 계산

1. 수직하중에 의한 굽힘 MOMENT

$$\text{BEAM 자중에 의한 MOMENT : } M_s = \frac{M \times \text{I-BEAM 자중} \times (\text{지지거리})^2}{8} \quad \text{kg-cm}$$

$$M_s = \frac{1.05 \times 72 \times 1100^2}{8} = 114345 \quad \text{kg-cm}$$

$$\text{이동하중에 의한 MOMENT : } M_d = F \times \frac{(\text{정격하중} + \text{호이스트 자중}) \times \text{지지거리}}{4} \quad \text{kg-cm}$$

$$M_d = 1.254 \times \frac{(1000 + 275) \times 1100}{4} = 439684 \quad \text{kg-cm}$$

$$\text{* 호이스트 자중} = 275 \text{ KG} \quad \text{용량 : 1000 KG}$$

$$\text{* DYNAMIC COEFFICIENT : } F = 1.254$$

$$\text{* STATIC COEFFICIENT : } M = 1.05$$

$$\text{굽힘 MOMENT 합계 : } \Sigma M_v = M_s + M_d = 114345 + 439684 = 554029 \quad \text{kg-cm}$$

2. 풍하중에 의한 굽힘 MOMENT

$$\text{풍하중에 의한 MOMENT : } M_w = \frac{\text{풍하중}(W) \times \text{지지거리}}{2}$$

$$M_w = \frac{139.4 \times 1020}{2} = 76672.6 \quad \text{kg-cm}$$

$$\begin{aligned} \text{풍하중 : } W &= \text{속도압}(q) \times \text{속도계수}(C) \times \text{압력을 받는 면적}(A) \text{ (kg)} \\ &= 23.66 \times 1.2 \times 4.91 = 139.40 \text{ (kg)} \end{aligned}$$

$$\text{속도압 : } q = 8.5 \times \sqrt[4]{h} \text{ (kg/m}^2\text{)} = 8.5 \times \sqrt[4]{60} = 23.66 \text{ (kg/m}^2\text{)}$$

$$\text{속도계수 : } C = 1.2 \text{ (크레인 제작기준 참조)}$$

$$\begin{aligned} \text{풍압을 받는 면적 } A &= \text{I-BEAM의 면적} + \text{HOIST의 면적 (m}^2\text{)} \\ &= 4.6 + 0.310 = 4.91 \text{ (m}^2\text{)} \end{aligned}$$

$$\text{* 호이스트의 풍압을 받는 면적 } \approx 0.8 \text{ m}^2$$

I-BEAM 규격	BEAM 자중 (kg/m)	최대 지지거리 (cm)	M _s (kg-cm)	M _d (kg-cm)	ΣM _v (kg-cm)	W (kg)	M _w (kg-cm)	A (m ²)
200×100×t7/10	26	400	5460	159885	165345	31.52	6303.0	1.110
250×125×t7.5/12.5	38.3	620	19323.3	247822	267145	51.39	15930.8	1.81
300×150×t10/18.5	65.6	930	74468	371733	446201	88.30	41059.1	3.11
350×150×t9/15	58.5	1020	79283	407707	487590	105.33	53720.5	3.71
400×150×t10/18	72.0	1100	114345	439684	554029	139.40	76672.6	4.91

단, 사용 I-BEAM은 MODEL별 기술사양서의 BEAM 쪽을 참조 할 것

9-2. 굽힘 응력 계산

1. 수직하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_v &= \frac{\text{수직 굽힘 MOMENT 합계 : } \Sigma M_v}{\text{단면 계수 : } Z_x} \quad (\text{kg/cm}^2) \\ &= \frac{554029}{1220} = 454.1 \quad (\text{kg/cm}^2) \end{aligned}$$

2. 풍하중에 의한 굽힘 응력

$$\begin{aligned} * \sigma_w &= \frac{\text{풍하중에 의한 굽힘 MOMENT : } M_w}{\text{단면 계수 : } Z_y} \quad (\text{kg/cm}^2) \\ &= \frac{76672.6}{118} = 649.8 \quad (\text{kg/cm}^2) \end{aligned}$$

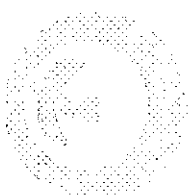
2. 풍하중에 의한 굽힘 응력

$$* \Sigma \sigma = \sigma_v + \sigma_w \leq 0.8 \times 1449 = 1159 \text{ kg/cm}^2$$

I-BEAM 규격	단 면 계 수 Zx	단 면 계 수 Zy	ΣM_v (kg-cm)	M_w (kg-cm)	σ_v (kg/cm ²)	σ_w (kg/cm ²)	$\Sigma \sigma$ (kg/cm ²)
200×100×t7/10	218	27.7	165345	6303.0	758.5	227.5	986.0
250×125×t7.5/12.5	415	56.2	267145	15930.8	643.7	283.5	927.2
300×150×t10/18.5	849	118	446201	41059.1	525.6	348.0	873.5
350×150×t9/15	871	95.4	487590	53720.5	559.8	563.1	1122.9
→ 400×150×t10/18	1220	118	554029	76672.6	454.1	649.8	1103.9

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

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KOSHA
Korea Occupational Safety & Health Agency

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9-3. I-BEAM 처짐(DEFLECTION)

1. I-BEAM 자중에 의한 처짐

$$\begin{aligned} * \delta_s &= \frac{5 \times \text{I-BEAM 자중} \times \text{지지거리}^3}{384 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{5 \times 72 \times 1100^3}{384 \times 2100000 \times 24100} = 0.247 \quad (\text{cm}) \end{aligned}$$

2. 이동하중에 의한 처짐 (DEFLECTION)

$$\begin{aligned} * \delta_d &= \frac{(\text{정격하중} + \text{호이스트자중}) \times \text{지지거리}^3}{48 \times 2100000 \times I_x} \quad (\text{cm}) \\ &= \frac{(1000 + 275) \times 1100^3}{48 \times 2100000 \times 24100} = 0.699 \quad (\text{cm}) \end{aligned}$$

3. 판정

1) 이동하중에 의한 처짐판정(하단표기)

$$\begin{aligned} &\frac{\text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{1000} \\ &= \frac{0.699}{1100} = \frac{1}{1575} < \frac{1}{1000} \end{aligned}$$

2) 처짐량 합계에 의한 처짐판정 (하단표기)

$$\begin{aligned} &\frac{\text{I-BEAM 자중에 의한 처짐} : \delta_s + \text{이동하중에 의한 처짐} : \delta_d}{\text{지지거리}} < \frac{1}{800} \\ &= \frac{0.247 + 0.699}{1100} = \frac{1}{1164} < \frac{1}{800} \end{aligned}$$

I-BEAM 규격	단면2차 MOMENT I _x	BEAM 자중 (kg/m)	δ _s (cm)	δ _d (cm)	이동하중에 의한 처짐 판정	처짐량 합계에 의한 처짐판정
200×100×t7/10	2170	26	0.048	0.373	1 / 1072	1 / 951
250×125×t7.5/12.5	5180	38.3	0.1093	0.582	1 / 1065	1 / 897
300×150×t10/18.5	12700	65.6	0.2576	0.801	1 / 1161	1 / 878
350×150×t9/15	15200	58.5	0.2532	0.883	1 / 1155	1 / 898
⇒ 400×150×t10/18	24100	72	0.2463	0.699	1 / 1575	1 / 1164

단, I-BEAM의 사용은 MODEL 별 기술사양서에 따른다.

LOAD LIMITER 권고 SETTING치

* POWER SOURCE : AC 3Φ 220V 60Hz

극동하이스트(주)

HOIST	MOTOR 용량	LOAD LIMITER 권고 SETTING치			LOAD CURRENT		C.T MODEL	연결단자 NO	C.T 용량	REMARK
		LOAD CURRENT	ADJ START TIME	SHOCK TIME	100%	110%				
C1 TON	2.4KW x 4P	110%	1 SEC	1 SEC	10 A	11.2 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	2.7 A	3.1 A	CT-1	K-K1, L-L1	5 V.A	
C2 TON	3.7KW x 4P	110%	1 SEC	1 SEC	16.0 A	17.4 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	2.7 A	3.1 A	CT-1	K-K1, L-L1	5 V.A	
C2.8 TON	5.0KW x 4P	110%	1 SEC	1 SEC	22.8 A	24.2 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	7.3 A	8.3 A	CT-1	K-K1, L-L1	5 V.A	
C3 TON	5.5KW x 4P	110%	1 SEC	1 SEC	22.8 A	24.3 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	7.3 A	8.3 A	CT-1	K-K1, L-L1	5 V.A	
C5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	28.2 A	30.1 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	6.7 A	8.1 A	CT-1	K-K1, L-L1	5 V.A	
C7.5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	28.2 A	30.1 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	6.7 A	8.1 A	CT-1	K-K1, L-L1	5 V.A	
C10 TON	9.0KW x 8P	110%	1 SEC	1 SEC	45.0 A	49.1 A	CT-2	K-K1, L-L1	5 V.A	
	1.1KW x 8P	110%	1 SEC	1 SEC	8.0 A	9.6 A	CT-2	K-K1, L-L1	5 V.A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

LOAD LIMITER 권고 SETTING치

POWER SOURCE : AC 3Φ 380V 60Hz

국동호이스트(주)

HOIST	MOTOR 용량	LOAD LIMITER 권고 SETTING치			LOAD CURRENT		C.T MODEL	연결단자 NO	C.T 용량	REMARK
		LOAD CURRENT	ADJ START TIME	SHOCK TIME	100%	110%				
C1 TON	2.4KW x 4P	110%	1 SEC	1 SEC	5.8 A	6.3 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.6 A	2.1 A	CT-1	K-K1, L-L1	5 V.A	
C2 TON	3.7KW x 4P	110%	1 SEC	1 SEC	9.3 A	11.3 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.6 A	2.1 A	CT-1	K-K1, L-L1	5 V.A	
C2.8 TON	5.0KW x 4P	110%	1 SEC	1 SEC	12.2 A	13.6 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	4.2 A	5.4 A	CT-1	K-K1, L-L1	5 V.A	
C3 TON	5.5KW x 4P	110%	1 SEC	1 SEC	12.2 A	13.6 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	4.2 A	5.4 A	CT-1	K-K1, L-L1	5 V.A	
C5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	16.3 A	17.8 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.9 A	5.3 A	CT-1	K-K1, L-L1	5 V.A	
C7.5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	16.3 A	17.8 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	4 SEC	1 SEC	3.9 A	5.3 A	CT-1	K-K1, L-L1	5 V.A	
C10 TON	9.0KW x 8P	110%	1 SEC	1 SEC	26.0 A	28.6 A	CT-2	K-K1, L-L1	5 V.A	
	1.1KW x 8P	110%	1 SEC	1 SEC	4.6 A	6.1 A	CT-2	K-K1, L-L1	5 V.A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

LOAD LIMITER 권고 SETTING치

* POWER SOURCE : AC 3Φ 440V 60Hz

극동하이스트(주)

HOIST	MOTOR 용량	LOAD LIMITER 권고 SETTING치			LOAD CURRENT		C.T MODEL	연결단자 NO	C.T 용량	REMARK
		LOAD CURRENT	ADJ START TIME	SHOCK TIME	100%	110%				
C1 TON	2.4KW x 4P	110%	1 SEC	1 SEC	5.0 A	7.3 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.4 A	1.8 A	CT-1	K-K1, L-L1	5 V.A	
C2 TON	3.7KW x 4P	110%	1 SEC	1 SEC	8.0 A	10.8 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.4 A	1.8 A	CT-1	K-K1, L-L1	5 V.A	
C2.8 TON	5.0KW x 4P	110%	1 SEC	1 SEC	10.5 A	13.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.7 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C3 TON	5.5KW x 4P	110%	1 SEC	1 SEC	10.5 A	13.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.7 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	14.1 A	18.5 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.3 A	4.7 A	CT-1	K-K1, L-L1	5 V.A	
C7.5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	14.1 A	18.5 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.3 A	4.7 A	CT-1	K-K1, L-L1	5 V.A	
C10 TON	9.0KW x 8P	110%	1 SEC	1 SEC	22.5 A	24.8 A	CT-2	K-K1, L-L1	5 V.A	
	1.1KW x 8P	110%	1 SEC	1 SEC	4.0 A	5.4 A	CT-1	K-K1, L-L1	5 V.A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

LOAD LIMITER 권고 SETTING치

* POWER SOURCE : AC 3Φ 460V 60Hz

극동호이스트(주)

HOIST	MOTOR 용량	LOAD LIMITER 권고 SETTING치			LOAD CURRENT		C.T MODEL	연결단자 NO	C.T 용량	REMARK
		LOAD CURRENT	ADJ START TIME	SHOCK TIME	100%	110%				
C1 TON	2.4KW x 4P	110%	1 SEC	1 SEC	4.8 A	5.2 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.3 A	1.5 A	CT-1	K-K1, L-L1	5 V.A	
C2 TON	3.7KW x 4P	110%	1 SEC	1 SEC	7.7 A	8.5 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.3 A	1.5 A	CT-1	K-K1, L-L1	5 V.A	
C2.8 TON	5.0KW x 4P	110%	1 SEC	1 SEC	10.0 A	11.5 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.5 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C3 TON	5.5KW x 4P	110%	1 SEC	1 SEC	10.0 A	11.5 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.5 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	13.5 A	14.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.2 A	3.6 A	CT-1	K-K1, L-L1	5 V.A	
C7.5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	13.5 A	14.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.2 A	3.6 A	CT-1	K-K1, L-L1	5 V.A	
C10 TON	9.0KW x 8P	110%	1 SEC	1 SEC	21.5 A	23.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.1KW x 8P	110%	1 SEC	1 SEC	4.0 A	5.4 A	CT-1	K-K1, L-L1	5 V.A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

LOAD LIMITER 권고 SETTING치

* POWER SOURCE : AC 3Φ 480V 60Hz

극동하이스트(주)

HOIST	MOTOR 용량	LOAD LIMITER 권고 SETTING치			LOAD CURRENT		C.T MODEL	연결단자 NO	C.T 용량	REMARK
		LOAD CURRENT	ADJ START TIME	SHOCK TIME	100%	110%				
C1 TON	2.4KW x 4P	110%	1 SEC	1 SEC	4.6 A	5.0 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.2 A	1.35 A	CT-1	K-K1, L-L1	5 V.A	
C2 TON	3.7KW x 4P	110%	1 SEC	1 SEC	7.3 A	8.2 A	CT-2	K-K1, L-L1	5 V.A	
	0.4KW x 4P	110%	1 SEC	1 SEC	1.2 A	1.35 A	CT-1	K-K1, L-L1	5 V.A	
C2.8 TON	5.0KW x 4P	110%	1 SEC	1 SEC	9.6 A	11.2 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.4 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C3 TON	5.5KW x 4P	110%	1 SEC	1 SEC	9.6 A	11.2 A	CT-2	K-K1, L-L1	5 V.A	
	1.5KW x 4P	110%	1 SEC	1 SEC	3.4 A	4.3 A	CT-1	K-K1, L-L1	5 V.A	
C5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	12.9 A	14.2 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.1 A	3.5 A	CT-1	K-K1, L-L1	5 V.A	
C7.5 TON	5.5KW x 6P	110%	1 SEC	1 SEC	12.9 A	14.2 A	CT-2	K-K1, L-L1	5 V.A	
	1.0KW x 6P	110%	1 SEC	1 SEC	3.1 A	3.5 A	CT-1	K-K1, L-L1	5 V.A	
C10 TON	9.0KW x 8P	110%	1 SEC	1 SEC	20.6 A	22.7 A	CT-2	K-K1, L-L1	5 V.A	
	1.1KW x 8P	110%	1 SEC	1 SEC	4.0 A	5.4 A	CT-1	K-K1, L-L1	5 V.A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

E.O.C.R 권고 SETTING치

* POWER SOURCE : AC 3Φ 220V 60Hz

극동호이스트(주)

HOIST	MOTOR 용량	MOTOR 정격 전류	DRIVE TYPE	E.O.C.R TYPE	권고 SETTING 치			REMARK
					DELAY TIME	OPERATION TIME	CURRENT	
C1 TON	2.4KW x 4P	10.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	10.0 A	
	0.4KW x 4P	2.7 A	1 DRAVE	SS-05	3 SEC	1 SEC	2.7 A	
C2 TON	3.7KW x 4P	16.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	16.0 A	
	0.4KW x 4P	2.7 A	1 DRAVE	SS-05	3 SEC	1 SEC	2.7 A	
C2.8 TON	5.0KW x 4P	22.8 A	1 DRAVE	SS-30	3 SEC	1 SEC	22.8 A	
	1.5KW x 4P	7.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	7.3 A	
C3 TON	5.5KW x 4P	22.8 A	1 DRAVE	SS-30	3 SEC	1 SEC	22.8 A	
	1.5KW x 4P	7.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	7.3 A	
C5 TON	5.5KW x 6P	28.2 A	1 DRAVE	SS-30	3 SEC	1 SEC	28.2 A	
	1.0KW x 6P	6.7 A	1 DRAVE	SS-30	3 SEC	1 SEC	6.7 A	
C7.5 TON	5.5KW x 6P	28.2 A	1 DRAVE	SS-30	3 SEC	1 SEC	28.2 A	
	1.0KW x 6P	6.7 A	1 DRAVE	SS-30	3 SEC	1 SEC	6.7 A	
C10 TON	9.0KW x 8P	45.0 A	1 DRAVE	SS-60	3 SEC	1 SEC	45.0 A	
	1.1KW x 8P	8.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	8.0 A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

E.O.C.R 권고 SETTING치

* POWER SOURCE : AC 3Ø 380V 60Hz

국동호이스트(주)

HOIST	MOTOR 용량	1 정격 전류	DRIVE TYPE	E.O.C.R TYPE	권고 SETTING 치			REMARK
					DELAY TIME	OPERATION TIME	CURRENT	
C1 TON	2.4KW x 4P	5.8 A	1 DRAVE	SS-30	3 SEC	1 SEC	5.8 A	
	0.4KW x 4P	1.6 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.6 A%	
C2 TON	3.7KW x 4P	9.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	9.3 A	
	0.4KW x 4P	1.6 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.6 A	
C2.8 TON	5.0KW x 4P	12.2 A	1 DRAVE	SS-30	3 SEC	1 SEC	12.2 A	
	1.5KW x 4P	4.2 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.2 A	
C3 TON	5.5KW x 4P	12.2 A	1 DRAVE	SS-30	3 SEC	1 SEC	12.2 A	
	1.5KW x 4P	4.2 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.2 A	
C5 TON	5.5KW x 6P	16.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	16.3 A	
	1.0KW x 6P	3.9 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.9 A	
C7.5 TON	5.5KW x 6P	16.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	16.3 A	
	1.0KW x 6P	3.9 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.9 A	
C10 TON	9.0KW x 8P	26.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	26.0 A	
	1.1KW x 8P	4.6 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.6 A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

E.O.C.R 권고 SETTING치

국동호이스트(주)

* POWER SOURCE : AC 3Φ 440V 60Hz

HOIST	MOTOR 용량	MOTOR 정격 전류	DRIVE TYPE	E.O.C.R TYPE	권고 SETTING 치			REMARK
					DELAY TIME	OPERATION TIME	CURRENT	
C1 TON	2.4KW x 4P	5.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	5.0 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2 TON	3.7KW x 4P	8.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	8.0 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2.8 TON	5.0KW x 4P	10.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	10.5 A	
	1.5KW x 4P	3.7 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.7 A	
C3 TON	5.5KW x 4P	10.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	10.5 A	
	1.5KW x 4P	3.7 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.7 A	
C5 TON	5.5KW x 6P	14.1 A	1 DRAVE	SS-30	3 SEC	1 SEC	14.1 A	
	1.0KW x 6P	3.3 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.3 A	
C7.5 TON	5.5KW x 6P	14.1 A	1 DRAVE	SS-30	3 SEC	1 SEC	14.1 A	
	1.0KW x 6P	3.3 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.3 A	
C10 TON	9.0KW x 8P	22.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	22.5 A	
	1.1KW x 8P	4.0 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.0 A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

E.O.C.R 권고 SETTING치

* POWER SOURCE : AC 3Φ 460V 60Hz

극동호이스트(주)

HOIST	MOTOR 용량	MOTOR 정격 전류	DRIVE TYPE	E.O.C.R TYPE	권고 SETTING 치			REMARK
					DELAY TIME	OPERATION TIME	CURRENT	
C1 TON	2.4KW x 4P	4.8 A	1 DRAVE	SS-30	3 SEC	1 SEC	4.8 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2 TON	3.7KW x 4P	7.7 A	1 DRAVE	SS-30	3 SEC	1 SEC	7.7 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2.8 TON	5.0KW x 4P	10.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	10.0 A	
	1.5KW x 4P	3.5 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.5 A	
C3 TON	5.5KW x 4P	10.0 A	1 DRAVE	SS-30	3 SEC	1 SEC	10.0 A	
	1.5KW x 4P	3.5 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.5 A	
C5 TON	5.5KW x 6P	13.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	13.5 A	
	1.0KW x 6P	3.2 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.2 A	
C7.5 TON	5.5KW x 6P	13.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	13.5 A	
	1.0KW x 6P	3.2 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.2 A	
C10 TON	9.0KW x 8P	21.5 A	1 DRAVE	SS-30	3 SEC	1 SEC	21.5 A	
	1.1KW x 8P	4.0 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.0 A	

NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

E.O.C.R 권고 SETTING치

POWER SOURCE : AC 3Φ 480V 60Hz

극동호이스트(주)

HOIST	MOTOR 용량	MOTOR 정격 전류	DRIVE TYPE	E.O.C.R TYPE	권고 SETTING 치			REMARK
					DELAY TIME	OPERATION TIME	CURRENT	
C1 TON	2.4KW x 4P	4.6 A	1 DRAVE	SS-30	3 SEC	1 SEC	4.6 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2 TON	3.7KW x 4P	7.3 A	1 DRAVE	SS-30	3 SEC	1 SEC	7.3 A	
	0.4KW x 4P	1.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	1.4 A	
C2.8 TON	5.0KW x 4P	9.6 A	1 DRAVE	SS-30	3 SEC	1 SEC	9.6 A	
	1.5KW x 4P	3.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.4 A	
C3 TON	5.5KW x 4P	9.6 A	1 DRAVE	SS-30	3 SEC	1 SEC	9.6 A	
	1.5KW x 4P	3.4 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.4 A	
C5 TON	5.5KW x 6P	12.9 A	1 DRAVE	SS-30	3 SEC	1 SEC	12.9 A	
	1.0KW x 6P	3.1 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.1 A	
C7.5 TON	5.5KW x 6P	12.9 A	1 DRAVE	SS-30	3 SEC	1 SEC	12.9 A	
	1.0KW x 6P	3.1 A	1 DRAVE	SS-05	3 SEC	1 SEC	3.1 A	
C10 TON	9.0KW x 8P	20.6 A	1 DRAVE	SS-30	3 SEC	1 SEC	20.6 A	
	1.1KW x 8P	4.0 A	1 DRAVE	SS-05	3 SEC	1 SEC	4.0 A	

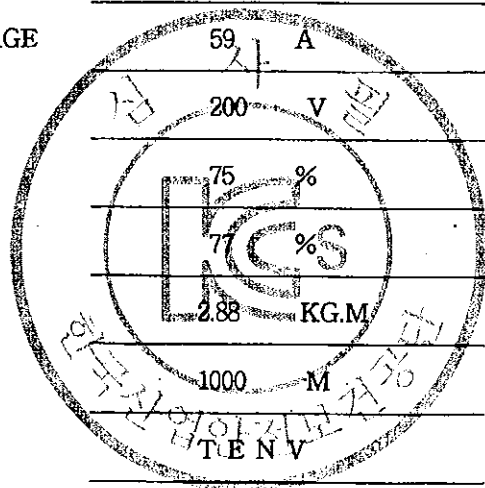
NOTE

1. 상기 TABLE의 수치는 권고 SETTING 수치이며 MOTOR의 특성 및 현장 조건에 따라 변경 가능함.

THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

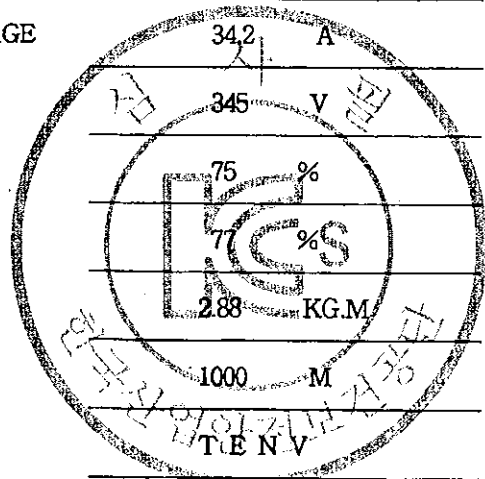
1. SERVICE	HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	112 S
4. RATED POWER	2.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	10 A
12. STARTING CURRENT AT RATED VOLTAGE	59 A
13. MINIMUM STARTING VOLTAGE	200 V
14. EFFICIENCY AT 100% RATED LOAD	75 %
15. POWER FACTOR AT 100% RATED LOAD	77 %
16. STARTING TORQUE	2.88 KG.M
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6206zz OPL : 6206zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

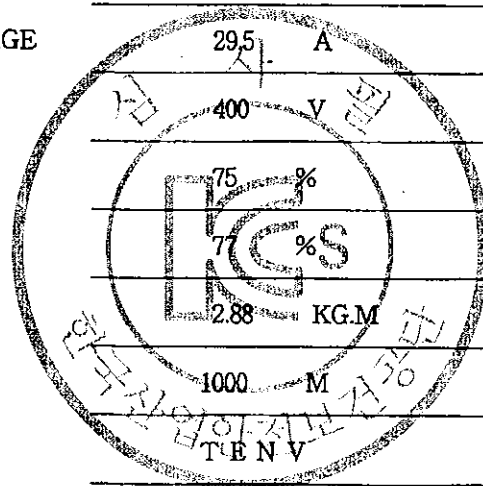
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2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	112 S
4. RATED POWER	2.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPEATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	5.8 A
12. STARTING CURRENT AT RATED VOLTAGE	34.2 A
13. MINIMUM STARTING VOLTAGE	345 V
14. EFFICIENCY AT 100% RATED LOAD	75 %
15. POWER FACTOR AT 100% RATED LOAD	77 %S
16. STARTING TORQUE	2.88 KG.M
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6206zz OPL : 6206zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPERATURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

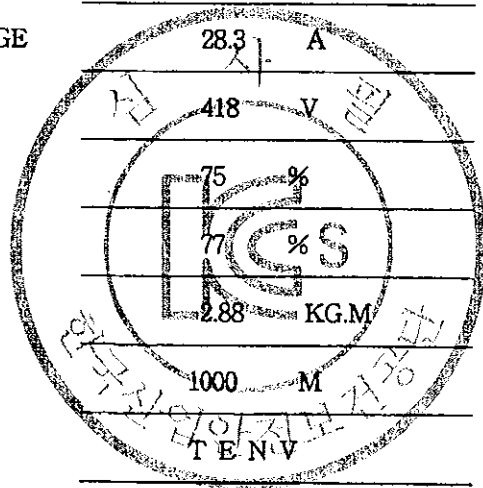
1. SERVICE	HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	112 S
4. RATED POWER	2.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	5.0 A
12. STARTING CURRENT AT RATED VOLTAGE	29.5 A
13. MINIMUM STARTING VOLTAGE	400 V
14. EFFICIENCY AT 100% RATED LOAD	75 %
15. POWER FACTOR AT 100% RATED LOAD	77 %S
16. STARTING TORQUE	2.88 KGM
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6206zz OPL : 6206zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

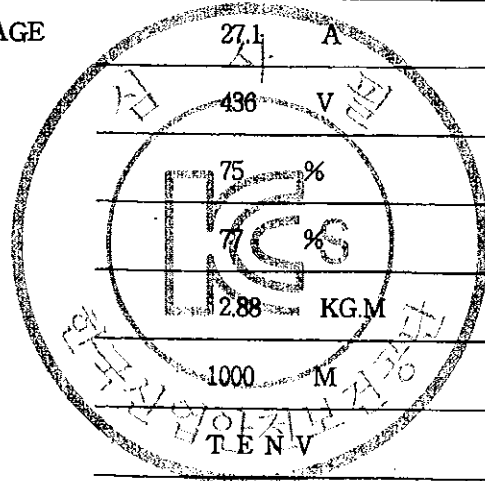
1. SERVICE	HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	112 S
4. RATED POWER	2.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	460 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	4.8 A
12. STARTING CURRENT AT RATED VOLTAGE	28.3 A
13. MINIMUM STARTING VOLTAGE	418 V
14. EFFICIENCY AT 100% RATED LOAD	75 %
15. POWER FACTOR AT 100% RATED LOAD	77 % S
16. STARTING TORQUE	2.88 KG.M
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	T E N V
19. TYPE OF BEARING	PL : 6206zz OPL : 6206zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPERATURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

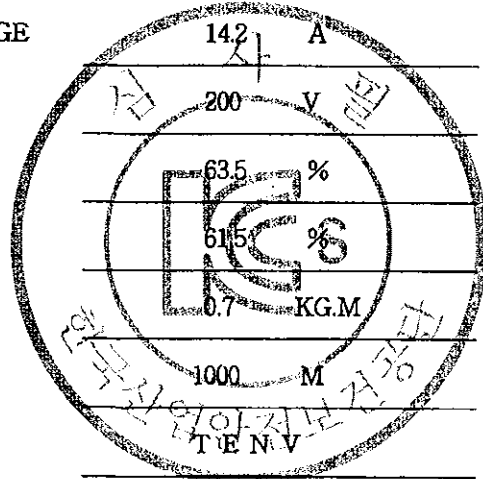
1. SERVICE	HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	112 S
4. RATED POWER	2.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	480 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	4.6 A
12. STARTING CURRENT AT RATED VOLTAGE	27.1 A
13. MINIMUM STARTING VOLTAGE	436 V
14. EFFICIENCY AT 100% RATED LOAD	75 %
15. POWER FACTOR AT 100% RATED LOAD	77 %
16. STARTING TORQUE	12.88 KG.M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6206zz OPL : 6206zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

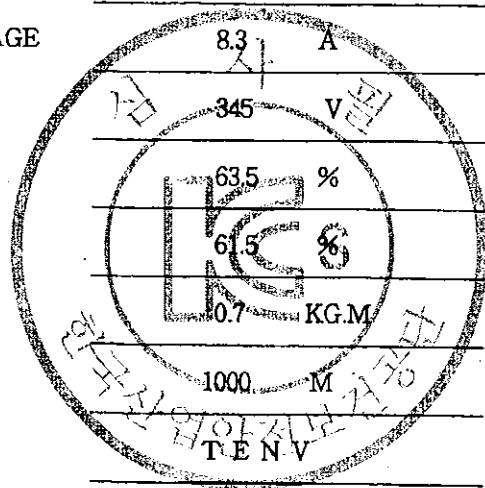
1. SERVICE	CREEP HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	2.7 A
12. STARTING CURRENT AT RATED VOLTAGE	14.2 A
13. MINIMUM STARTING VOLTAGE	200 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KG.M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXMUM AMBIENT TEMPORE/ 2011-04-25 17:55:00	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

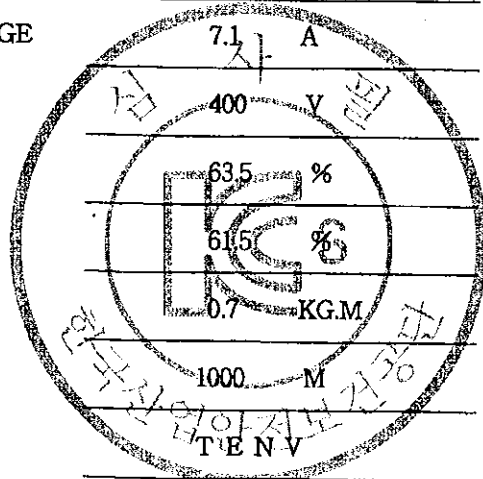
1. SERVICE	CREEP HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.6 A
12. STARTING CURRENT AT RATED VOLTAGE	8.3 A
13. MINIMUM STARTING VOLTAGE	345 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KG.M
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

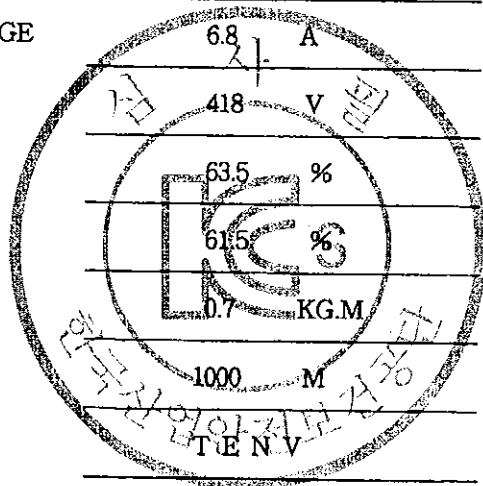
1. SERVICE	CREEP HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.4 A
12. STARTING CURRENT AT RATED VOLTAGE	7.1 A
13. MINIMUM STARTING VOLTAGE	400 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KG.M
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXMUM AMBIENT TEMPORE/ 2011-04-25 17:55:00	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

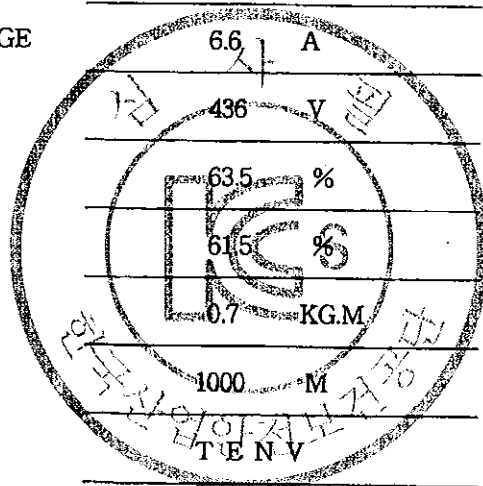
1. SERVICE	CREEP HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	460 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.3 A
12. STARTING CURRENT AT RATED VOLTAGE	6.8 A
13. MINIMUM STARTING VOLTAGE	418 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TIE N V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

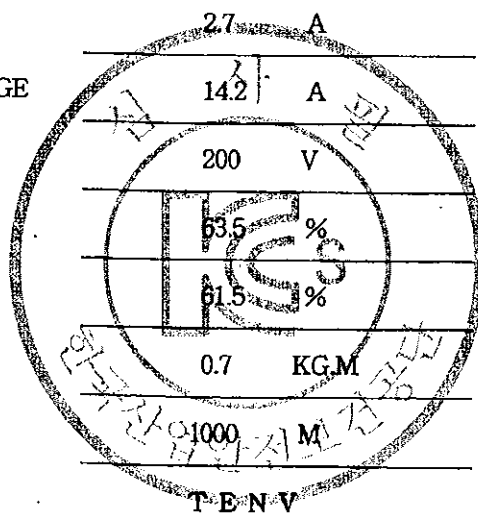
1. SERVICE	CREEP HOISTING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	480 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.2 A
12. STARTING CURRENT AT RATED VOLTAGE	6.6 A
13. MINIMUM STARTING VOLTAGE	436 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KG.M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

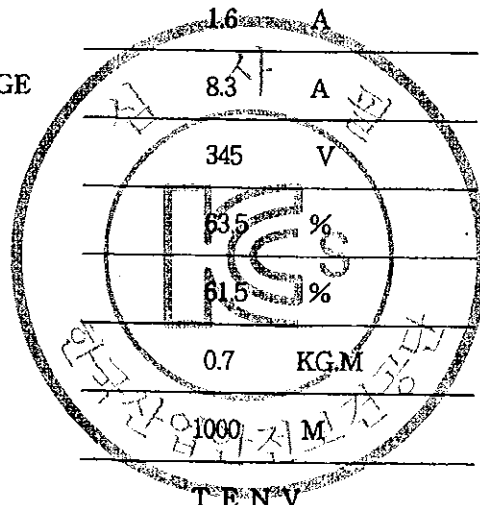
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	2.7 A
12. STARTING CURRENT AT RATED VOLTAGE	14.2 A
13. MINIMUM STARTING VOLTAGE	200 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KGM
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

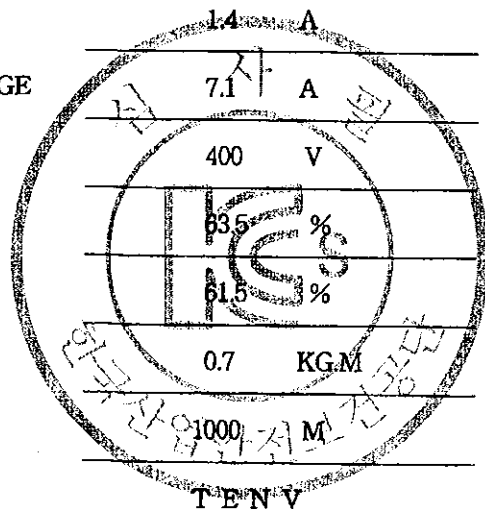
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.6 A
12. STARTING CURRENT AT RATED VOLTAGE	8.3 A
13. MINIMUM STARTING VOLTAGE	345 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	T E N V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

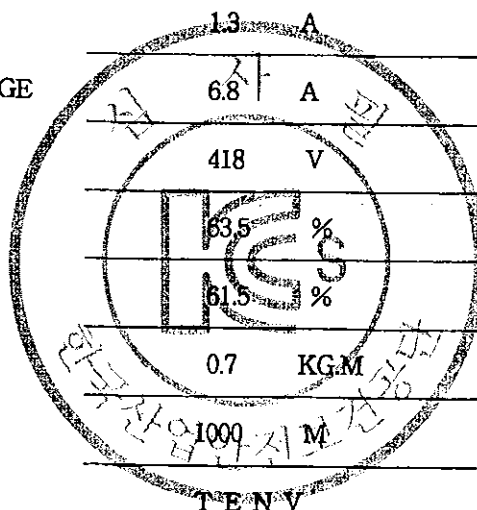
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.4 A
12. STARTING CURRENT AT RATED VOLTAGE	7.1 A
13. MINIMUM STARTING VOLTAGE	400 V
14. EFFICIENCY AT 100% RATED LOAD	83.5 %
15. POWER FACTOR AT 100% RATED LOAD	81.5 %
16. STARTING TORQUE	0.7 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

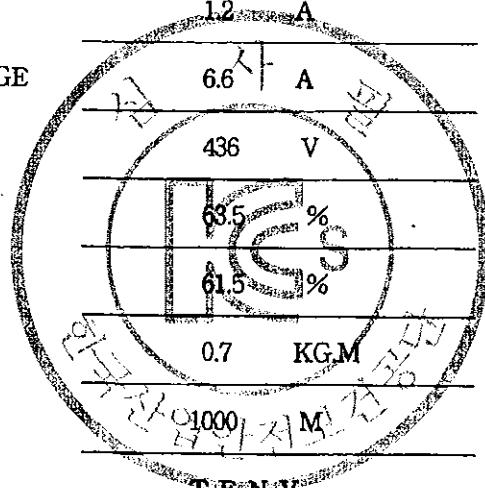
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2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	460 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	1.3 A
12. STARTING CURRENT AT RATED VOLTAGE	6.8 A
13. MINIMUM STARTING VOLTAGE	418 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

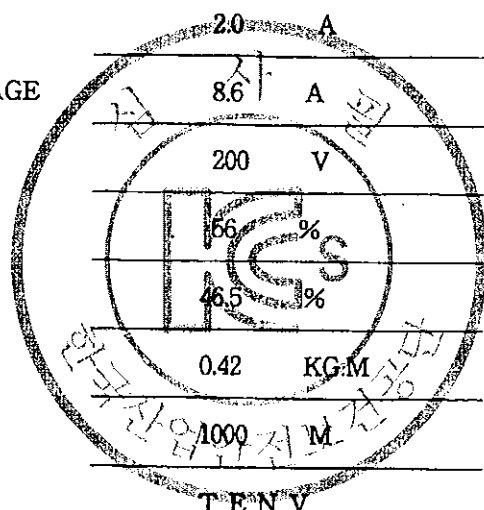
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.4 KW x 4 P
5. RATED VOLTAGE AND FREQUENCY	480 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1692 RPM
11. FULL LOAD CURRENT	12 A
12. STARTING CURRENT AT RATED VOLTAGE	6.6 A
13. MINIMUM STARTING VOLTAGE	436 V
14. EFFICIENCY AT 100% RATED LOAD	63.5 %
15. POWER FACTOR AT 100% RATED LOAD	61.5 %
16. STARTING TORQUE	0.7 KG.M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	T E N V
19. TYPE OF BEARING	PL : 6205zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.2 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	220 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1128 RPM
11. FULL LOAD CURRENT	2.0 A
12. STARTING CURRENT AT RATED VOLTAGE	8.6 A
13. MINIMUM STARTING VOLTAGE	200 V
14. EFFICIENCY AT 100% RATED LOAD	56%
15. POWER FACTOR AT 100% RATED LOAD	46.5%
16. STARTING TORQUE	0.42 KG-M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	T E N V
19. TYPE OF BEARING	PL : 6202zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE

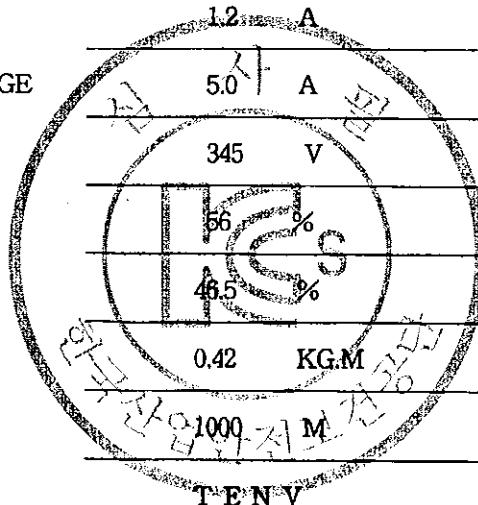


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THREE PHASE INDUCTION MOTOR DATE SHEET

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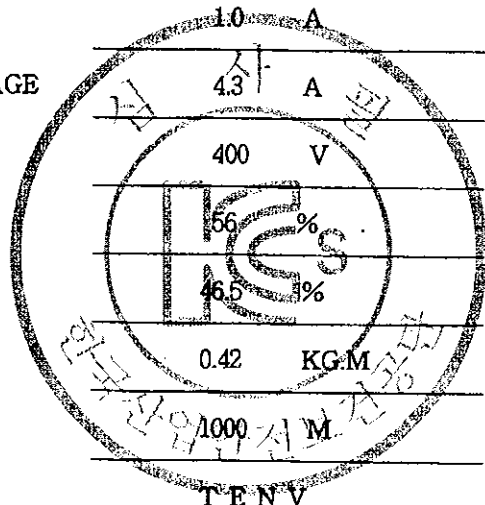
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.2 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	380 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1128 RPM
11. FULL LOAD CURRENT	12.3 A
12. STARTING CURRENT AT RATED VOLTAGE	5.0 A
13. MINIMUM STARTING VOLTAGE	345 V
14. EFFICIENCY AT 100% RATED LOAD	56 %
15. POWER FACTOR AT 100% RATED LOAD	46.5 %
16. STARTING TORQUE	0.42 KGM
17. SITE ALTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6202zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

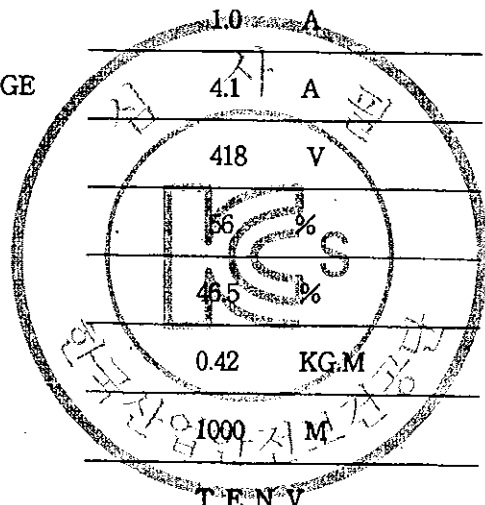
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.2 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	440 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATting	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1128 RPM
11. FULL LOAD CURRENT	10 A
12. STARTING CURRENT AT RATED VOLTAGE	4.3 A
13. MINIMUM STARTING VOLTAGE	400 V
14. EFFICIENCY AT 100% RATED LOAD	56 %
15. POWER FACTOR AT 100% RATED LOAD	46.5 %
16. STARTING TORQUE	0.42 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TENV
19. TYPE OF BEARING	PL : 6202zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

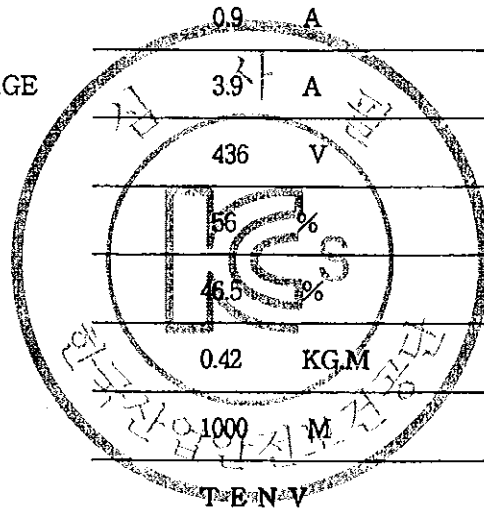
1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.2 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	460 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1128 RPM
11. FULL LOAD CURRENT	1.0 A
12. STARTING CURRENT AT RATED VOLTAGE	4.1 A
13. MINIMUM STARTING VOLTAGE	418 V
14. EFFICIENCY AT 100% RATED LOAD	56 %
15. POWER FACTOR AT 100% RATED LOAD	46.5 %
16. STARTING TORQUE	0.42 KG.M
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6202zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE



THREE PHASE INDUCTION MOTOR DATE SHEET

SCHEDULE OF TECHNICAL DATA

1. SERVICE	TRAVERSING
2. MANUFACTURE	극동호이스트(주)
3. FRAME NUMBER	80
4. RATED POWER	0.2 KW x 6 P
5. RATED VOLTAGE AND FREQUENCY	480 V 60 Hz
6. MOTOR TYPE	SQUIRREL CAGE ROTOR TYPE
7. SERVICE FACTOR AND RATTING	1.0 , 30 MIN
8. LOCATION AND INSULATION CLASS	INDOOR, OUTDOOR, B CLASS
9. DESIGN TRMPERATURE RISE(BY RESISTANCE)	80 ℃
10. FULL LOAD SPEED	1128 RPM
11. FULL LOAD CURRENT	0.9 A
12. STARTING CURRENT AT RATED VOLTAGE	3.9 A
13. MINIMUM STARTING VOLTAGE	436 V
14. EFFICIENCY AT 100% RATED LOAD	56 %
15. POWER FACTOR AT 100% RATED LOAD	46.5 %
16. STARTING TORQUE	0.42 KGM
17. SITE ALTTITUDE(UNDER)	1000 M
18. ENCLOSURE & COOLING METHOD	TEN V
19. TYPE OF BEARING	PL : 6202zz OPL : 6204zz
20. MOUNTING	HORIZONTAL
21. MAXIMUM AMBIENT TEMPURE	40 ℃
22. BEARING LUBRICATION	GREASE
23. STARTING METHOD	FULL VOLTAGE





CERT NO. 200703WRU59900

DATE Oct. 26, 2010

MILL TEST CERTIFICATE

THIS IS TO CERTIFY THAT THE MATERIAL DESCRIBED BELOW WAS MANUFACTURED
IN ACCORDANCE WITH KISWIRE LTD SPECIFICATION AND APPLICABLE SECTIONS

OF KSD 3514 - 2002 (B Grade)

TO MESSRS

MATERIAL DESCRIPTION UNGALVANIZED STEEL WIRE ROPE

06 X 19 (SL) + FC 1000 M X 5 REEL

EX NO. 1W4264

ORDER NO. REEL NO. 1 ~ 5 SAMPLING NO. 1

DIAMETER OF ROPE 6.000 mm TYPE OF CORE Fiber Core

SPECIFIED BREAKING LOAD 20.90 kN SAMPLE BROKE AT 26.78 kN

WT. OF ZINC COATING OF OUTER WIRE MIN. 0.000 g/m²

ROPE LAY RHRL LAY LENGTH 38.6 mm

LUBRICATION A-2

CHEMICAL ANALYSIS OF WIRE ROD

CHARGE NO.	C X 100	Si X 100	Mn X 100	P X 1000	S X 1000
SA51859	72	21	69	14	

DATE OF SAMPLE TEST Jan. 21, 2010

Approved by Q.C Manager H.S. SONG
KISWIRE LTD., KOREA



KS



JIS



API



ABS



KR



NK



GLloyd's



DNV



LR



BV