



Global Leader Preparing for the Future
KDA

 **KDA** KUK DONG AUTOMATION CO., LTD



(주)극동자동화 회사소개서

New Way of Thinking
New Wave Technology

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KDA corporation prepares for the Future



1) 대표이사 인사말

안녕하십니까.?

저희 (주) 극동자동화는 1979년 창립한 (주)극동의 자동화 사업부를 모태로 포항제철(현 POSCO)등 유수의 기업과 거래를 시작하였습니다.

이후 극동으로부터 분리하여 1991년 창사 이래 공장자동화 설비 제조, 산업용 기계 및 금형제작 분야를 영위하여 삼성 SDI 주식회사의 주요 협력업체로 성장해 왔으며 2003년 시스템 사업부를 설립하여 선박엔진부품사업부와 함께 극동자동화의 미래를 개척하고 있습니다.

특히 시스템 사업부는 기존 가지고 있던 설계, 시스템 구축, 생산, 기술 경험 등을 바탕으로 2004년 현대중공업의 선박에 필요한 CCTV시스템을 선박용으로 CCTV 하우징을 개발 후 제품화하여 사업을 시작하였습니다.

이후 축적된 설계,구매, 생산, 기술을 기반으로 현대엔지니어링을 비롯한 국내외 유수의 EPC사 및 Shipbuilder들과 협력하여 국내외 플랜트 시장 및 선박 시장에서 CCTV 시스템 시장에서 선도적인 위치를 견지하여 왔습니다. 이러한 경험을 바탕으로 보안 시스템과 커뮤니케이션 시스템에도 사업 영역을 새롭게 확장하며 국내외 EPC 시장에 진출하게 되었습니다.

저희는 많은 국내외 프로젝트의 경험을 쌓아가며 선박 및 해양 프로젝트와 해외플랜트 시장의 System Integration 분야에서 기존의 해외 업체들과의 경쟁에서도 뒤지지 않은 한국 토종기업으로서 각광받고 있습니다.

앞으로도 당사는 고객의 만족과 신임을 받는 기업으로 더욱 경쟁력 있는 제품을 공급할 수 있도록 최선을 다해 나가겠습니다.

이상열 배상
(주) 극동자동화 대표이사

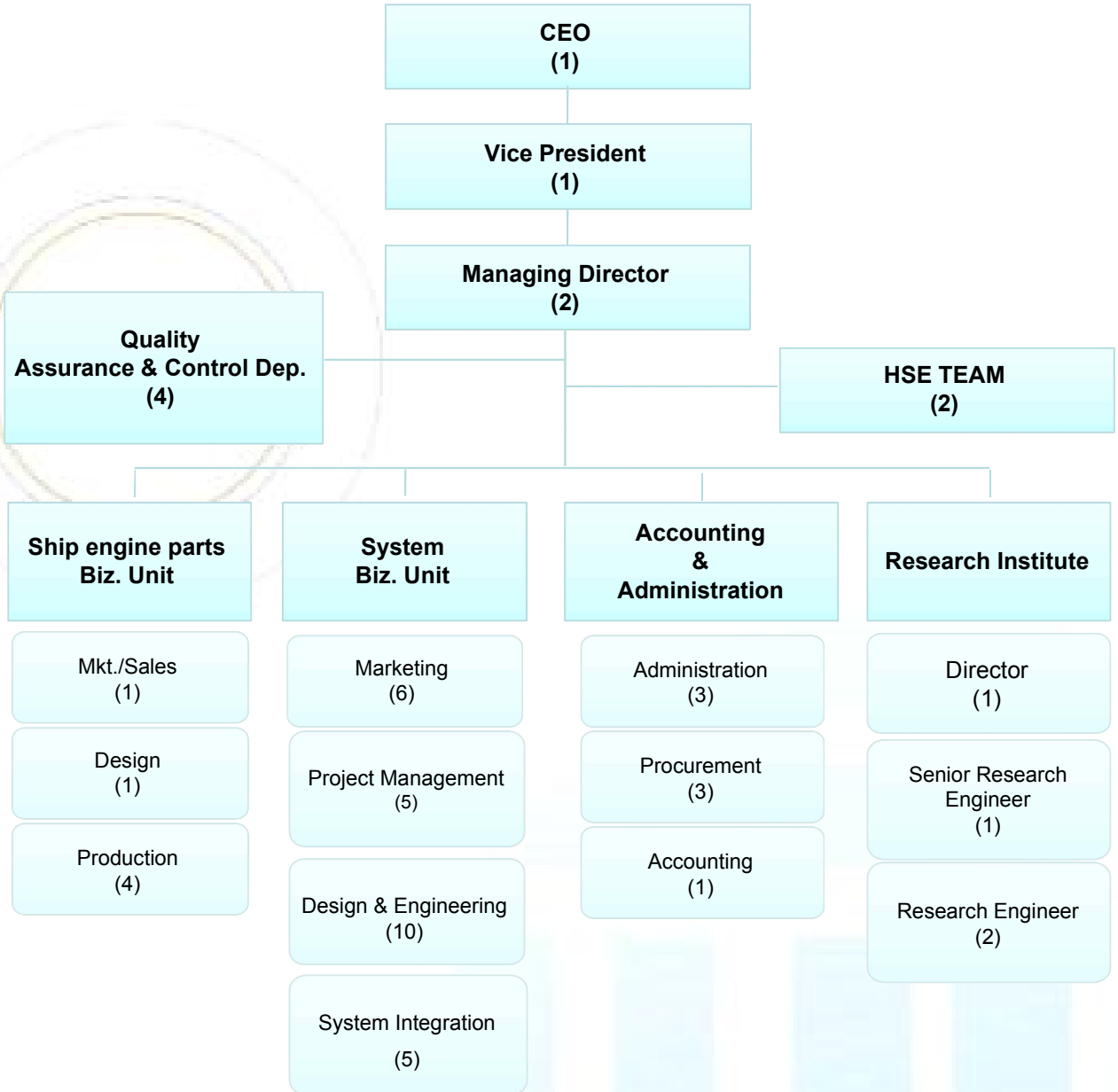
2) 회사 현황

회사명	 KDA (주) 극동자동화
본사	울산광역시 북구 숙보로 27 번지 Tel. 052-288-8885 / Fax. 052-288-7123
서울 영업소	서울시 용산구 만리재로 202 풀림 아이원 709호 Tel. 02-3273-8885
설립연도	1991년 2월 1일
대표이사	이상열
사업영역	정보통신공사, CCTV 제조, 선박엔진부품 제작 외
공장면적	2,485 m ² (267,480ft)
주요고객사	조선해양 현대중공업, 삼성중공업, STX 조선해양, 성동 조선해양 
	건설사 현대엔지니어링, 현대건설, 한화건설, 삼성물산, 대림산업, 대우건설, 한국전력, STX중공업, 두산중공업, SK건설, GS건설 
임직원	60명
연간 매출액	166억원
관계회사	(주)극동, (주)동아기업



3) 회사 주요연혁

2017	<ul style="list-style-type: none"> •KNPC 발주처 Approved Vendor 등록 •KONEX 상장
2016	<ul style="list-style-type: none"> •ISO 9001, 14001, OHSAS 18001 갱신
2015	<ul style="list-style-type: none"> •MMS(SAUDI) 와 에이전트 협약 •ICT(Kuait) 와 에이전트 협약 •Auditors Report(2012~2015)
2014	<ul style="list-style-type: none"> •Rajab&Sililah(SAUDI) 와 에이전트 협약 • STX 중공업 협력업체 등록
2012	<ul style="list-style-type: none"> •방폭 CCTV Housing ATEX 인증 • TAKREER 발주처 Approved Vendor 등록 •대림산업 협력업체 등록 •삼성엔지니어링 협력업체 등록
2011	<ul style="list-style-type: none"> •K-CAN, UAE와 에이전트 협약
2010	<ul style="list-style-type: none"> •BOSCH KOREA 대리점 취득 •ISO 14001 인증 •OSHAS 18001 인증
2009	<ul style="list-style-type: none"> •EMDAD LLC., UAE와 에이전트 협약
2008	<ul style="list-style-type: none"> •삼성중공업 협력업체 등록 •현대엔지니어링 협력업체 등록 •현대건설 협력업체 등록
2007	<ul style="list-style-type: none"> •CCTV System Lloyd Register's Type Approval 획득 •한화건설 협력업체 등록
2006	<ul style="list-style-type: none"> •성동조선 조선기자재 공급업체 등록. •CISCO 에이전트 협약
2005	<ul style="list-style-type: none"> •Cooperation Agreement with VT and Sollink USA •Saudi Aramco Project 수행
2004	<ul style="list-style-type: none"> •ISO 9001 인증 •선박용 CCTV System 국산화 (IP66/67/68 인증) •현대중공업 협력업체 등록
2003	<ul style="list-style-type: none"> •시스템 사업부 설립
1991	<ul style="list-style-type: none"> •극동자동화 설립





1) 해외 플랜트 SI 사업분야

해외 플랜트 통신 및 보안 시스템 통합 사업에서 당사는 시스템 설계 및 엔지니어링, 시스템 조립, 공급, 통합구축, 시운전, 감리, 준공 검사 이후 시스템 운영자 교육, 유지 보수 업무 등 전반적인 통합 솔루션을 제공합니다.

- *System Design & Engineering*
- *Commissioning, Start-up, Training*
- *System Integration, Supply, Fabrication*
- *Factory Acceptance Test (FAT)*
- *Manufacture*
- *Site Acceptance Test (SAT)*

System Integration

CCTV (Closed Circuit Television)
ACS (Access Control System)
FIDS (Fence Intrusion Detection System)
MIDS (Micro Wave Intrusion Detection System)

LAN (Local Area Network)
WAN (Wide Area Network)

PA (Public Address)
Paging
Intercom

KDA
 Security &
 Telecommunication

TEL (Telephone System)
PABX
IP-PBX

Radio
Master Clock

Meteorological
Etc.



2) 선박 및 해양 SI 사업분야

선박 건조와 해양플랫폼 생산에서 CCTV, 통신 시스템 사업에서 당사는 시스템 설계 및 엔지니어링, 시스템 조립, 공급, 시스템 통합 구축과 시운전, 공장/선주 검사이후 시스템 운영 교육 및 유지보수 업무 등 통합 솔루션을 제공합니다.

- *System Design & Engineering*
- *System Integration, Supply, Fabrication*
- *Manufacture*
- *Commissioning, Start-up, Training*
- *Factory Acceptance Test (FAT)*
- *Site Acceptance Test (SAT)*

System Integration

CCTV (Closed Circuit Television)
- AWP70 , AW70 , EXP 60 , EXP 70
ACS (Access Control System)

DNS (Data Network System)
VSAT (Very Small Aperture Terminal)
Microwave system

PA (Public Address)
GA (General Alarm)

KDA
Security &
Telecommunication

TEL (Telephone System)
- Analog , Digital , IP
Sound Powered Telephone

Radio
Master Clock

Navigation system

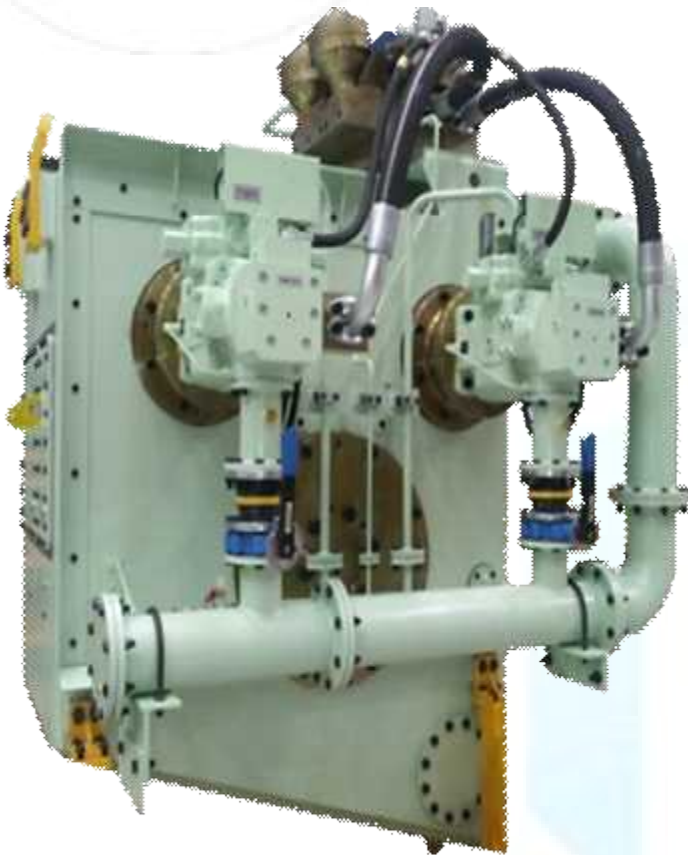


3) 선박엔진부품분야

MAN DIESEL의 전자식 ME 엔진의 시스템 오일 유압을 생성시키는 장치 모듈인 H.P.S를 생산 , 엔진 연소 시 발생하는 진동을 상쇄시키는 부품인 CHAIN WHEEL을 생산합니다.

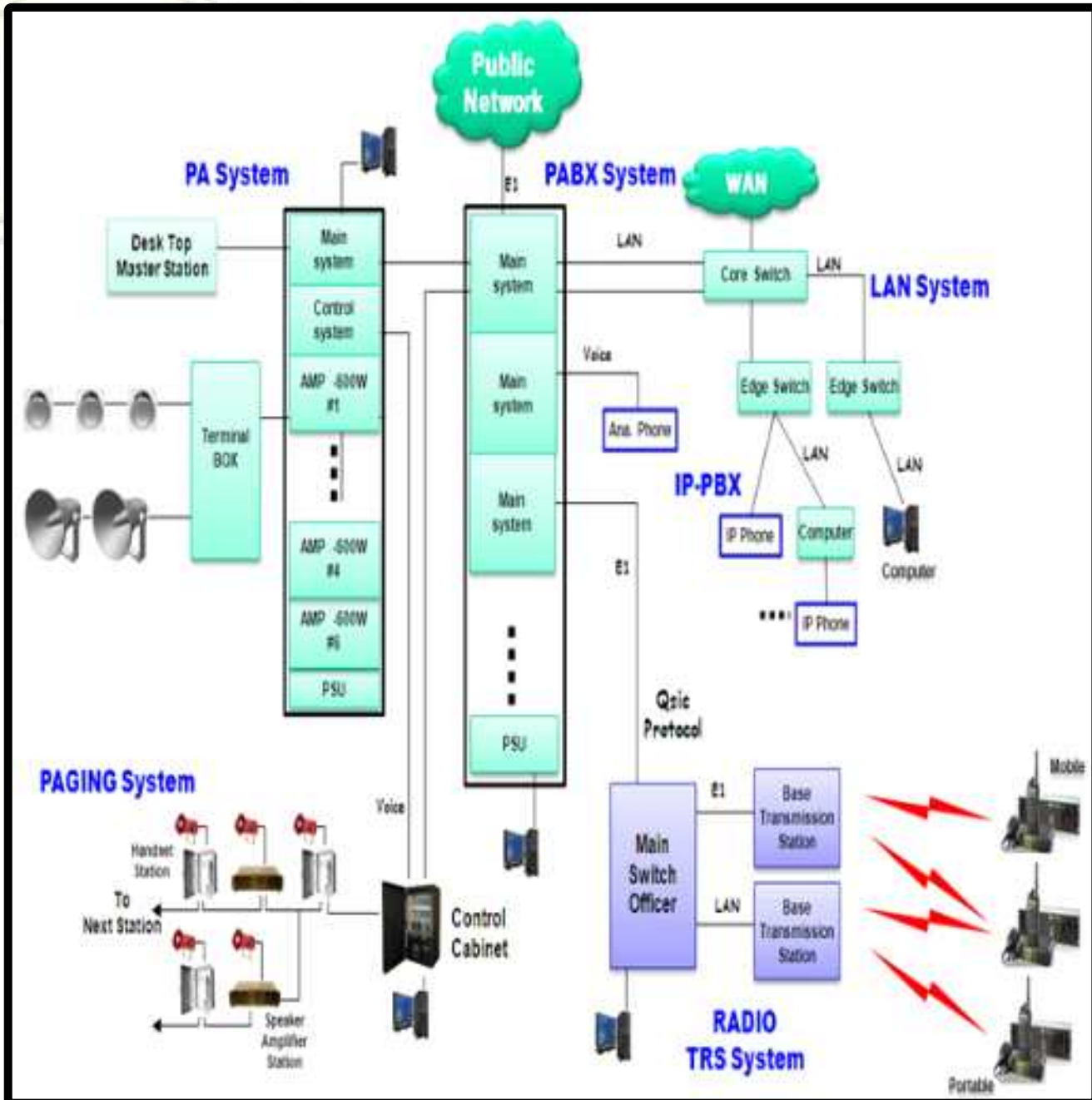
● *H.P.S(Hydraulic Power Supply)*

● *Chain Wheel*



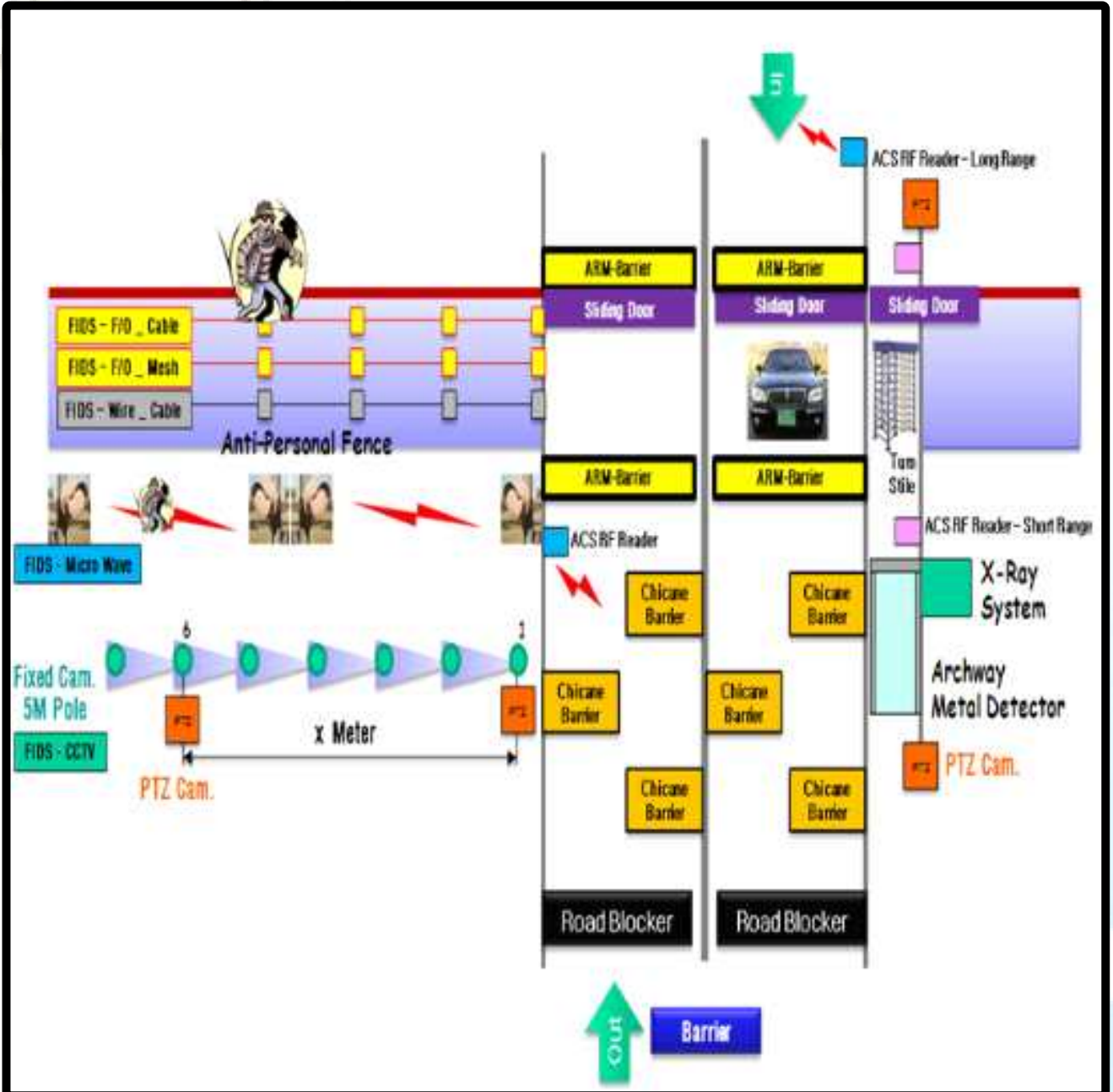
1) Communication System

네트워크 시스템(Lan System)과 플랜트 내외부 전화를 사용할 수 있는 전화 시스템 (Tel System) 또한 플랜트 방송 시스템(PA/GA System)과 직통전화(Hotline), 경고 방송 시스템(Siren System), 무선통신 시스템(Radio System)을 의미하며, 개별 시스템 운영 및 통합 운영할 수 있게 시스템 구성 및 공급합니다.



2) Security System

플랜트에서 보안시스템은 허가된 인원 및 차량 통행을 위한 출입통제 시스템을 구축하며 외부침입에 대한 보안, 내부 화재 등 긴급 상황에 대한 감시, 보안을 위해 CCTV 시스템, 무단침입 방지 시스템(FIDS,MIDS)을 구축, 상호 연동 및 통합 운영 시스템을 공급하며, 개별 시스템 운영 및 통합 운영할 수 있게 시스템 구성 및 공급합니다.



3) 선박 CCTV System

선박 CCTV 시스템은 선박 내외부 상시 감시 및 통합 관제를 위한 수단으로 해상 규정에 적합한 제품, 해상 환경으로 고려한 제품을 직접 제조하여 공급합니다. 당사 공급 제품으로는 고정형, 회전형 카메라, 방폭 카메라가 있으며, 이 카메라 들은 통합 관제시스템 및 운항시스템과 연동 구축 및 개별 운영시스템으로 구성 및 공급합니다.



System		협력사
Tele communication	LAN	CISCO, HP
	IP-PBX	AASTRA, CISCO, SIEMENS
	PABX	AASTRA(ERICSSON), ALCATEL, SIEMENS, NEC
	PA	BOSCH, GAI-TRONICS, FEDERAL SIGNAL, INDUSTRIAL
	INTERCOM	COMMEND
	RADIO TRS	MOTOROLA, TAINET, SIMOCO, AASTRA
	PAGING	GAI-TRONICS, GUARDIAN, SPECTOR LUMENEX
	SCS	ADC KRONE, PANDUIT, R&M, SYSTIMAX
	CABINET	RITTAL
	GPS CLOCK	MASTER CLOCK, WHARTON
Security	CCTV	KDA , BOSCH, PELCO, VIDEOTEC, HONEYWELL, SAMSUNG, COEX
	FIDS	SOUTHWEST MICROWAVE, MAGAL, SENSTA R STELLAR, FFT
	ACS	BOSCH, APOLLO, HONEYWELL, IDTECK, HID
	ROAD BLOCKER	FRONTIER-PITTS, FAAC, MCS, OPTIMA
Meteorological Observation	SENSOR	VAISALA, AADI
	DATA LOGGER	VAISALA, AADI, CAMPBELL SCI
Navigation	RADAR	FURUNO
	ECDIS	
	Weather Fax	
	Navigational Echo	
	Sonar	



1) 공사실적 (2017~2015)

2016

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Song-Hau 1 Thermal Power Plant	Vietnam	SH1PP and LILAMA	DHIC	1.3 M	Communication System
Jeddah South TPP Project	Saudi	SEC	HHI	5.6 M	Security System
Shuqaiq Steam Power Plant Project	Saudi	SEC	HHI	4.4 M	Security System
Karabatan Utility Power Plant Project	Kazakhstan	Karabatan Utility Solutions	DHIC	1 M	Communication & Security System
SAFI IPP Project	Morocco	SAFI ENERGY COMPANY	DWEC	709 K	Security System
(Youngnam Combined Cycle Power Plant Project)	Korea	Korea Southern Power CO., Ltd	DWEC	25 K	Communication System

2015

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Rabigh 2 Independent Power Project	Saudi Arabia	ALMOURJAN Electricity Production Company	SCNT	1.1 M	Communication
Algeria Mega Deal CCPP	Algeria	Société Algérienne de Production de l'Electricité	SCNT	1.1 M	Communication
ASC Phase VI	Indonesia	P.T. Asahimas Chemical	HDEC	130 K	Communication
New FBC Boiler (#10) Project	Korea	Hyundai Oil Bank	HHI	170 K	Communication & Security
Jordan IPP 1 10Mw PV Power plant	Jordan	ARABIA ONE	HQC	150 K	CCTV

▶FAT, SAT and Commissioning at site for every system respectively was performed by KDA.

1) 공사실적(2014~2013)

2014

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Algeria SCPP	Algeria	Sodiete Algerienne de Production de l'Electricite	HENC	1.0 M	Communication & Security
Az Zour North IWPP	Kuwait	Shamal Az-Zour Al-Oula K.S.C	HHI	1.3 M	Communication & Security
Ma'aden Gold	Saudi Arabia	Ma'aden Phosphate Company	HENC	1.4 M	Communication
Garraf Gas Treatment Unit	Iraq	Petronas	STX	1.38 M	Communication
Jazan Refinery & Terminal Package No.14	Saudi Arabia	Aramco	HENC	900 K	Communication & Security

2013

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Ghana Takoradi T2	Ghana	Takoradi	KEPCO E&C	940 K	Communication & Security
Petroamazonas	Ecuador	Petroamazonas EP'	HHI	230 K	Security
Ghana Takoradi T1	Ghana	Takoradi	KEPCO E&C	35 K	Communication & Security
HDO NEW FBC#9	Korea	Hyundai Oil Bank	HHI	172 K	Security
YANBU_MED	Marafiq	SEC	DHIC	42 K	Communication

▶FAT, SAT and Commissioning at site for every system respectively was performed by KDA.

1) 공사실적(2012~ 2011)

2012

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Bangladesh Gas Compressor	Bangladesh	Gas Transmission	HEC	220 K	Communication
Tihama POS	Saudi Arabia	Saudi Aramco/ Tihama Power Generation	HHI	340 K	Communication
EMPP Panama	Panama	Autoridad	HHI	115 K	Communication
RPPN2	Saudi Arabia	SEC	DOOSAN	930 K	Communication & Security
KOTC	Kuwait	KOTC	HENC	900 K	Communication & Security
Ma'aden Rolling Mill	Saudi Arabia	Ma'aden	SECL	3.5 M	Communication & Security
KNPC	Kuwait	KNPC	DAELIM	250 K	Communication
UONE-LBO	UAE	Takreer	HEC	250 K	Communication

2011

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Marafiq MED (Desalination Unit 10 & 11)	Saudi Arabia	Marafiq Power and Water Utility Company	DHIC	50 K	Communication & Access Control System
Jaramajo 140MW Diesel Power Plant	Equador	Equitatis S.A.	HHI	250 K	CCTV System
Marafiq STG Unit 5 & 6, 550MW	Saudi Arabia	Marafiq Power and Water Utility Company	HENC	1.1 M	Communication & Access Control System
New FBC Boiler #8	Korea	Hyundai Oil Bank	HHI	230 K	Communication & CCTV System

▶FAT, SAT and Commissioning at site for every system respectively was performed by KDA.

1) 공사실적(2010~2009)

2010

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Riyadh PP11 IPP , 2000MW	Saudi Arabia	Dhuruma Electricity Company	HHI	1.0 M	Security System
Samra Power Station Phase-III Simple Cycle	Jordan	Samra Electric Power Generating Company	HENC	650 K	Communication System
Sabiya Combined Cycle Gas Turbine	Kuwait	Ministry of Electricity & Water	HHI	10.7 M	Communication & Security System

2009

Project name	Location	End User	Contractor	Contract Amount(\$)	Description
Al-Dur Independent Water and Power	Bahrain	Al-Dur Power and Water Company B.S.C	HHI	700 K	CCTV & Security
Al-Dur Independent Water and Power	Bahrain	Al-Dur Power and Water Company B.S.C	HHI	2.0 M	Communication
Al-Dur Independent Water and Power	Bahrain	Al-Dur Power and Water Company B.S.C	HHI	250 K	Meteorological
SIPCO 160MW Combined Cycle Co-Generation	Thailand	Siam Power Generation Public Company Limited	HEC	700 K	Communication

▶FAT

by KDA.

AW-70 / AW-70T Weather Proof Fixed type

● Mechanical Specification

Market

PLANT, MARINE, TRAFFIC

Function

PTZ, WIPER, PUMP

Specification

IP66

(Front)
(Rear)
(Side)

Radius of Rotation : 750 mm

● Specification

Feature	AW-700	AW-70T
● Camera	1/4 Type Super HAD II CCD Powerful 40X Optical zoom & 12X digital zoom High Resolution of 670TV Lines Variable Motion Detection Min illumination 0.6Lux @ F1.6 (Color) E-Flip, Mega Art, Black & White, Mirror image, Color Enhancement	13mm lens -FOV : 34°(H) × 28°(V) 7.5 to 13.5μm spectral range IP & Analog Video Output D1, 4CIF, Q-Native, CIF, QCIF streaming Resolutions Auto AGC, Manual AGC, etc IEC60068-2-27
● Materials	Stainless Steel (SUS-316L)	
● Input Power	AC220V, 60Hz	
● Power Consumption	50W	
● Temperature	25°C to +70°C	
● Weight	About 6Kg	
● Dimension	182(W) × 158(H) × 500(D)mm (without Wiper)	
● Protection	IP66	

TEL +82 52 288 6208 / FAX +82 52 288 7123 / E-mail. kdamk@kda.kr / www.kda.kr

AWP-70 / AWP-70T Weather Proof PTZ type

● Mechanical Specification

Market

PLANT, MARINE, TRAFFIC

Function

PTZ, WIPER, PUMP

Specification

IP66

Feature

-13mm lens-FOV: 34°(H) × 28°(V)
-7.5 to 13.5 μm spectral range
-IP & Analog Video Output
-D1, 4CIF, Q-Native, CIF, QCIF streaming Resolutions
-Auto AGC, Manual AGC, etc
-IP66
-IEC60068-2-27

(Front)
(Side)

Radius of Rotation : 750 mm

● Specification

Feature	AWP-70	AWP-70T
● Camera	1/4 Type Super HAD II CCD Powerful 40X Optical zoom & 12X digital zoom High Resolution of 670TV Lines Variable Motion Detection Min illumination 0.6Lux @ F1.6 (Color) E-Flip, Mega Art, Black & White, Mirror image, Color Enhancement	13mm lens -FOV : 34°(H) × 28°(V) 7.5 to 13.5μm spectral range IP & Analog Video Output D1, 4CIF, Q-Native, CIF, QCIF streaming Resolutions Auto AGC, Manual AGC, etc IEC60068-2-27
● Materials	Stainless Steel (SUS-316L)	
● Pan / Tilt	Angle / Pan : 0° to 350°, Tilt : -90° to +90°	
● Input Power	AC220V, 60Hz	
● Power Consumption	80W	
● Temperature	-25°C to +70°C	
● Weight	About 25kg	
● Dimension	370(W) × 427(H) × 521(D)mm	
● Protection	IP66	

TEL +82 52 288 6208 / FAX +82 52 288 7123 / E-mail. kdamk@kda.kr / www.kda.kr

EXP-60 (First Half Launching Soon!) Explosion Proof PTZ Camera

● Mechanical Specification

Market

PLANT, MARINE, TRAFFIC

Function

PTZ, WIPER, PUMP

Option

WIPER, PUMP

Certification

IP66, IEC60068-2-27

Classification Society

CCPS, IEC, ATEX, FM, UL, CSA, CE, CCC, GOST, etc.

(Front)
(Side)

Radius of Rotation : 600 mm

● Specification

● Protection Class	Ex II 2 G Exd IIC T6 Gb, IP66 / IP67
● Ambient Temperature Range	-40°C ≤ Ta ≤ +65°C
● Electric Ratings	220VAC, 80W, 50Hz/60Hz
● Material	SUS 316L
● PTZ Housing Speed (Variable Speed)	1000rpm × 15/50 × 1/60 = 5rpm
● PAN, Tilt Angle & Speed	PAN : Endless, Tilt : +90° / Speed : 20°/sec (PTZ 1 Rev : 12/sec)
● Cable Gland	M25 / Cable Dia. : 17.5~22
● Weight	39kg
● Camera Module	

● Description

The integrated camera station, EXP60 is explosion proof camera station for use in the extremely hazardous area.

The camera housing and pan/tilt drive are integrated as an assembly and maintenance-free.

Internal cabling via slip ring with low electrical noise offers high performance and quality of camera picture and reduces maintenance cost.

Reduce DC motors for pan and tilt driver has reliable life cycle.

Electro polished stainless steel construction provides anti-explosive stylish exterior and reliable lifecycle.

The EXP-60 is applicable for maritime offshore or onshore explosive hazardous area.

For all weather auto fan and heater with thermostat is employed for the operational temperature and the construction is designed for water and dust proof/IP66, Explosion proof certified for zone I & II, Class II, group B and temperature T6 (Ex dIB T6)

TEL +82 52 288 6208 / FAX +82 52 288 7123 / E-mail. kdamk@kda.kr / www.kda.kr

EX-70 Explosion Proof Fixed Camera

● Mechanical Specification

Market

PLANT, MARINE, TRAFFIC

Function

WIPER, PUMP

Option

WIPER, PUMP

Certification

IP66, IEC60068-2-27

Classification Society

CCPS, IEC, ATEX, FM, UL, CSA, CE, CCC, GOST, etc.

(Front)
(Side)

● Specification

● Material	Electro-polished Stainless steel 316L
● Weight	15kg
● Explosion Class	Ex II 2 G Ex d IIC T6 Gb
● Operating Temperature	-40°C ≤ Ta ≤ 65°C
● Ingress Protection	IP66 / IP67
● Power Requirements	110~230Vac 50/60Hz
● Power Consumption	Max 45W
● SIZE	470L × 200H × 200W
● CABLE FITTING	Ex Cable Gland M25x1.5, NPT 1/4"
● OPTION	WIPER, WASHER PUMP, CAMERA MODULE

● Description

The integrated camera station, EX-70 is explosion proof camera station for use in the extremely hazardous area.

- This explosion flarproof camera EX-70 can be installed in Hazardous Area(IEC60079, Zone1, Zone2) and designed and manufactured with Stainless steel 316L material using for Oil & Gas, Marine and Industrial Markets.
- EX-70 is receiver built-in type CCTV, therefore junction box is not required for additional receiver.
- Wiper module and washer pump can be installed on EX-70 as option items and illustrated as follows.

TEL +82 52 288 6208 / FAX +82 52 288 7123 / E-mail. kdamk@kda.kr / www.kda.kr

Pan/Till Receiver (KRX-1006)



- Remote Control Pan/Tilt/Zoom Receiver
- Support RS-485 / I2C Protocol
- Support Sensing-T & Servo Valsa Control Protocol
- Compact Size Built in camera housing

Specification	
Format	RS-485 / I2C Protocol
Camera Part	Basic Model: 4000 / 1080i Low
	Resolution: 1280 (Dn) / 720
Camera Interface	Protocol: Servoing-T (RS-485), Servo Valsa Protocol (I2C), Low (RS-232)
	Basic Rate: 9,600 / 38,400 bps
	Modulation: RC-485 or TTL (RS-232)
IP Address	1 ~ 127
IP Control	Switch Type: Relay Type (Relay breaker Switch)
	Output: Relay Output / 220 VAC (Max 2A)
Control Mode	Support Function: Pan, Left, Right, TR Up, Down, Pan, Tilt, Water Pump, Light
Control Logic	Input: Water DC Motor, Direction Controlled / 12 VDC (Max 2A)
	Output: Magnetic Hall Sensor (for Water Motor, Hydraulic Sensor)
Power	Input: 220 VAC ± 10% / 60 Hz
	Output: 12 VDC / 1.25A (Max 15W)
Dimension	100 x 107 x 50mm (W x H x D)
Weight	about 110 g
Operating Temp	-40°C to +70°C

Acoustic Hood (KDA-AH-001)

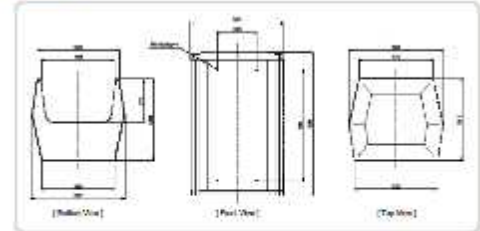


Key Features

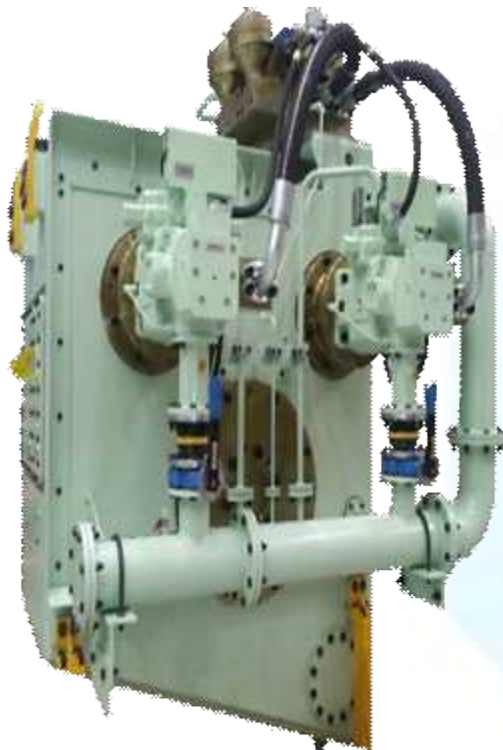
- High Quality Acoustic Panel (99% Noise Absorption)
- Sound Absorb up to 25 dB(A)
- Waterproof
- Completely maintenance free (3A and corrosion resistant)
- Standard color : Yellow (RAL 1018)
- Optional colors available
- Can be used both indoor, outdoor and offshore



Dimension



KDA Corp. Automation Co., Ltd.
10, Buissons, Bongsu, Buan, Namwon
Jeollabuk-do, Korea





DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 21666-2008-AQ-KOR-RvA

This is to certify that

KDA CO., LTD.

816-6, Hyomun-dong, Buk-gu, Ulsan, Korea
(27, Sukbo-ro, Buk-gu, Ulsan, Korea)

has been found to conform to the Management System Standard:
ISO 9001:2008, KS Q ISO 9001:2009

This Certificate is valid for the following product or service ranges:
**Design, Development, Manufacture, Installation and Maintenance of
Security & Communication System Integration for Onshore and Offshore**

<p><i>Initial Certification date:</i> February 4th, 2005</p> <p><i>This Certificate is valid until:</i> December 27th, 2016</p> <p><i>The audit has been performed under the supervision of</i></p>  <p>Young-Keun Kim <i>Lead Auditor</i></p>	<p><i>Place and date:</i> Seoul, December 13th, 2013</p> <p><i>for the Accredited Unit:</i> DNV CERTIFICATION B.V., THE NETHERLANDS</p>  <p>In-Kyoon Ahn <i>Management Representative</i></p>
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Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DET NORSKE VERITAS CERTIFICATION B.V. Zwolsweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 688 - www.dnvba.com



DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 90482-2010-AE-KOR-RvA

This is to certify that

KDA CO., LTD.

816-6, Hyomun-dong, Buk-gu, Ulsan, Korea
(27, Sukbo-ro, Buk-gu, Ulsan, Korea)

has been found to conform to the Management System Standard:
ISO 14001:2004, KS I ISO 14001:2009

This Certificate is valid for the following product or service ranges:
**Design, Development, Manufacture, Installation and Maintenance of
Security & Communication System Integration for Onshore and Offshore**

<p><i>Initial Certification date:</i> December 27th, 2010</p> <p><i>This Certificate is valid until:</i> December 27th, 2016</p> <p><i>The audit has been performed under the supervision of</i></p>  <p>Young-Keun Kim <i>Lead Auditor</i></p>	<p><i>Place and date:</i> Seoul, December 13th, 2013</p> <p><i>for the Accredited Unit:</i> DNV CERTIFICATION B.V., THE NETHERLANDS</p>  <p>In-Kyoon Ahn <i>Management Representative</i></p>
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Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DET NORSKE VERITAS CERTIFICATION B.V. Zwolsweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 688 - www.dnvba.com



DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 90481-2010-HSO-KOR-DNV

This is to certify that

KDA CO., LTD.



816-6, Hyomun-dong, Buk-gu, Ulsan, Korea
(27, Sukbo-ro, Buk-gu, Ulsan, Korea)

has been found to conform to the OH & S Assessment Series Standard:
OHSAS 18001:2007

This Certificate is valid for the following product or service ranges:
**Design, Development, Manufacture, Installation and Maintenance of
Security & Communication System Integration for Onshore and Offshore**

<p><i>Initial Certification date:</i> December 27th, 2010</p> <p><i>This Certificate is valid until:</i> December 27th, 2016</p> <p><i>The audit has been performed under the supervision of</i></p>  <p>Young-Keun Kim <i>Lead Auditor</i></p>	<p><i>Place and date:</i> Seoul, December 13th, 2013</p> <p><i>for the Accredited Unit:</i> DNV CERTIFICATION LTD. KOREA</p>  <p>In-Kyoon Ahn <i>Management Representative</i></p>
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Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
DNV BUSINESS ASSURANCE KOREA LTD., KYUNG BLDG., 1, JONG-RO, JONGNO-GU, SEOUL, 110-714, KOREA, TEL: +82 27273790 - www.dnvba.kr

DET NORSKE VERITAS EC-TYPE EXAMINATION CERTIFICATE

[2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC

[3] EC-Type Examination Certificate Number: **DNV 12 ATEX 1609X**

[4] Equipment or Protective System: **Explosion proof CCTV Housing**

[5] Applicant - Manufacturer or Authorized representative: **KDA CO., LTD.**

[6] Address: **816-6, Hyomun-dong, Buk-gu, Ulsan, Korea**

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential reports listed in section 14.

[9] Compliance with the Essential Health and Safety Requirements has been assessed by compliance with:
EN 60079-0: 2009 and EN 60079-1: 2007


[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.


[12] The marking of the equipment or protective system shall include the following:

Ex II 2 G Ex d IIC T5 Gb -40°C ≤ Ta ≤ +65°C

Høvik, 2012-11-08
for Det Norske Veritas AS




Haknon Knudsen
Certification Manager



Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The digitally signed and electronically distributed document is the original and valid certificate. URL: www.dnv.com/digitalcertificates

DET NORSKE VERITAS AS VERITAVEBEN 1, 1363 HØVIK, NORWAY TEL: (+47) 67 57 88 00 FAX: (+47) 67 57 88 01



REGISTRATION & PRE-QUALIFICATION STATUS BY TAKREER

16-APR-2012 14:12 FROM FOU TAKREER TO 96318181 P.001/001

TAKREER
شركة التطوير للمقاولات
We Refine Right

FACSIMILE MESSAGE

To : Mr. EMDAD - LLC. Fax No: 6318181
Attn: Chief Executive Officer Abu Dhabi

From : Procurement Support Department Manager Fax No: 6027442

Abu Dhabi Oil Refining Company (TAKREER)
P.O. Box 388 - Tel: 9712-3827000 - Abu Dhabi, U.A.E.

Ref. No.: TK/LS/009/FSC/012 Date: 14 APR 2012
Subject: REGISTRATION & PRE-QUALIFICATION STATUS

This has reference to the Pre-qualification Document of your Principal Mr. Kuk Dong Automation Co Ltd (KDA) - Korea, submitted by you as a Manufacturer. Please be informed that based on the evaluation, the above principal has been included in TAKREER records as a possible source for supply of the following products:

- > System Integration - Telecom Only
- > System Integration - CCTV Only

Please note that at the time of release of equipment, a further short listing takes place based on exhibited invent at that time and the specifics of material /equipment in question as the need may be.

You are advised to quote your Principal's Registration No.907266 in all future correspondence.

Regards,
Husain Al Hoshoni

If you do not receive all the pages, please call Telephone : (9712) 6027479 No. of pages to follow:

Confidentiality Notice: This file is Confidential. If you are not the intended recipient, please notify us immediately. You should not copy the file or use it for any purpose or disclose its contents to any other person. Thank you. 9712-3827000-3827000

TOTAL P.001

شركة البترول الوطنية الكويتية
KNPC
أحد شركات مؤسسة البترول الكويتية
A Subsidiary of National Petroleum Corporation

VENDORS & CONTRACTORS EVALUATION COMMITTEE (V & CEC)

M.S. KDA CO. LTD. DATE: 02/02/2017
#816-6 HYO MOON-DONG, BUK-GU REF: V/C-C2125-17-0134L
ULSAN 683360 REPUBLIC OF KOREA FILE NO: C.2125

SUBJECT: CONTRACTOR APPROVAL

GENTLEMEN,
REFERENCE TO THE ABOVE SUBJECT, PLEASE NOTE THAT YOUR COMPANY IS APPROVED AS A CONTRACTOR EFFECTIVE 02/02/2017 FOR THE FOLLOWING TYPE(S) OF WORK(S) FOR KNPC REFINERIES:

KD 250 Million - 500 Million	KD 100 Million - 250 Million	KD 30 Million - 100 Million	KD 10 Million - 30 Million	KD 1 Million - 10 Million	KD 250,000 - 1 Million	KD 50,000 - 250,000
						7 15A5
						7 22A4

THE COMPANY (CONTRACTOR) CODE ALLOCATED TO YOUR COMPANY IS 1003409.
PLEASE ENSURE TO QUOTE THE ABOVE CODE AND FILE NO. ON ALL OF YOUR FUTURE CORRESPONDENCE.

OUSSAMA H. SHAMMAS
CHAIRMAN - V & CEC

NOTE: APPROVAL EXPIRY: 02/02/2022

GE INTERNATIONAL INC.
HYUNDAI HEAVY INDUSTRIES CO., LTD.

CERTIFICATE OF CONFORMITY

Project : Engineering, Procurement, Construction, Operation and Maintenance of Combined Cycle Gas Turbine Project at Sabiya Power Station
Project Company : Ministry of Electricity & Water
EPC Contractor : Hyundai Heavy Industries Co.,Ltd.
Vendor : KDA Co.,Ltd. (Kuk Dong Automation Co.,Ltd.)
System : CCTV System

For KDA Co., Ltd.

Scope of Supply
Manufacture, Material supply, Commissioning, Training and Documentation for the CCTV System

We undersigned, hereby certify that the materials supplied and delivered as describe above are fully in compliance with the followings :

1. All goods have been manufactured, tested and inspected in accordance with the requirements of the MEW specification documents and drawings.
2. All dimensions in the approved drawing have been strictly followed during manufacturing the goods.
3. During SAT Inspection and Commissioning there are no more errors and the system functionalities are under perfect.

By:
Name: Mahamed gelain Mohamed
Title: I am a engineer
Company: M.G.W
Date: 26.6.2012

KDA

mouchel

Mr Chung-Kyu Lee
Project Manager
Hanwha Engineering & Construction Corp
Hanwha Bldg #1
Janggyodong, JungGu
Seoul 100-797
Korea.

Contact: Jorge (Jordi) van Engelen
Tel: 00965 2575 1868
Fax: 00965 2575 1870
E-mail: Jordi.vanengelen@mouchel.com

Your Ref: HENC-MCHL-LT-0548 Our Ref: 722148/ML-HEC/6.2/JE/11650
31st January 2012

Dear Sir,

Subject: Um Al Aish LPG Filling Plant
Contract Ref: L.P.G/PRD-J-01/2009
Client Approval – Communication Systems


Reference to your approval request as per the letter in reference, and further to the vendor qualification information submitted per e-mail on January 16th 2012, kindly be advised that KDA, South Korea Communication Systems, is approved vendor for the above mentioned scope of work.


Yours faithfully

mouchel
P.O.Box: 26835
Safat 13123, Kuwait
Tel: +965 57511668


Jorge (Jordi) van Engelen
Project Manager - Design
For and on behalf of Mouchel

Encl: None
CC: Eng. Yousef Al Khamis KOTC
Eng. Ahmed Al Bidan KOTC

Certificate of Conformity, Saudi Aramco 3rd Party Co-generation Program



الذماميل (سأف)
Saudi Aramco



TIHAMA
Power Generation Co., Ltd.

CERTIFICATE OF CONFORMITY


Project : Saudi Aramco 3rd Party Cogeneration Program
Project Company : TIHAMA Power Generation Co., Ltd.
EPC Constructor : HYUNDAI Heavy Industries Co., Ltd.
Vendor : KDA (Kuk Dong Automation Co., Ltd.)
Plant : Uthmaniyah Gas Plant

For KDA Co., Ltd.


Scope of Supply
A manufacture, supply, commissioning, training and document of Security and CCTV System

We undersigned, hereby certify that the materials supplied and delivered as describe above are fully in compliance with the followings:

1. All goods have been manufactured, tested and inspected in accordance with the requirements of the specification of the document and drawing.
2. All dimensions in approved drawing have been strictly followed in manufacturing the goods.
3. There are no known hidden flaws or defects in the system through SAT and commissioning.

By: 

Name: SARABD GUPTA
Title: C&I Engineer
Company: Tihama Power
Date: 18/oct/2005



106 of 119

감사합니다.

Global Leader Preparing for the Future

KDA

 **KDA** KUK DONG AUTOMATION CO., LTD

Lloyd's
Register

