



www.daeyang.co.kr



### **Daeyang Electric**

### **HEAD OFFICE / LIGHTING DIVISION**

245, Jangpyeong-ro, Saha-gu, Busan, Korea Tel +82-51-200-5213, 5214, 5284, 5315 Fax +82-51-200-5210, 5310

### **Central R&BD Centre**

36, Magokjungang-ro, Gangseo-gu, Seoul, Korea Tel +82-2-3458-7602 Fax +82-2-3458-7609

### **R&D CENTER**

45-10, Noksansandan 261-ro 14beon-gil, Gangseo-gu, Busan, Korea Tel +82-51-200-5462, 5485 Fax +82-51-200-5499

### **SI DIVISION**

45-16, Noksansandan 261-ro 14beon-gil, Gangseo-gu, Busan, Korea Tel +82-51-200-5401~5408 Fax +82-51-204-1991

### **SENSOR DIVISION**

16, Venture-ro 100beon-gil, Yeonsu-gu, Incheon, Korea Tel +82-32-830-5515 Fax +82-32-830-5509

## **Affiliated Companies**

### **DAEYANG INSTRUMENT Co.,LTD**

45-10, Noksansandan 261-ro 14beon-gil, Gangseo-gu, Busan, Korea Tel +82-51-200-9720, 9721, 9722 Fax +82-51-200-9719

### **DAEYANG ELECTRIC SUPPLY Co.,LTD**

233, Dusong-ro, Saha-gu, Busan, Korea Tel +82-51-414-9937 Fax +82-51-414-9940



## HISTORY OF DAEYANG



|                                   | 1977 | 05 | DAEYANG Electric Co., Ltd. founded.   |
|-----------------------------------|------|----|---|
|                                   | 1977 | 12 | Designated as manufacturer of marine electric equipment by Ministry of Commerce and Industry.             |
|                                   | 1984 | 04 | Moved main office & factory to current location. (Shinpyong, Busan)                                       |
| Organization                      | 1985 | 09 | Selected as an "Excellent Exporting Company" by the Korea Development Bank.                               |
| Financial Status                  | 1988 | 03 | Established an affiliated company, DAEYANG Instrument Co.,Ltd.  |
| Certification                     | 1988 | 12 | DAEYANG R&D center founded.   |
| Major Product                     | 1989 | 01 | Established an affiliated company, DAEYANG Electric Supply Co., Ltd.                                      |
| Lighting Product                  | 1990 | 11 | Selected as a defense industry company by the Ministry of National Defense                                |
|                                   | 1992 | 03 | Signed a technical license agreement with WITT & SOHN, Germany  |
| Communication & Navigation system | 1994 | 03 | Certified by BASEEFA for explosion proof lighting equipment   |
| Switchboard &                     | 1995 | 80 | Nominated as one of the most prominent medium-sized enterprises with advanced                             |
| Console                           |      |    | technologies by ministry of commerce and industry   |
| Rolling Stock                     | 1996 | 12 | Certified by LRQA for ISO 9001- DAEYANG Electric Co., Ltd.  |
| Equipment                         | 2000 | 07 | Selected by "Small & Medium Business Administration" for "Venture Company"                                |
| UUV                               | 2001 | 11 | Awarded the "Bronze Tower Order" for contribution to industry by Ministry of Commerce,                    |
| MDV                               |      |    | Industry and Energy Awarded the "Export Tower" by Ministry Awarded the                                    |
| Sensor                            |      |    | "Leading Company" by Ministry of commerce, Industry and Energy  |
|                                   | 2002 | 11 | Certified by LRQA for ISO 9001-2000   |
| Performance<br>Track Records      |      |    | DAEYANG Electric Co., Ltd. & DAEYANG Instrument co., Ltd.   |
| Worldwide                         | 2003 | 02 | Selected as a "National Manufacture Research Center" by Korean Ministry of Commerce, Industry and Energy. |
| Service Network                   | 2003 | 09 | Completed the development of Goniometer   |
| Worldwide<br>Sales Network        | 2004 | 06 | Certified by BASEEFA 2001 ATEX for explosion proof lighting equipment.                                    |
|                                   | 2004 | 09 | Completed the development WICS (Wireless Interior Communication System)                                   |
|                                   | 2005 | 05 | Expanded & moved Noksan factory for Fan & Ventilation Division  |
|                                   |      |    |   |



## **HISTORY OF DAEYANG**



|                                   | 2006 06 | Certified as "INNO-BIZ" company by Small and Medium Business Administration (SMBA)         |
|-----------------------------------|---------|--|
|                                   | 2006 11 | Co-developed with KORDI an Unmanned Underwater Vehicle(UUV) for deep sea                   |
|                                   |         | exploration at 6,000m depth in the ocean successfully                                      |
| Organization                      | 2007 01 | Established design research center for interior lighting equipment of cruise in Seoul      |
| Financial Status                  | 2007 02 | Completed the development of LED flat lighting equipment                                   |
| Certification                     | 2007 05 | Certified by IECEx for explosion proof lighting equipment                                  |
| Major Product                     | 2007 07 | Certified by LCIE with ATEX ex for explosion proof lighting equipment                      |
| Lighting Product                  | 2008 07 | Completed the development of new explosion proof lighting equipment for onshore            |
| Lighting Froduct                  | 2008 11 | Certified by LRQA for ISO 14001-DAEYANG Electric Co., Ltd.                                 |
| Communication & Navigation system | 2008 12 | Developed new Tactical Integrated Communication System(ADICS-21)                           |
| Switchboard &<br>Console          | 2010 09 | Designated as "Defence Industry Equipment" on the ADICS-21 by goverment                    |
|                                   | 2010 11 | Award '30 Million US Dollar Export Award' at 47th Export Day.                              |
| Rolling Stock                     | 2010 12 | Certified by LRQA for OHSAS 18001  |
| Equipment                         | 2011 01 | KHNP(KOREA HYDRO & NUCLEAR POWER CO.,LTD) Approved Vendor                                  |
| UUV                               | 2011 07 | Flotation on the stock exchange (Listed on KOSDAQ)   |
| MDV                               | 2011 11 | Certified by KEPIC(Korea Electric Power Industry Code)                                     |
| Sensor                            | 2012 01 | Acquired "KSB"(Korea Special Battery)  |
|                                   | 2012 07 | Completed developement of MDV(Mine Disposal Vehicle) for Korea Navy                        |
| Performance<br>Track Records      | 2012 11 | Expanded & moved R&D Center and Electric & Electronic factory to Noksan factory            |
| Worldwide                         | 2013 03 | Awarded "Industrial Service Medal" on the 47th taxpayer's day                              |
| Service Network                   | 2013 04 | Expanded & moved DAEYANG Instrument Co.,Ltd to Noksan factory                              |
| Worldwide<br>Sales Network        | 2013 08 | Certified by IECEx Service Facility(KGS)   |
|                                   | 2013 11 | Certified by The Data quality management system(Defense Agency for Technology and Quality) |
|                                   | 2014 06 | KHNP(KOREA HYDRO & NUCLEAR POWER CO.,LTD) Approved Vendor (E272A)                          |
|                                   |         | (Renewal Registration of Duration)   |



## HISTORY OF DAEYANG



|                              | 2014 09 | Certified by KOLAS for International laboratory accreditation corporation.  |
|------------------------------|---------|---|
|                              | 2014 10 | Awarded "Industry development of LED & International competitiveness improvement by minister of ministry of Trade, Industry and Energy" |
| Organization                 | 2015 05 | Certified by KEPIC(Korea Electric Power Industry Code) (E208) (J210) (Renewal Registration of Duration)                                 |
| Financial Status             | 2015 07 | Selected as a World Class 300   |
| Combisionshipm               | 2015 08 | KHNP(KOREA HYDRO & NUCLEAR POWER CO.,LTD) Approved Vendor (E208) (J210)   |
| Certification                | 2015 12 | Award `50 Million US Dollar Export Award' at 52th Export Day.   |
| Major Product                | 2016 03 | Awarded 'Exemplary Taxpayer' of Busan Metropolitan City   |
| Lighting Product             | 2016 03 | Expanded Sensor Division  |
| Communication &              | 2016 12 | Expanded SI Division  |
| Navigation system            | 2017 13 | Awarded "Korea Technology Award" by ministry of Trade, Industry and Energy  |
| Switchboard &                | 2018 12 | Awarded "Mecenat Award" by Busan Metropolitan City office of Education  |
| Console                      | 2019 05 | NET(New Excellent Technology) certified by Korean government  |
| Rolling Stock<br>Equipment   | 2019 13 | Awarded "Korean World-class Product Award 2019" for Helideck Lighting   |
|                              | 2019 12 | Awarded "Hidden Champion 100 in Materials-Components-Equipment"   |
| UUV                          |         | Awarded "The Best Employer Prize" by Busan Metropolitan City  |
| MDV                          | 2020 13 | 1 , 3, 1  |
| Sensor                       | 2021 07 | Lighting 7 Awarded "Silver medal" by EcoVadis Sustainability Rating   |
| Performance<br>Track Records | 2021 09 | Awarded 'First grade' in ESG Assessment   |
|                              | 2022 02 | CRC(Central R&BD Centre) Completion   |
| Worldwide<br>Service Network | 2022 03 | Awarded "President's Citation" at the 56th taxpayer's day   |
| Worldwide<br>Sales Network   | 2022 06 | Awarded "Gold medal" by EcoVadis Sustainability Rating  |



## **ORGANIZATION**



Number of employees 355 (2022)

History of Daeyang

Organization

Financial Status

Certification

Major Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

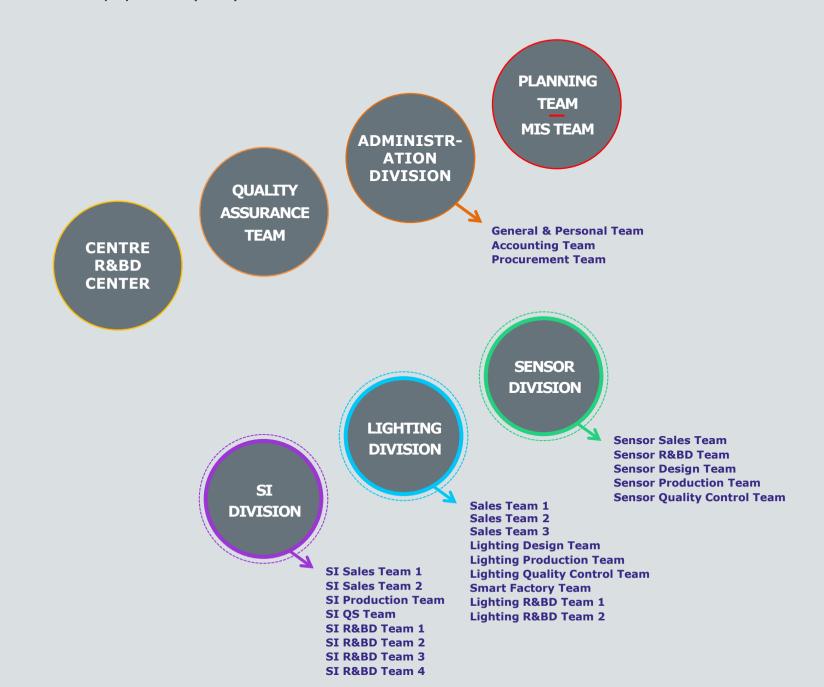
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Performance Track Records

Worldwide Service Network





## **Financial Status**



DECEMBER, 2022 (unit. Millionwon)

History of Daeyang

Organization

Financial Status

Certification

Major Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

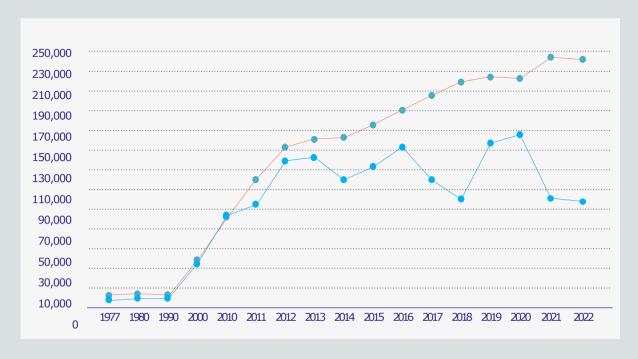
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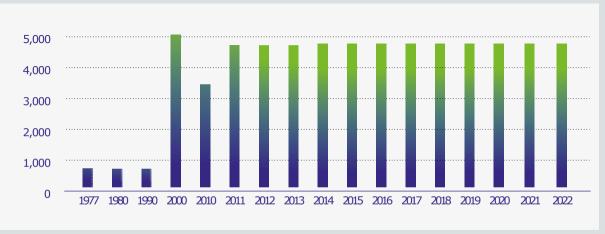
Senso

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## **Certification of Approval**



History of Daeyang

Organization

Financial Status

Major Product

Lighting Product

Communication & Navigation system

> Switchboard & Console

Rolling Stock

Track Records

Service Network

Sales Network

**2,500** Certificates (up to 1st SEP. 2022)

**ABS** UL LCIF KR Sira ΙR KGS

RV **KOSHA SERCONS** 

KRH **RINA** KTL CCS

RS DNV • GL

**INFRIS** KS KSC POLAND **IRIS** 

ISO 9001:2015

DOMS (KDS 0050-9000-4)

ISO/TS 22163:2017 IATF 16949:2016

ISO 26262:2011

IECEx CoC Certificate Service Facility

SQ (SupplierQuality)

**KOLAS** 

ISO 45001:2018 ISO 14001:2015













NAME OF TAXABLE PARTY.





## **Major Product**



History of Daeyang

Organization

Financial Status

Certification

Major Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

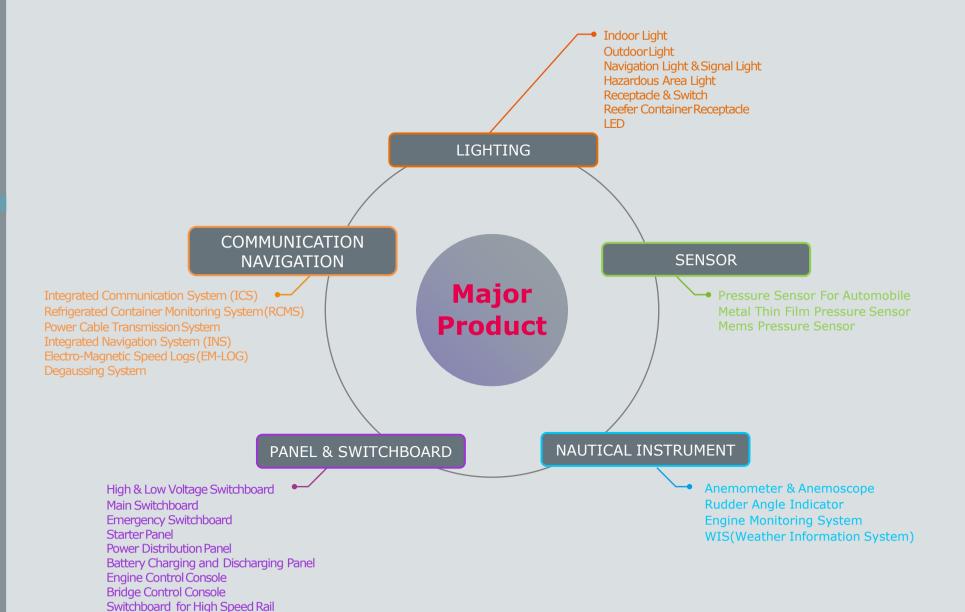
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Worldwide Service Network



www.daeyang.co.kr COMPANY PROFILE 도약2022, 달성3000

History of Daeyang

Organization

Financial Status

Certification

Maior Produc

Lighting Produc

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

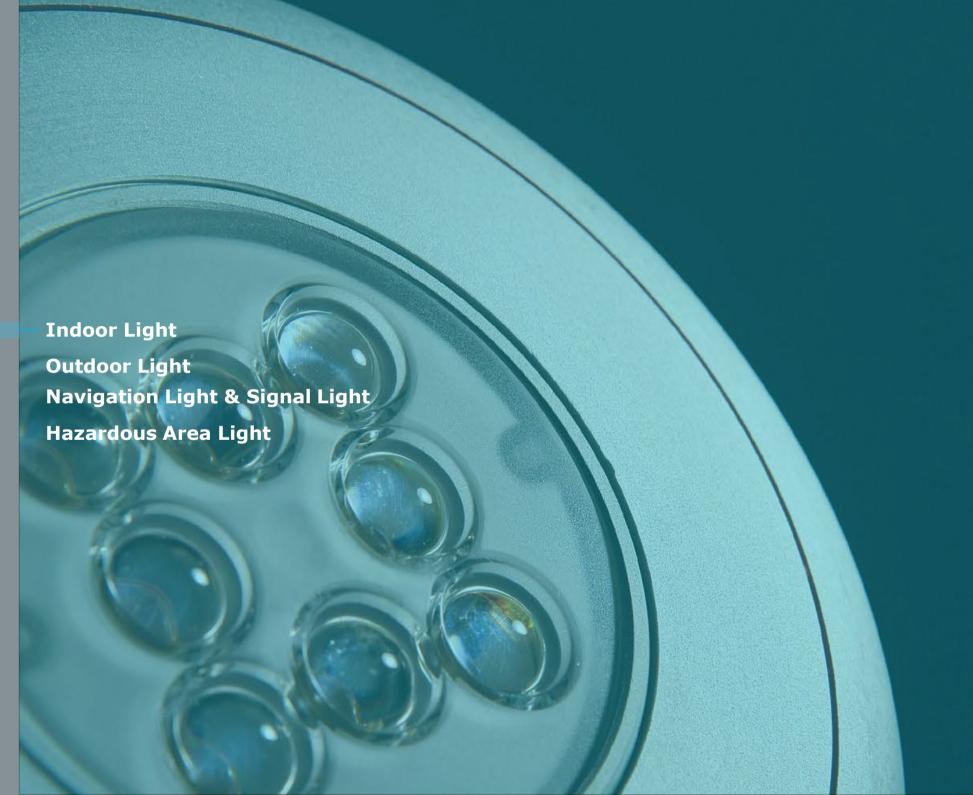
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MDV

Sensor

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Organization

Financial Status

Certification

Maior Product

Lighting Produc

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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Worldwide Service Network

> Worldwide Sales Network

## **Lighting Product**



We will continuously seek the lighting engineering based on our long experience and know-how of the lighting. We will provide the best solution for all fields of lighting, such as the industrial scenery, and environmental lighting.

- 1. Indoor Light
- 2. Outdoor Light
- 3. Navigation Light & Signal Light
- 4. Hazardous Area Light



## **Indoor Light**





**DAEYANG** 

**Outdoor Light** 



History of Daeyang

Organization

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Certification

Major Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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Worldwide Sales Network











IW-01 IS







DDS-84ABC

A2-D

A2L-DM06H

A2L-SM06H



## Hazardous Area Light

History of Daeyang

Organization

Financial Status

Certification

Communication &

Switchboard & Console

Rolling Stock

MDV

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FL-edg

FL-220/240edgBu

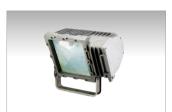
FL-220/240WFedg FL-220/240WFedgBu

FL-220/240edgG FL-220/240edgBuG









EXF-614

PF50HnRT2BSI-226UWM2

PF42SnRT2BI-226UWM2W

PF-40SBX2









EXLED-1AD

EXLED-1BD







## **Communication & Navigation system**



We continuously develop communication systems for ships; in particular

ICS (Integrated Communication Systems) for navy vessels and navigation systems such as ECDIS, EM-LOG.

**ICS** 

**ADICS-21** 

**WIRAS** 

**RCMS** 

STC

**EM-LOG** 

Organization Financial Status Certification

Lighting Product

Major Product

Switchboard & Console

Rolling Stock

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Typical Voice Terminal (MVT-35)



Typical Voice/Data Terminal (MDT-128)







Organization

Financial Status

Certification

Major Product

Lighting Product

Communication & Navigation system

Switchboard 8 Console

Rolling Stock Equipment

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## **Switchboard & Console**



- 1. Main switchboard
- 2. Emergency switchboard
- 3. Group starter
- 4. Bridge Control console
- 5. Engine control console







### 1. Main switchboard

The main switchboard is newly designed for commercial marine application. It has many advantages in design and is manufactured with compactness and ruggedness. The main switchboard is meets the requirements of classification societies such as LRS, ABS, DNV, GL, BV, NK, KR and complies with IEC439-1 (option)

### 2. Emergency switchboard

The Emergency switchboard is used for automatic start of emergency generator when power supply is the main switchboard fails. The panel consists of generator panel, feeder panel, emergency group starter panels and a shore connection box. The requirements of classification societies such as LRS, ABS, DNV, GL, BV, NK, KR be with the emergency switchboard.





Organization

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Communication & Navigation system

Switchboard 8 Console

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### 3. Group starter

The groups starter is a newly designed and manufactured for easy installation, space saving with high reliability and safety. Especially the layout of components and units provides easy operation and maintenance, and simultaneously compacts design provides less weight and requires less space for installation. The group starter meets the requirements of classification societies and complies with international standard(IEC)



### 4. Bridge control console

The bridge control console had been upgraded for hardware and software in system, has several features in design and manufacturing.



### 5. Engine control console

The engine control console is continuously developed in design of hardware and software, and has several features with easy operation, monitoring and maintenance.

Organization

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Communication & Navigation system

Switchboard & Console

Rolling Stock Equipmen

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## **Rolling Stock Equipment**



**IRIS** 

Certification

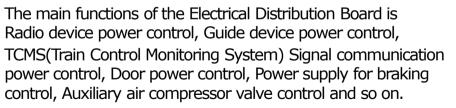
- 1. Electric Distribution board
- 2. End Cubicle Module
- 3. Low/High Voltage Box & Plate
- 4. Testing Equipment



### 1. Electric Distribution board

The Electrical Distribution Board is custom design considering vibration and external environment.

The Electrical Distribution Board consist internal and external wiring is connected to all electrical devices through the terminal block. It has easy installation and maintenance.









It is possible to manufacture a waterproof and dustproof type Electrical Distribution Board according to IP environment and the environment of the train.











Organization

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Major Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipmen

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### 3. Low/High Voltage Box & Plate

The Low & High Tension Junction Box & Plate are custom designs which considers vibration and external environment. The Low & High Tension Junction Box & Plate is distribution of power and communication lines. The function of exchanging power and communication line between a vehicle, and external and internal wirings can be easily connected to the connectors.

The main functions of the Low & High Tension Junction Box & Plate are Electrical connectors for connection and disconnection of circuits, Low-voltage control power and signal communication power supply, supply auxiliary power, and so on.





### 4. Testing Equipment

We have developed our own tester to increase the reliability of Electrical Distribution Board of special ordered.

Main Product

PLC Testing Equipment, Waterproof Testing Equipment, Low Tension Junction Box Testing Equipment, Torsion Testing Equipment





Organization

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Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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Sensor

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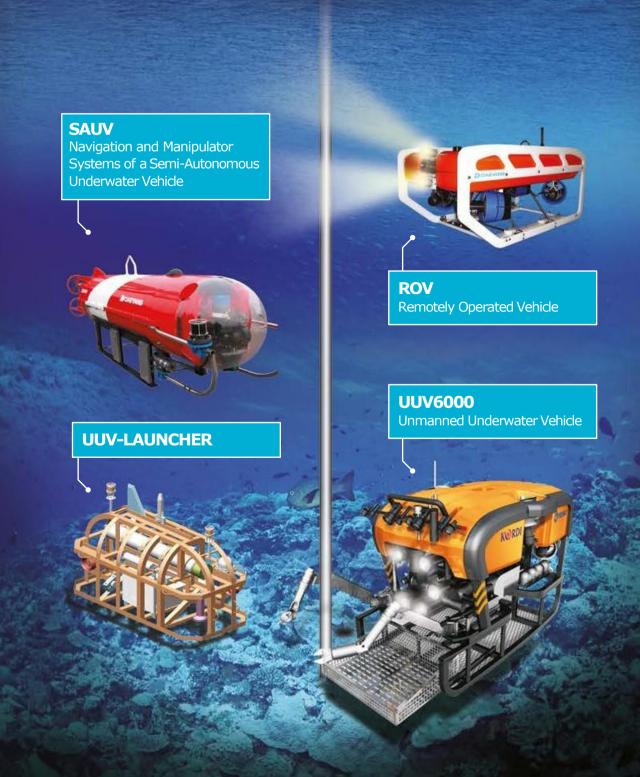
## **UUV**

Daeyang is backed by over 43 years of experience in the design, development, manufacture, and installation in marine, shipbuilding and industry.

We have aggressively invested about 10 % of annual sales for R&D to pursue innovation and the development of new products.

Especially, since we have been performing the development of the UUV which is the unmanned underwater vehicle, in 1990s, we succeed in the development of 400m SAUV, on May, 2003. We also succeed in the development of 6000m UUV as the forth of the world, on November, 2006. Currently, the UUV is used for the deep sea exploration to help the ecological environment research and the discovery of new natural materials for the development of new products in the Pacific.







## MDV Mine Disposal Vehicle



History of Daeyang

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Major Produc

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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> Worldwide Sales Network

**Objective** Development of Technology for a 400m-class Mine Disposal Vehicle

as a part of ACTD(Advanced Concept Technology Demonstration) project

**Period** 2008.10~2011.06



**Contents** 

Development of Design and Integration Technology for MDV

- Development of Technology for Automatic Control
- Design and Application of Complex Navigation Algorism
- Development of Technology for precisely control of Communication System

### **Specifications**

| Dimension(LxØ) | 3.512(m)x0.55(m)   |  |
|----------------|--|--|
| Material       | AL6061, FRP  |  |
| Sea State      | Below 4  |  |
| Depth          | 400m   |  |
| Max. speed     | 7knots   | and the same of th |
| Max. time      | 7 knots: 1.5 hours<br>3.5 knots: 3 hours   |  |
| Thruster       | For./Rev(2), Ver.(2), Lat(2)   |  |
| Telemetry      | Fiber Optic / Coaxial / RF   |  |
| Power          | Lithium Polymer Battery  |  |
| Sensors        | USBL, GPS, DVL,<br>Multi-beamSonar,<br>Forward-looking. Sonar<br>Altitude Sonar,<br>Camera/Light Pressure sensor, Compass, |  |



Organization

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Certification

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Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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## Sensor



Daeyang supplies various types of sensors measuring temperature / pressure / humidity / ultrasonic flow as a module and as a system, which have been developed and manufactured on our own.

We have developed all the core technologies for the sensors such as MEMS(Micro Electro Mechanical System), SoC design, simulation and reliability test, etc.

Recently, we developed the pressure sensors for ESC(Electronic Stability Control) system for the automobile, and since 2014 we started to supply these sensors to HKMC and SYMC.

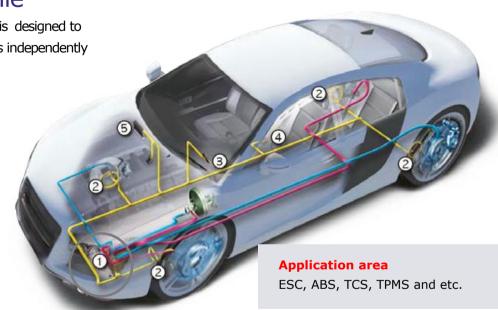
- 1. Pressure Sensor For Automobile
- 2. Hydrogen Fuel Cell Pressure Sensor
- 3. Pressure Sensor For ESC System
- 4. Metal Thin Film Pressure Sensor
- 5. MEMS Pressure Sensor

### 1. Pressure Sensor For Automobile

The pressure sensor modules ESC(Electronic Stability Control) is designed to provide optimal operation to control the brake power of wheels independently under the condition where the steering system does not work.

### Special Features

- Superior high pressure performance
- Operation to withstand harsh environments
- Excellent long-term stability
- Temperature compensation is convenient
- Integrated and assembled structure
- Superior burst pressure performance
- There is no concern leakage pressure
- Superior corrosion resistance properties





Organization

Certification

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Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock

Track Records

Service Network

Sales Network

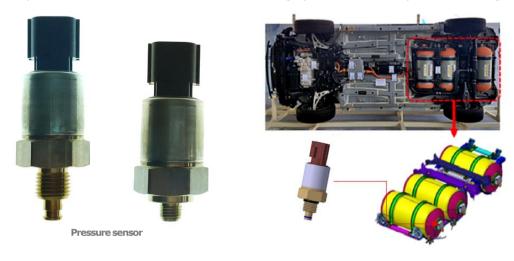
Financial Status

**DAEYANG** 

## 2. Hydrogen Fuel cell Pressure Sensor

The Pressure sensors for hydrogen fuel cells have been developed for hydrogen cars.(NEXO)

We developed a pressure sensor used in the hydrogen fuel storage system. This pressure sensor shows excellent durability and precision even in extreme environments of high pressure, low temperature and high temperature above 700 bar.



#### **Application area**

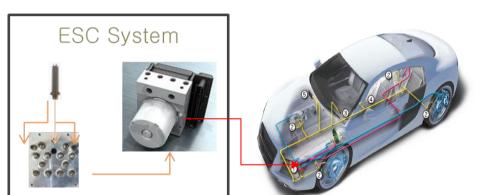
Hydrogen fuel cell vehicles, industrial hydrogen fuel systems

## 3. Pressure Sensor of ESC System

The pressure sensor modules for ESC(Electronic Stability Control) is designed to provide ego optimal operation to control the brake power of wheels under the condition where the steering system does not work.

The ESC system is also designed to have the brake and start-up power of each wheel controlled independently and is used in ABS and TCS as a basic item since it detects and controls steering wheel angle, braking pressure, and vehicle speed.





### **Application area**

ESC, ABS, TCS, TPMS and etc.





### 4. Metal Thin Film Pressure Sensor

We developed pressure sensor for high temperature and high pressure area by using metal thin films, deposited by the sputtering system. This kind sensor has the excellent performances like linearity, reliability and safety for harsh environments.



History of Daeyang

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Communication & Navigation system

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Rolling Stock Equipment

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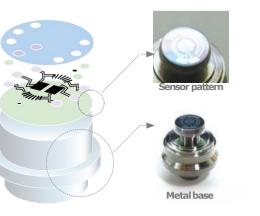
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> Worldwide Sales Network





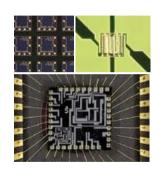
Package and Module

### **Application area**

Pressure transducer and transmitter, industrial automation, ventilation system, automobiles, aircrafts, hydraulic system, compressor, medical instruments

### 5. MEMS Pressure Sensor

Daeyang's MEMS(Micro Electro Mechanical Systems) pressure sensor has excellent properties just because of using advantages of Si semi-conductor with high sensitivity and the metal structure with high safety. Because of these characteristics, the operation range is wide from 1 bar to 1,500 bar and moreover







### **Application area**

Pressure transducer and transmitter, industrial automation, ventilation system, automobiles, aircrafts, hydraulic system, compressor, medical instruments



## Performance Track Records



SANOYAS

MES

-SWS

COSCO

•CSIC

BOHAI

NAIKAI ZOSEN

CHINA SHIPPING

History of Daeyang

Organization

Financial Status

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Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

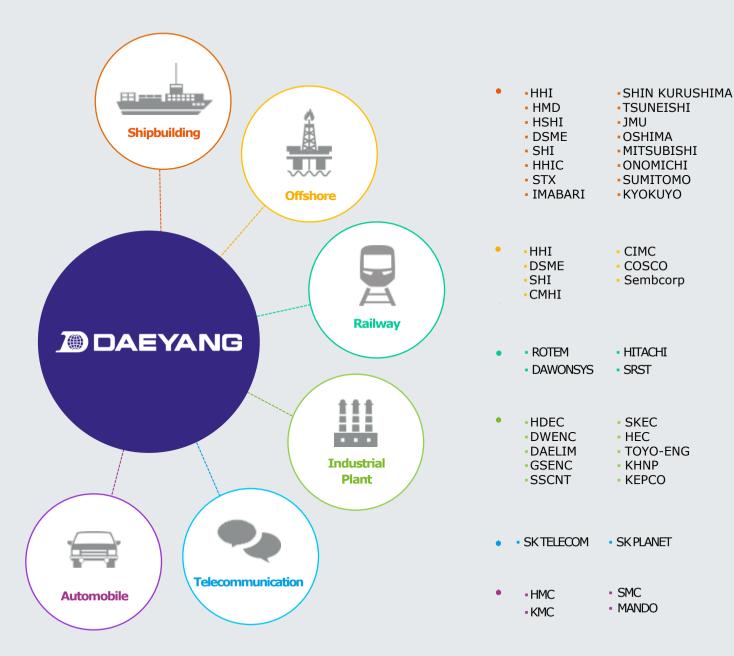
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Worldwide Service Network





## Worldwide Service Network



MEMBER

History of Daeyang

Organization

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Maior Product

Lighting Product

Communication & Navigation system

Switchboard & Console

Rolling Stock Equipment

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MDV

Senso

Performance Track Records

Worldwide Service Network

| Country       | Company Name  | Website                     |
|---------------|---|-----------------------------|
| Argentina     | Turbogen  | www.turbogen.com            |
| Δustralia     | Read's Electric Company PTY. Ltd                              | www.readselectric.com       |
| Belgium       | Maintenance Partners NV                                       | www.maintenancepartners.com |
| Brazil        | Metalook Brasil   | www.metalock.com.br         |
| Canada        | Hostmost Marine Services                                      | www.hostmostgroup.com       |
| Canada        | Changshu Ruite Electric Co., Ltd                              | www.m-ruite.com             |
|               |   |                             |
|               | Dalian Shun Ze Marine Electrical Engineering Co.              | www.dlsz.an                 |
|               | Huludao Haitong electric equipment manufacturing Co.,<br>Ltd. | www.hldht.an                |
|               | Jiangsu Hiscaler Electric Co., Ltd                            | www.hiscaler.com            |
| China         | RMS Marine Service Company Ltd.                               | www.rmsmarineservice.com    |
|               | Saiernico Electric & Automation Ltd                           | www.saiemico.com            |
|               | Shanghai NSE Co. Ltd.   | www.nse.net.cn              |
|               | TIANJIN HAIRUN MARINETECHNICALCO.                             | www.tjhairun.com            |
|               | Zhejiang Xin Ya Electric Development Co. Ltd.                 | www.xy-cd.com               |
| Colombia      | Electronica Maritima ITECSAS                                  | www.iteccolombia.com        |
| Croatia       | PELIGD.O.O.   | www.pelig.hr                |
| Feroe Islands | MPTeknik Sp/f   | www.mpt.fo                  |
| France        | MACOR (Amarix Group)  | www.macor.fr                |
| Common        | IngBuero Querin GmbH  | www.querin.com              |
| Germany       | Karle & Fuhrmann  | www.karle-fuhrmann.de       |
| Gibraltar     | Sandvik Marine Group  | www.sandvikservice.com      |
| Greece        | Nova Electronics s.a.   | www.novaelectronics.gr      |
|               | A. Santamaria Spa   | www.a-santamaria.it         |
| Italy         | Eligroup  | www.eligroup.net            |
|               | S.I.R.M. spa  | www.sirmspa.it              |
| Japan         | Bemac Uzushio Electric Company Ltd                            | www.bemac-uzushio.com       |
| Lithuania     | RSB Novikontas Ltdd   | www.novikontas.eu           |

| Country      | Company Name                                   | Website                      |
|--------------|--|------------------------------|
| Mexico       | Marine Radio Surveyors                         | www.marineradiosurveyors.com |
| Netherlands  | Navico   | www.navico.com               |
|              | PAT-KRUGER GROUP                               | www.pat-kruger.com           |
| Nigeria      | Radial Cirde Telecommunications Ltd            | www.radialcirde.com          |
|              | BWSC Panama, S.A.                              | www.bwsqpanama.com           |
| Panama       | Electromar Services SA                         | www.electromarpanama.com     |
| Рапатта      | Intermaritime Group                            | www.intermaritime.org        |
|              | Talleres Industriales SA                       | www.talleresindustriales.com |
| Dalamid      | Enamor   | www.enamor.com.pl            |
| Poland       | EPA Marinesp. z o.o                            | www.epamarine.pl             |
| Romania      | Navtron SRL                                    | www.navtron.ro               |
| Si           | Cyclect Electrical Engineering PTE Ltd         | www.cydect.com.sg/cydect     |
| Singapore    | Jason Electronics Pte. Ltd.                    | www.jason.com.sg             |
| South Africa | SMD Telecommunications Pty (Ltd)               | www.smd-marine.com           |
|              | AAGE Hempel                                    | www.aagehempel.com           |
| Spain        | Crosscomar S.L.                                | www.crosscomar.com           |
|              | Hermanos Alfaro                                | www.halfaro.com              |
| Sweden       | Laholm Marine & Industry Services AB           | www.lmis.se                  |
| Taiwan       | Reson Electronics                              | www.reson.com.tw             |
| Turkiye      | Besiktas Marine                                | www.besiktasmarine.com       |
| United       | S.I.R.M. UK                                    | www.sirmspa.it               |
| Kingdom      | Belfor Holdings Inc.                           | www.belfor.com               |
|              | Koffler Electrical Mechanical Apparatus Repair | www.koffler.com              |
| U.S.A        | Seaboard Controls INC                          | www.seaboardcontrols.com     |
|              | Simplex Americas LLC                           | www.simplexamericas.com      |
|              | C.A. Metalmecanica Industrial y Naval          | www.camin.com.ve             |
| Venezuela    | Radio Marina de Venezuela                      | www.radiomarinagroup.com     |

Organization

Financial Status

Certification

Major Product

Lighting Product

Communication & Navigation system

> Switchboard & Console

Rolling Stock

Track Records

Service Network

## Worldwide Sales Network



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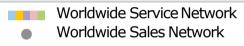
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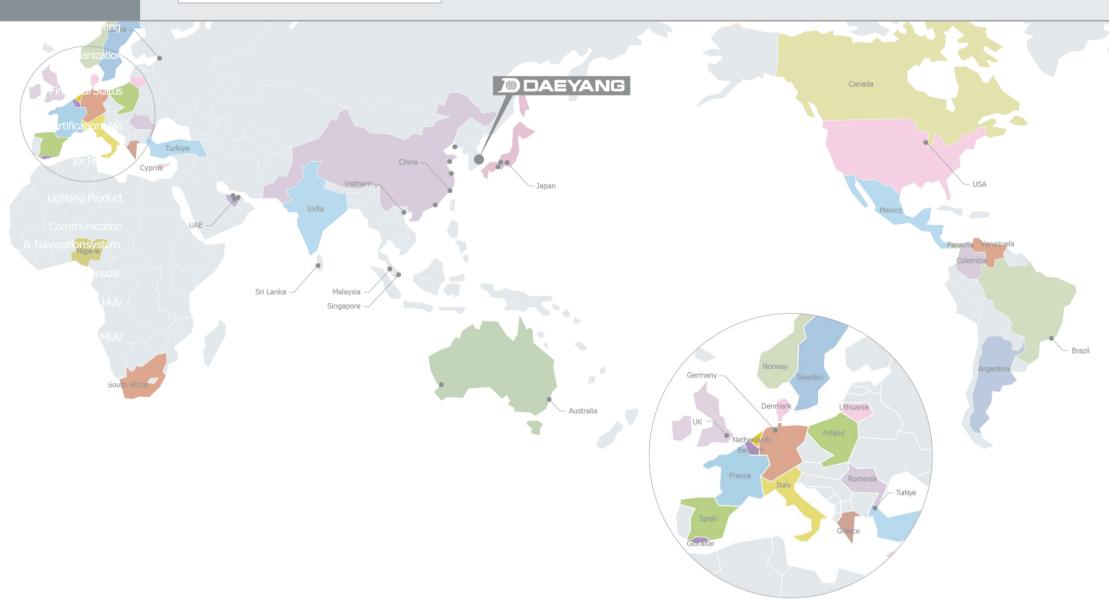
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# THANK YOU

