COMPANY PROFILE 2019

MAIN SWITCH BOARD

CONTROL CONSOL

BATTERY CHARGING & DISCHARGING BOARD

CONTROL & DISTRIBUTION PANEL

TRANSFORMER

ALARM PANEL

AXIAL FLOW FAN

XENON SEARCH LIGHT

LIGHT

HDE HYUNDAI ELECTRIC FACTORY

HDE HYUNDAI ELECTRIC FACTORY

SERVICE SCOPE

DESIGN & ENGINEERING

DETAIL ENGINEERING & DEVELOPMENT -Own pattern Design and Quality Workmanship

MANUFACTURE

MAIN SWITCH BOARD

CONTROL CONSOLE

BATTERY CHARGING & DISCHARGING BOARD

CONTROL & DISTRIBUTION PANLEL

TRANSFORMER

ALARM PANEL

AXIAL FLOW FAN

XENON SEARCH LIGHT

FISHERY VESSEL LIGHT

COMMISSIONING & AFTER SERVICE

HDE HYUNDAI ELECTRIC FACTORY

About Us

Taken together, our Purpose, Values and Principles are the foundation for HYUNDAE ELEC. MFG's unique culture. Throughout our history of over a decade, our business has grown and changed while these elements have endured, and will continue to be passed down to generations of **HYUNDAE ELEC. MFG** people to come.

Our Values reflect the behaviors that shape the tone of how we work with each other and with our partners.

And Our Principles articulate HYUNDAE ELEC. MFG's unique approach to conducting work every day.

Our Purpose

We will provide branded products and services of superior quality and value that improve the lives of the world's consumers, now and for generations to come. As a result, consumers will reward us with leadership sales, profit and value creation, allowing our people and the communities in which we live and work to prosper.

Our Values

Integrity

We always try to do the right thing.

We are honest and straightforward with each other.

We uphold the values and principles of HYUNDAE ELEC. MFG in every action and decision.

We are data-based and intellectually honest in advocating proposals, including recognizing risks.

Leadership

We are all leaders in our area of responsibility, with a deep commitment to delivering leadership results.

We have a clear vision of where we are going.

Ownership

We accept personal accountability to meet our business needs, improve our systems and help others improve their effectiveness.

We all act like owners, treating the Company's assets as our own and behaving with the Company's long-term success in mind.

Passion for Winning

We are determined to be the best at doing what matters most.

We have a compelling desire to improve and to win in the marketplace.

Trust

We respect our customers and consumers, and treat them as we want to be treated.

We have confidence in each other's capabilities and intentions.

We believe that people work best when there is a foundation of trust.

HDE HYUNDAI ELECTRIC FACTORY

Our Principles

We Show Respect for All Individuals

We believe that all individuals can and want to contribute to their fullest potential. We value differences. We inspire and enable people to achieve high expectations, standards and challenging goals.

We are honest with people about their performance.

We Are Strategically Focused in Our Work

We operate against clearly articulated and aligned objectives and strategies. We only do work and only ask for work that adds value to the business. We simplify, standardize and streamline our current work whenever possible.

Innovation is the Cornerstone of Our Success

We place great value on big, new consumer innovations.

We challenge convention and reinvent the way we do business to better win in the marketplace.

We Value Mastery

We believe it is the responsibility of all individuals to continually develop themselves and others.

We encourage and expect outstanding technical mastery and executional excellence.

We Seek to Be the Best

We strive to be the best in all areas of strategic importance to the Company.

We benchmark our performance rigorously versus the very best internally and externally.

We learn from both our successes and our failures.

We Are Externally Focused

We develop superior understanding of consumers and their needs.

We create and deliver products, packaging and concepts that build winning brand equities.

We develop close, mutually productive relationships with our customers and our suppliers.

We incorporate sustainability into our products, packaging and operations.

Mutual Interdependency is a Way of Life

We work together with confidence and trust across business units, functions, categories and geographies.

We take pride in results from reapplying others' ideas.

We build superior relationships with all the parties who contribute to fulfilling our Corporate Purpose, including our customers and suppliers and governments.

HDE HYUNDAI ELECTRIC FACTORY

HISTORY

Sep 2006 Bomyung Eltec's founded.
(MAIN SWITCH BOARD, CONTROL CONSOLE, BATTERY CHARGING & DISCHARGING BOARD, CONTROL & DISTRIBUTION PANLEL, TRANSFORMER, ALARM PANEL, AXIAL FLOW FAN, XENON SEARCH LIGHT,FISHERY VESSEL LIGHT)

April 2008 Acquired ISO9001 (Authentication)

May 2013 Renamed to HYUNDAE ELEC. MFG.
(MAIN SWITCH BOARD, CONTROL CONSOLE, BATTERY CHARGING & DISCHARGING BOARD, CONTROL & DISTRIBUTION PANLEL, TRANSFORMER, ALARM PANEL, AXIAL FLOW FAN, XENON SEARCH LIGHT,FISHERY VESSEL LIGHT)

May 2013 Acquired ISO9001:2015 Certification.
(Quality Management Sytem)

Sept 2013 Expanded Division of the Crane Control System

Aug 2015 Certificate of Design Registration
(Elec. Clutch's Main Shaft & Holding Bracket)

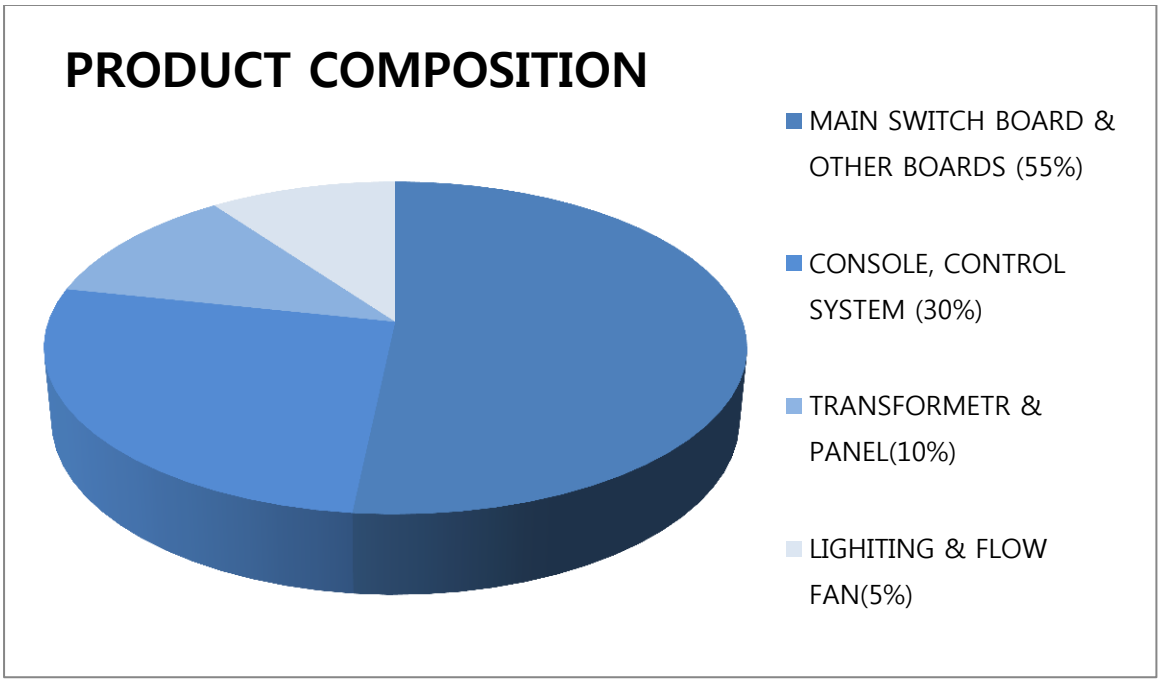
Jan 2016 New Office Location
(Expansion)

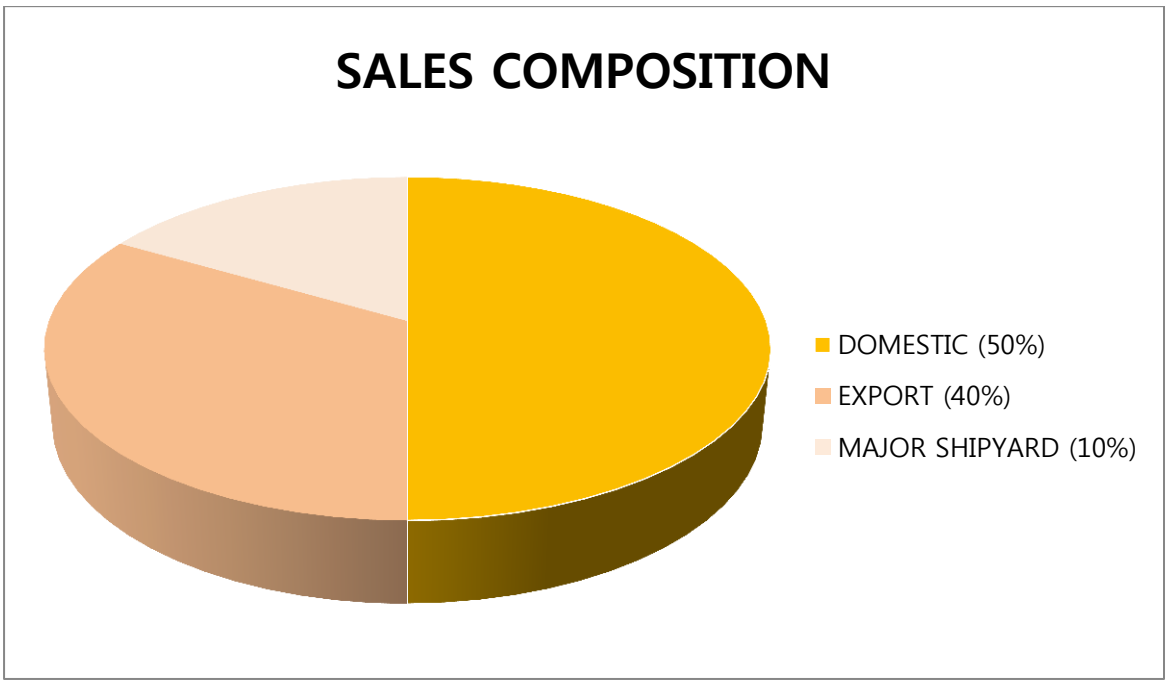
AQUIRED MOST CLASS APPROVAL

(LR, BV, DNV, ABS, NK, KR, GL, VR<on behalf of KR>

HDE HYUNDAI ELECTRIC FACTORY

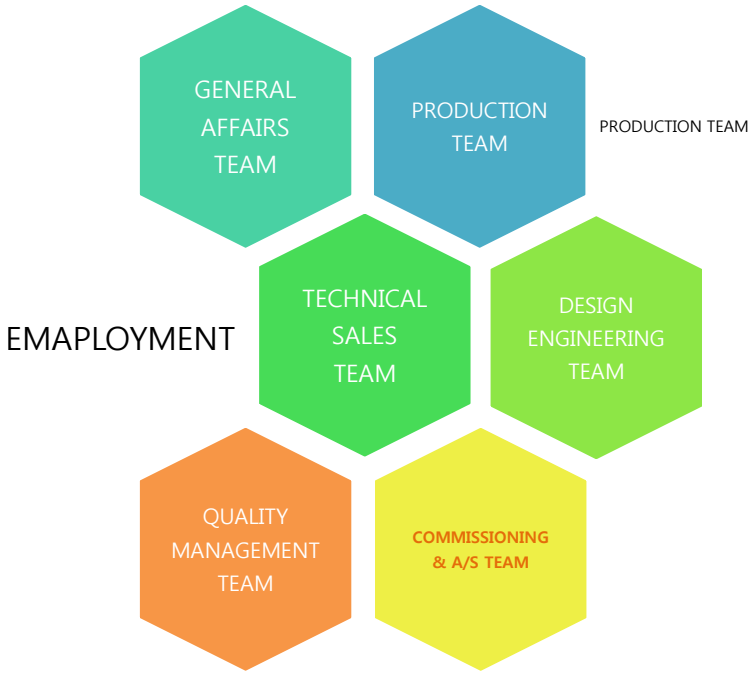
SERVICE COMPOSITON





HDE HYUNDAI ELECTRIC FACTORY

EMPLOYMENT

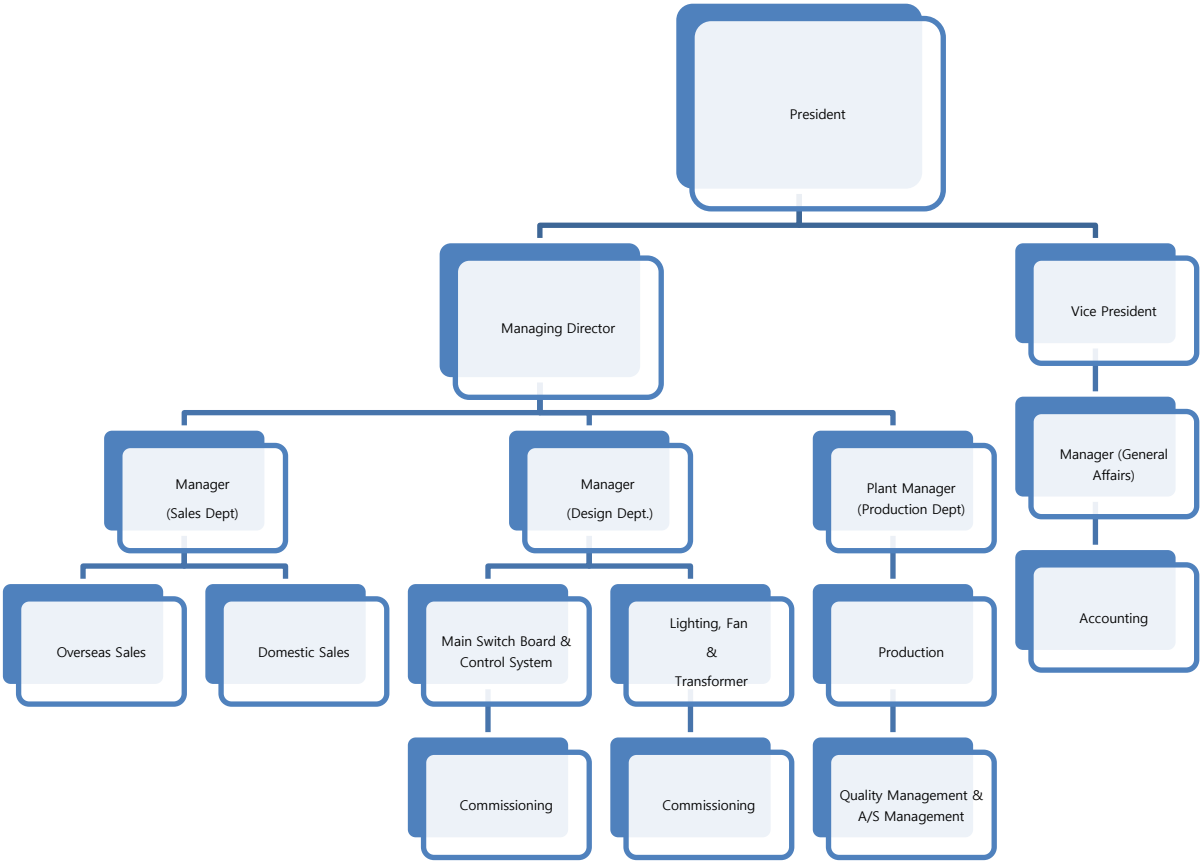


OCCUPATION

Design & Engineering Team	**3**	**Architecture & Design.**
Production Team	**8**	**Elec. Technician, Machining Engineer, General Production, Progress Control.**
Quality Management Team	**1**	**Q.C.**
Technical Sales Team	**3**	**Sales / Project Management.**
General Affair Team	**1**	**Account Management**
Commissioning & A/S Team	**2**	**Commissioning & After Service Care.**
Total : 18 Persons	**/**	**Concurrent Personel 3**

HDE HYUNDAI ELECTRIC FACTORY

GENERAL ORGANIZATION



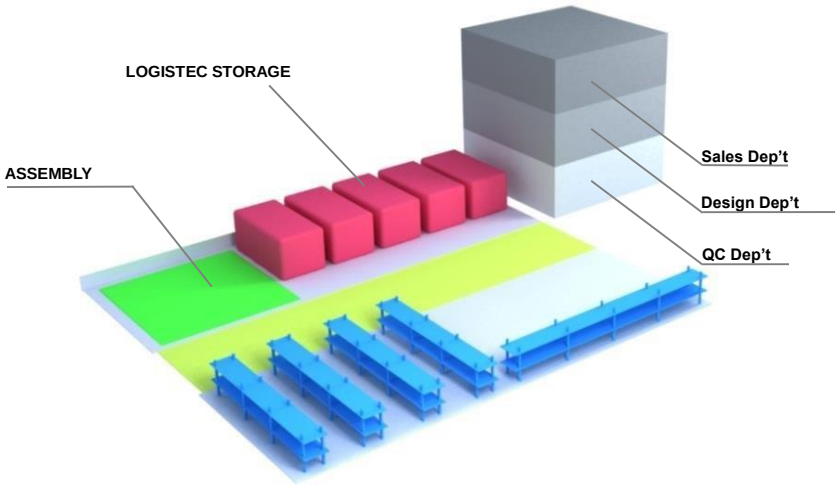
HDE HYUNDAI ELECTRIC FACTORY

HEAD OFFICE & FACTORY #1

ADDRESS : 15-4, Eulsukdo-Daero 755Beon-Gil, Saha-gu, Busan, Korea.
TEL. +82 51 418 1700~1
FAX +82 51 417 1700

LAND

Ground area of 1,800 ㎡
Building area of 782 ㎡
Subsidiary Facilities area of 263 ㎡

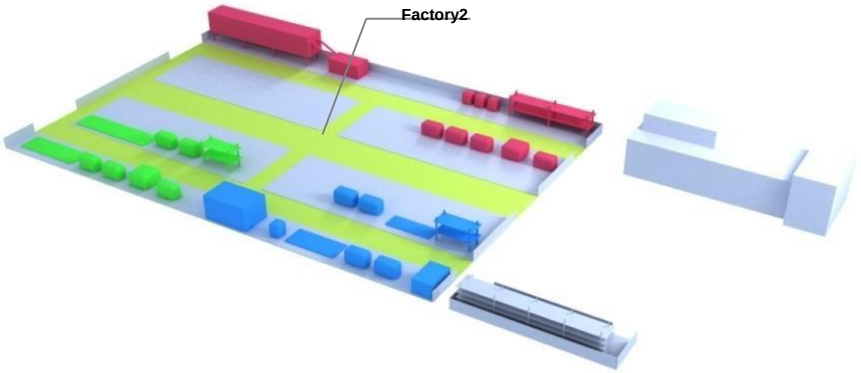


FACTORY 1

ADDRESS : 121 Saha-ro, Gupyeong-dong Busan, Korea.

LAND

Factory :
Ground area of 1,600 ㎡
Building area of 800 ㎡



CONTACT

DESIGN DEPARTMENT	President	/ Mr. Seung-Jae Hwang.
SALES DEPARTMENT	Managing Director	/ Mr. Taeho Choi.
ADMINISTRATION DEPARTMENT	General Manager	/ Mrs.

HDE HYUNDAI ELECTRIC FACTORY

EQUIPMENT

NAME		SPECIFICATION	Q'TY	REMARK MAKER
O/H CRANE		15TON 10TON 5TON 1TON	1 1 1 1	BANDO
LATHE		Φ580 x 2,000L	1	Tongil Heavy Industries
CUTTER				
AUTO CUTTER				
WELDING MACHINE		CO2, TIG WELDER		

HDE HYUNDAI ELECTRIC FACTORY

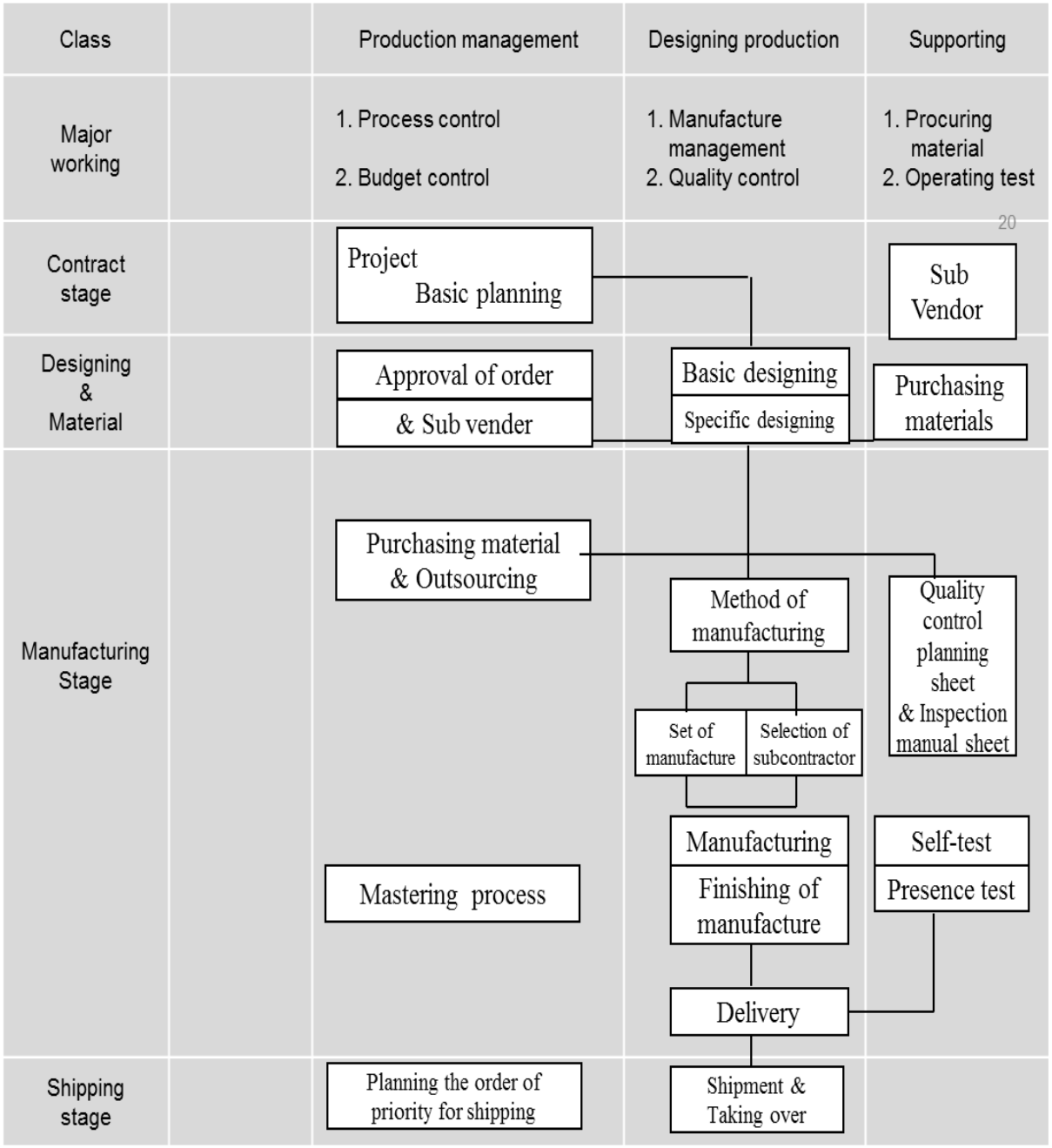
WORK PLACE Head Office

Factory #1

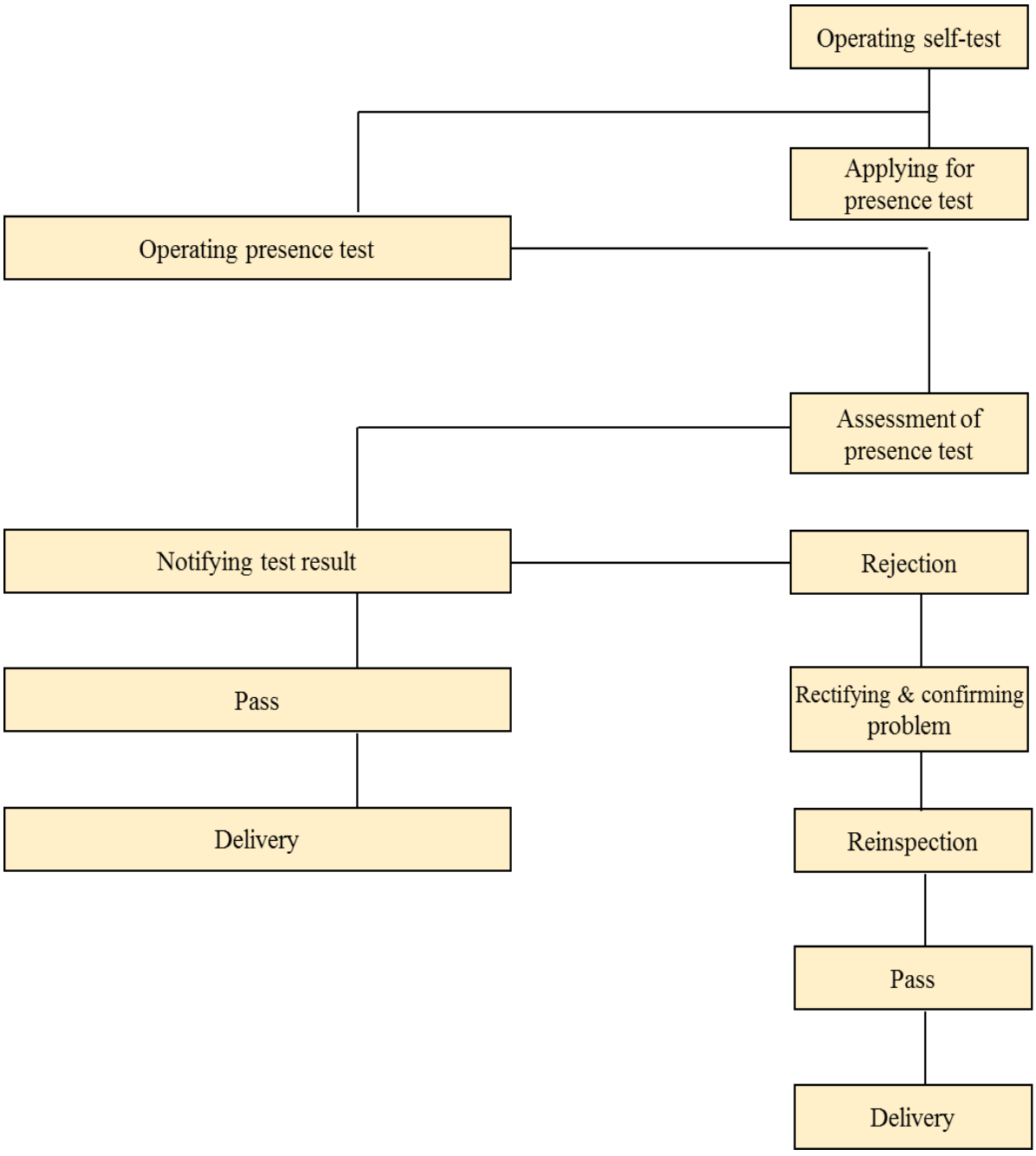
HDE HYUNDAI ELECTRIC FACTORY

PRODUCT MANAGING SYSTEM

FLOW OF WORKING

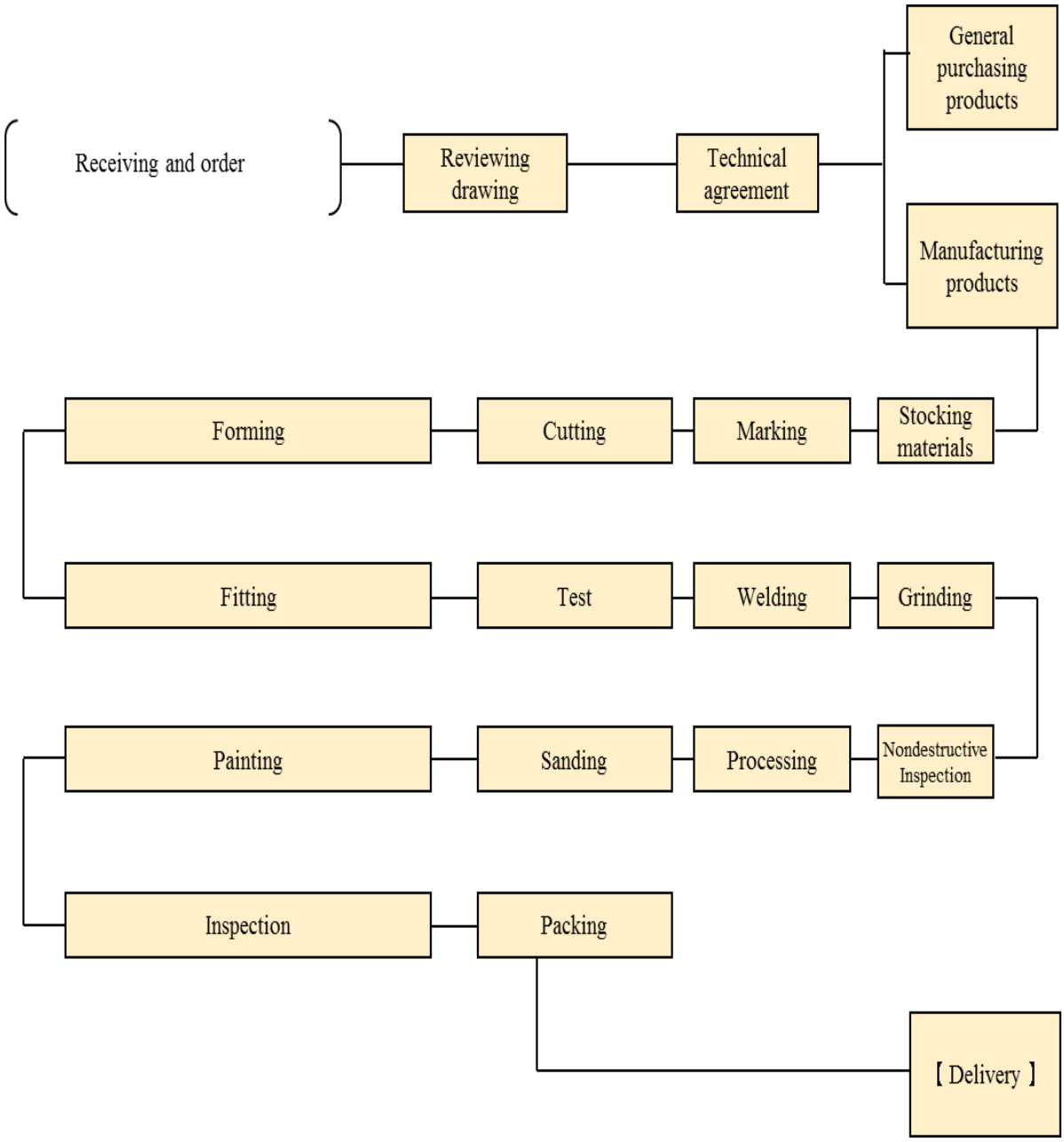


TEST OF INSPECTION



HDE HYUNDAI ELECTRIC FACTORY

PRODUCTION PROCEDURE & SYSTEM



HDE HYUNDAI ELECTRIC FACTORY

MAJOR PARTNERS & REFERENCE

HHI & STX & HANJIN & DAESUN & HERMA & SUMEC & SUBIC & KOREAN NAVY & GOVERNMENT.

HDE HYUNDAI ELECTRIC FACTORY

MAIN PANEL FOR TANKER

KOREAN GOVERNMENT RESEARCH VESSEL BRIDGE CONTROL CONSOL

HDE HYUNDAI ELECTRIC FACTORY

EMERGENCY PANEL

NAVIGATION CONTROL PANEL

HDE HYUNDAI ELECTRIC FACTORY

FLOATING CRANE'S CRANE CONTROL SYSTEM PANEL (BRIDGE)

ENGINE ROOM PANEL

HDE HYUNDAI ELECTRIC FACTORY

XENON SEARCH LIGHT

HYUNDAI ELECTRIC FACTORY

BCD

GYRO COMPASS

WING CONSOL

STARTER (WINCH & STEERING GEAR)

HDE HYUNDAI ELECTRIC FACTORY

STX ENGINE'S GENRATOR

CONTROL PANEL

AXCIAL FLOW FAN

PUMP STARTER

HDE HYUNDAI ELECTRIC FACTORY

QUALITY MANAGEMENT

CHAPTER 1. QUALITY POLICY

Our company's goal is devote ourselves to the best company in the world with superior product and distinguished service based on the endless effort for studying and developing which come from mind that high technology innovation only leads us to be the best.

We say that the 21th century is silent unlimited competition era.
Our mottos are "Honest, credibility and technology innovation" and we promise to our customers to supply good products with satisfied delivery time.

Thank you for your continued support and it would be great if you could offer me some encouragement and advice.

PRESIDENT S. J. HWANG S.J.HWANG

HDE HYUNDAI ELECTRIC FACTORY

CHAPTER 2. MANAGEMENT RESPONSIBILITY

2.1 SCOPE

This chapter applies to the organization and resource of the company and the management review to assure a quality system that meets customer requirements and the ISO 9001 requirement.

2.2 PURPOSE

The purpose of the management is to achieve practical quality management.

2.3 RESPONSIBILITY AND AUTHORITY

2.3.1 The organizational system of the company is shown in <Fig. 1> the organizational chart.

2.3.2 The responsibility and authority of the personnel that control, implement, verify tasks that directly affect and their interrelationship are as follows.

2.3.2.1 Director

1) The director has the overall responsibility and authority to check and evaluate the appropriateness and efficiency of the quality system and the quality of all products produced by the company.

2.2.2.2 Quality management department manager

1) The quality control department manager, as a quality management representative, has the set authority on the following in addition to other responsibilities.

- Has the responsibility to establish, implement, and maintain the quality system to satisfy ISO 9001.
- Has the responsibility to report the quality system implementation results to the director as a resource for the review and improvement of the quality system.

2) Overall control of document and materials

3) Establish and maintain methods and procedures to control quality record.

4) Planning, implementation, and control of the internal quality audit.

5) Inspection and testing of products including purchased products.

6) Establish and maintain procedures for corrective and preventive measures.

7) Overall control of inspection, measurement, and testing equipment.

8) Control of defective products.

9) Tasks related to the verification of customer dissatisfaction items.

10) Planning and control of education and training.

CHAPTER 2. MANAGEMENT RESPONSIBILITY

2.2.2.3. Production department manager

1) Overall control of processes and facilities.

2) Review and handling of defective products.

3) Establish and maintain methods and procedures for product handling, storage, packaging, preservation, and delivery.

4) Overall control of purchasing.

5) Evaluation and selection of suppliers.

2.2.2.4. Sales department manager

1) Review and control of contracts.

2) Control of customer supplied items.

2.2.2.5. Design department manager

The design team belongs to the sales department as a separate unit and has the responsibility and authority for the following.

1) Overall control of tasks related to design.

2) Control of P.O.R and blueprints.

2.2.2.6. Control department manager

1) Overall control of general affairs and accounting tasks.

2.4. RESOURCES

For the management of the company, task, implementation, and verification tasks including the internal quality audit. the director should provide appropriate resources, including the recognition of necessary resources and deployment of trained personnel.

2.5. MANAGEMENT REVIEW

2.5.1 The management should review the quality system more than once a year according to the management review regulation to satisfy the ISO 9001 requirements and the quality policy and goal specified by the management.

2.5.2 The record of management review should be maintained according to the quality record control regulation.

2.6. RELATED REGULATIONS

2.6.1 Management review regulation

2.6.2 Quality record control regulation

CHAPTER 3. QUALITY SYSTEM

3.1. SCOPE

The chapter applies to the establishment, documentation and maintenance of the quality system.

3.2. PURPOSE

The purpose of this chapter is to make customer satisfaction the first priority of the company by preventing defects in all the stages from design to service.

3.3. RESPONSIBILITY AND AUTHORITY

The management representative has the responsibility for the establishment, documentation, and maintenance of the quality system.

3.4. DOCUMENT SYSTEM

The document system of the quality system is as follows.

3.4.1 Quality manual

It is a document that contain the ISO 9001 requirements and a reference for quality system procedures and regulations.

3.4.2 Quality regulation

3.4.2.1. It sets the responsibility, procedures, and requirements for the quality system implemented. It meets the ISO 9001 requirements and the requirements of the quality manual and quality policy.

3.4.2.2. The regulation should be decided based on the complexity of the task, method used, and the skill and training needed by the personnel performing the task.

3.4.2.3. The regulation can refer to a guide book that sets the operation method.

3.4.3 Process progress diagram

It is a document that contains the identification and plan of the process progress.

3.4.4 Guide book

It is a document that regulates detailed methods for a specific task, such as the progress guide book.

3.4.5 Quality plan

3.4.5.1. Documentation to achieve quality requirements of the product developed because of customer request or company's need should follow the development operation control regulation.

3.4.5.2. The product development plan can be drawn up in a development plan document, which includes the review and inspection of process progress and the review of the inspection and testing plan, and it can quote from the existing quality system, if necessary.

CHAPTER 3. QUALITY SYSTEM

3.5. ESTABLISHMENT AND MAINTENANCE OF THE QUALITY SYSTEM

3.5.1 The quality manual, quality regulation and guide book(will be called "documents") should be established and maintained according to the document and material control regulation.

3.5.2 Document should be applied to all the activities performed at the company.

3.5.3 When the quality system is revised, documents should be revised accordingly.

3.6. RELATED REGULATIONS

3.6.1 Document and material control regulation

3.6.2 Development task control regulation

CHAPTER 4. CONTROL REVIEW

4.1 SCOPE

This chapter applies to the overall control of receiving, reviewing and approval of customer requests for all the contracts entered by the company.

4.2 PURPOSE

The purpose of this chapter is to find out and communicate customer quality requirements accurately and prevent any losses on all the contracting parties by reviewing, verifying, and adjusting the items of a contract.

4.3 RESPONSIBILITY AND AUTHORITY

The sales department manager and staff of sales department have the responsibility and authority on overall control of contract review.

4.4 PROCEDURE

4.4.1 The sales department manager should review delivery date, product name and production possibility while referring to the customer's request of estimate, order sheet, and blue print (will be called "estimated request materials")

4.4.2 The sales department manager should check whether there's any discrepancy between the estimates request materials and the estimate.

5.4.3 The sales department manager should check if there is any discrepancy between the estimate and the order sheet received from the customer and if there is any discrepancy, the sales department manager should handle it.

4.4.4 The order sheet received from a customer should be notified to the respective department.

4.4.5 The sales department manager should arbitrate contracting activities between the customer and the respective department.

4.4.6 The sales department manager should review the contract according to the contract review regulation.

4.4.7 Change of contract should be controlled according to the contract review regulation.

4.4.8 Any changes in the contract should be notified to the respective department.

4.4.9 The record of contract review should be maintained.

4.5 RELATED REGULATION

4.5.1 Contract review regulation

CHAPTER 5. DESIGN CONTROL

5.1. SCOPE

The chapter applies to the procedures and methods to control and verify product design to assure that the regulated requirements will be satisfied.

5.2. PURPOSE

The purpose of this chapter is to control design tasks effectively.

5.3. RESPONSIBILITY AND AUTHOURITY

The design team manager has the responsibility for the control of overall design related tasks.

5.4. PROCEDURES

5.4.1 Design plan

5.4.1.1 The design team should draw up a design plan for design activities by approved drawing.

5.4.1.2 In the design plan, design activities should be described or quoted. And the design plan should be revised as the design process progresses.

5.4.1.3 The design tasks should be performed by qualified personnel, who were qualified according to the education and training regulation.

5.4.2 Design input

5.4.2.1 Design input request items should be reviewed and documented for proper selection.

5.4.2.2 The items that are incomplete, vague, or contradictory should be settled by consulting with the person who requested them.

5.4.2.3 At the time of design input, the result of the contract review activity should be taken into account.

5.4.3 Design output and contract review

5.4.3.1 The design output should be documented in a drawing to be able to verify the design input request items and check their validity.

5.4.3.2 The technical sales department manager should review the design blueprint and sign on it.

5.4.4 Design verification and validity check

5.4.4.1 The design team manager should perform design verification by comparing the design input document and the drawing. And he/she should record the result.

5.4.4.2 After product production, the design team manager should perform validity check of the design on the basis of the design input document and the drawing

CHAPTER 6. CONTROL OF DOCUMENT AND MATERIAL

6.1 SCOPE

This chapter applies to the procedures and methods of controlling documents and materials for the establishment and maintenance of the quality system.

6.2 PURPOSE

The purpose is to control documents and materials effectively.

6.3 RESPONSIBILITY AND AUTHORITY

The QM department manager has the responsibility and authority for the overall control of documents and materials.

6.4 PROCEDURE

6.4.1 Documents and materials should be reviewed and approved of their appropriateness by the person to whom the authority is entrusted before their publication according to the material control regulation.

6.4.2 Documents and materials should be registered and maintained in the document control ledger or material control ledger to show the status of the most recent revision.

6.4.3 Documents should be distributed to places where the functions performed are critical to the effective implementation of the quality system.

6.4.4 The documents that have lost their validity and/or nullified should be promptly removed by issuer or the user so that they are not misused.

6.4.5 All the nullified documents that are preserved for legal or reference purpose should be identified appropriately.

6.4.6 The change of documents or materials should be reviewed and approved by the same organization that performed the initial review and approval, unless noted otherwise.

6.4.7 Any changes of the document should be noted appropriately in the respective revised document.

6.5 RELATED REGULATION

6.5.1 Document and material control regulation

CHAPTER 7. PURCHASE

7.1 SCOPE

This chapter defines the responsibility, methods, and procedures to control purchased items and customer supplied items.

7.2 PURPOSE

The purpose of this chapter is to reduce inappropriateness by controlling purchased items and customer supplied items.

7.3. RESPONSIBILITY AND AUTHORITY

7.3.1 The production department manager has the overall responsibility for purchasing, evaluation and selection of suppliers.

7.3.2 The sales department manager has the responsibility for overall control of the customer supplied items.

7.4. EVALUATION OF SUPPLIES

7.4.1 Supplies should be evaluated and selected according to the purchase control regulation.

7.4.2 The evaluation record of acceptable suppliers should be maintained.

7.5. PURCHASE CONTROL

7.5.1 Items to be purchased should be purchased according to the purchase control regulation.

7.5.2 The size, type, grade, and other important matters of the purchased product should be included in the purchase order.

7.5.3 The appropriateness of the regulated requirements in the purchase order should be reviewed and approved before the purchase order is sent out.

7.5.4 If the verification of the product to be purchased is to be done at the outside supplier's premise, the verification procedure and shipping method should be prescribed in the purchase order.

7.6. CONTROL OF CUSTOMER SUPPLIED ITEMS

7.6.1 When a customer supplies items to be used for product production, the customer supplied items should be controlled according to the customer supplied item control regulation.

7.6.2 The customer supplied items that are lost or damaged should be recorded and reported to the customer.

7.7. RELATED REGULATION

7.7.1 Purchase control regulation

7.7.2 Customer supplied items control regulation

CHAPTER 8. PROCESS CONTROL

8.1 SCOPE

This chapter prescribes the requirements and responsibilities for the control of processes that affect quality directly.

8.2 PURPOSE

The purpose of this chapter is to achieve quality improvement and customer satisfaction by effectively controlling processes that affect quality directly.

8.3 PESPONSIBILITY AND AUTHORITY

The production department manager has the responsibility and authority on the overall process control.

8.4 PROCEDURE

8.4.1 The production processes that affect quality directly should be identified and planned in the production progress chart.

8.4.2 The production department should establish an operation guide book that sets the implementation method of a process, and distribute it to the appropriate plant.

8.4.3 Process variables and product characteristics that need to be controlled should be prescribed and controlled in the respective guide book.

8.4.4 The welding process is a special process, and it should be performed by qualified welders.

8.4.5 Production facilities should be preserved according to the process control regulation for the continuous maintenance of process capability.

8.5 IDENTIFICATION AND TRACKING OF PRODUCTS.

Identification of materials and tracking of finished products should be controlled according to the process control regulation.

8.6 RELATED REGULATION

Process control regulation

CHAPTER 9. INSPECTION AND TESTING

9.1 SCOPE

This chapter applies to the procedures, methods, and responsibility for the inspection and testing to verify the product's appropriateness to the prescribed requirements.

9.2 PRUPOSE

The purpose is to systematically verify whether the product meets the prescribed requirements.

9.3 RESPONSIBILITY AND AUTHORITY

The quality management department manager has the overall responsibility for the control of the inspection and testing.

9.4 PROCEDURE

9.4.1 Types of inspection performed in the company are the import inspection, process inspection, and final inspection.

9.4.2 All the inspection and tests should be performed according to the inspection and testing control regulation.

9.4.3 Except in emergency cases, all the products should not be released to a process or used before the import inspection and process inspection are completed. To recall the product when incongruity occurs, the products thus issued should be identified and recorded.

9.4.4 The final inspector should confirm whether all the regulated inspections are performed and whether the results satisfy the prescribed requirements before the final inspection.

9.4.5 Defective products should be controlled according to the defective product control regulation.

9.4.6 All the products should not be issued until all the inspections are completed satisfactorily and related should be recorded and maintained.

9.4.7 The inspection results should be recorded and maintained.

9.4.8 In the inspection record, the product's pass or fail status should be identified.

9.4.9 The inspector responsible for the product issue should be identified in the inspection record.

9.5. RELATED RUGULATIONS

9.5.1 Inspection and testing control regulation

9.5.2 Defective product control regulation

CHAPTER 10. CONTROL OF INSPECTION, MEASUREMENT AND TESTING EQUIPMENT

10.1 SCOPE

This chapter prescribes the procedures and methods of the calibration control for inspection, measurement, and testing equipment (will be called "measuring instrument") used in quality related activities.

10.2 PURPOSE

The purpose is to assure that the functions of the measuring instruments are proper.

10.3 RESPONSIBILITY AND AUTHORITY

The quality management department manager has the overall responsibility for the calibration control of the measuring instruments.

10.4 Control of measuring instruments.

10.4.1 The quality management department manager should register the instrument number, size, calibration interval, etc. of all the measuring instruments in the measuring instrument control ledger.

10.4.2 All the measuring instruments should be used according to the items to be measured and the precision required

10.4.3 The quality management department manager should request the calibrations or related businesses.

10.4.4 The calibration status should be identified properly and the record of calibration should be maintained.

10.4.5 All the measuring instruments should be handled and stored to sustain their level of precision by all users.

10.4.6 To take into account of measuring error and to satisfy the required level of precision, a measuring instrument with the precision level of a notch higher should be used.

10.5. RELATED REGULATION

10.5.1 Measuring instrument control regulation.

CHAPTER 11. RESULT OF INSPECTION AND TEST

11.1 SCOPE

This chapter applies to the control methods and responsibility to identify the results of all inspections and tests.

11.2 PURPOSE

The purpose is to issue only the products that have passed the test.

11.3 RESPONSIBILITY AND AUTHORITY

The quality management department manager has the responsibility for the overall control of the results of inspections and test.

11.4. PROCEDURE

11.4.1 The identification of the pass or fail status of a product inspected or tested should be done properly.

11.4.2 The identification of the results of inspections and tests should be maintained according to the Inspection and test control regulation and the defective product control regulation.

11.5. RELATED REGULATIONS

11.5.1 Inspection and test control regulation

11.5.2 Defective product control regulation

CHAPTER 12. CONTROL OF DEFECTIVE PRODUCTS

12.1 SCOPE

This chapter applies to the procedures and methods to prevent the unintentional use or installation of defective products.

12.2 PURPOSE

The purpose is to reduce customer dissatisfaction by effectively controlling defective products.

12.3 RESPONSIBILITY AND AUTHORITY

12.3.1 The quality management department manager has the responsibility for the overall control of defective products.

12.3.2 The respective department manager has the responsibility to handle defective products.

12.4 PROCEDURE

12.4.1 Identification, recording, evaluation, decision of disposition, notification to the respective department and other related procedures should follow the defective product control regulation.

12.4.2 The department manager of the respective department should handle defective products according to the disposition decision.

12.4.3 To prevent unintentional use of defective products until the disposition decision is reached, they should be controlled separately.

12.4.4 The decision of disposition can be one of the following.

1) Repair 2) Rework 3) Use as it is

4) Separate application 5) Discard 6) Return

12.4.5 Limited use or repair of products that don't meet requirements should be reported to the customer or its representative, if required in the contract.

12.4.6 The inappropriate item adopted but didn't meet requirements and the content of repair should be recorded to show its status.

12.4.7 Products repaired or reworked should be tested again.

12.5 RELATED REGULATION

12.5.1 Defective product control regulation

CHAPTER 13. CORRECTIVE AND PREVENTIVE MEASURE

13.1 SCOPE

This chapter applies to the procedures and responsibility of corrective and preventive measures for actual or potential defective items.

13.2 PURPOSE

The purpose is to maintain efficient quality system and to continue quality improvement through effective control of defective items that block quality.

13.3. RESPONSIBILITY AND AUTHORITY

13.3.1 The quality management department manager should establish and maintain corrective and preventive measure for defective items.

13.3.2 The respective department manager has the responsibility to take necessary corrective and preventive measure.

13.4 CORRECTIVE MEASURES

13.4.1 All the corrective measures should be employed in consideration of the size of the problem and possible danger.

13.4.2 Customer dissatisfaction items and defective product reports should be handled effectively.

13.4.3 Causes for the defects should be probed and recorded.

13.4.4 Corrective measure should be decided upon, implemented, and reviewed for their effectiveness.

13.4.5 Change of quality system as a result of a corrective measure should be implemented and recorded.

13.5. PREVENTION MEASURES

13.5.1 Useful information to detect possible causes of defects should be utilized properly.

13.5.2 Stage of preventive measures should be decided.

13.5.3 Preventive measure should be employed properly.

13.5.4 The result of preventive measures should be utilized as management review data.

13.6. RELATED REGULATION

13.6.1 Corrective and preventive measure regulation

CHAPTER 14. HANDLING, STORAGE, PACKAGE, PRESERVATION AND DELIVER

14.1 SCOPE

This chapter applies to the procedures and responsibility to prevent damage of the product and quality degradation during the process of product handling, storage, package, preservation, and delivery.

14.2 PURPOSE

The purpose is to prevent damage or quality degradation by controlling product handling, storage, package, preservation, and delivery.

14.3 RESPONSIBILITY AND AUTHORITY

The production department manager should establish and maintain methods and procedures ot prevent damage to the product and quality degradation during the process of product handling, storage, package, preservation, and delivery.

14.4 HANDLING

Handling of warehouse products, products in process, and final products should be done according to the handling, storage, package, preservation and delivery regulation to prevent product damage or fire.

14.5 STORAGE AND PRESERVATION

15.5.1 All the products should be stored and preserved at designated areas to prevent fire or damage.

15.5.2 Bringing in and out the products from the designated areas should be controlled properly.

14.6 PACKAGE AND DELIVERY

14.6.1 It's a rule to wrap up the whole product with vinyl or plastic wrap. But if a customer request otherwise, follow the customer's request.

14.6.2 A protective measure should be taken to protect the product that received the final inspection.

14.6.3 When specified in the contract, this protection continues until handling the product over at the destination.

14.7. RELATED REGULATION

14.7.1 Handling, storage, package, preservation, and delivery control regulation

CHAPTER 15. CONTROL OF QUALITY RECORDS

15.1 SCOPE

This chapter applies to the procedures and responsibility to control quality record.

15.2 PURPOSE

The purpose is to maintain quality record so that it can prove the regulated requirement are proper and the quality system is operated effectively.

15.3 RESPONSIBILITY AND AUTHORITY

15.3.1 The quality management department manager has the overall responsibility to control the quality record.

15.3.2 The respective department manager has the responsibility to control the quality record that is issued from or stored at the department.

15.4 PROCEDURE

15.4.1 Procedures for the identification, collection, indexing, accessing, filing, storage, maintenance, and discarding of the quality record should follow the quality record control regulation.

15.4.2 The related quality record received from a supplier should be considered as a quality record of the company and should be controlled accordingly.

15.4.3 All the quality records should be legible and should be stored and preserved to prevent damage or aging.

15.4.4 The quality record should be available for the customer or its representative for evaluation for agreed time span, if specified in the contract.

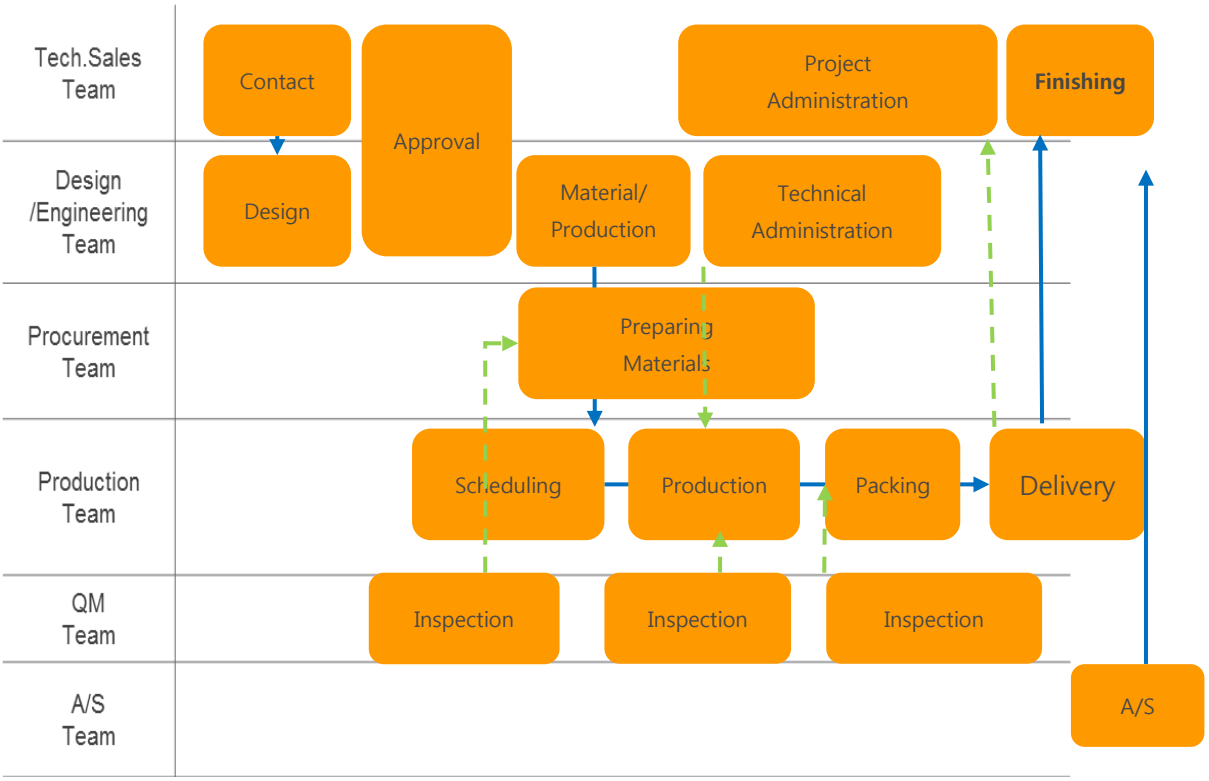
15.4.5 The preservation period of a quality record should be set and recorded.

15.4.6 The name of a quality record, the name of the department storing the record, and the period of preservation should be noted on the cover of the ledger that contains the quality record.

15.5. RELATED REGULATION

15.5.1 Quality record control regulation

PROJECT WORK FLOW



HDE HYUNDAI ELECTRIC FACTORY

HSE (Health, Safety and Environment) Management Program

Execution of HSE Management

Notice of Protecting Items

Goal of HSE Program

'NO ACCIDENT' Calendar

Signboards of Safety rules and Operation cautions

H S E SYSTEM

- **Adoption and application of effective safety management system**

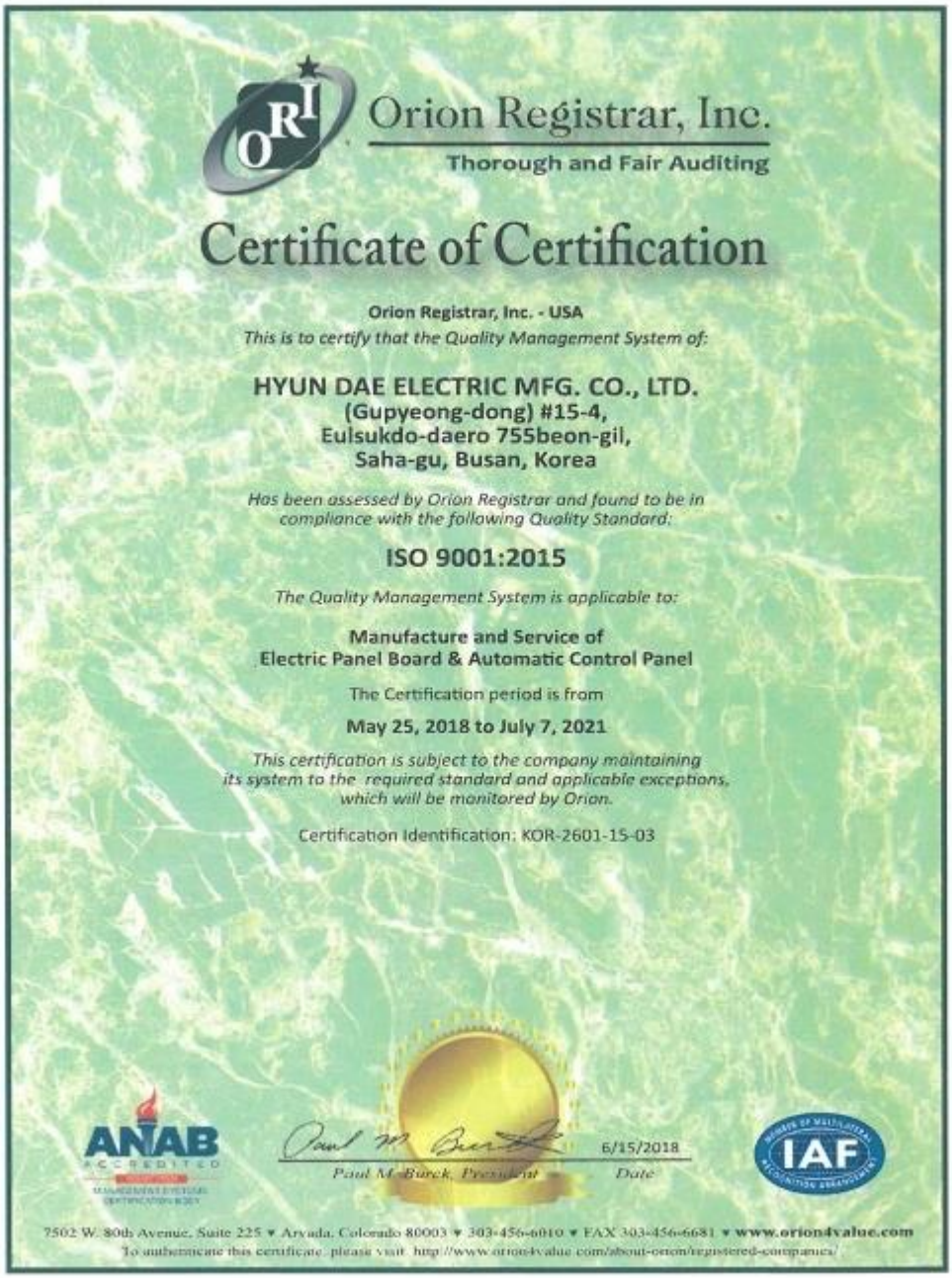
(1)Making inspection & management guide line for all related facilities. Draw safety plans for safety management

(2) Facility safety check by professional outsourcing company in the first and latter half of the year.

(3) Empower safety manager and give severer penalty to offender.

HDE HYUNDAI ELECTRIC FACTORY

ISO 9001:2015



Orion Registrar, Inc.

Thorough and Fair Auditing

Certificate of Certification

Orion Registrar, Inc. - USA

This is to certify that the Quality Management System of:

HYUN DAE ELECTRIC MFG. CO., LTD.
(Gupyeong-dong) #15-4,
Eulsukdo-daero 755beon-gil,
Saha-gu, Busan, Korea

Has been assessed by Orion Registrar and found to be in compliance with the following Quality Standard:

ISO 9001:2015

The Quality Management System is applicable to:

Manufacture and Service of
Electric Panel Board & Automatic Control Panel

The Certification period is from

May 25, 2018 to July 7, 2021

This certification is subject to the company maintaining its system to the required standard and applicable exceptions, which will be monitored by Orion.

Certification Identification: KOR-2601-15-03

ANAB ACCREDITED

Paul M. Burck, President — 6/15/2018 Date

IAF

7502 W. 80th Avenue, Suite 225 ▼ Arvada, Colorado 80003 ▼ 303-456-6010 ▼ FAX 303-456-6681 ▼ www.orion4value.com

To authenticate this certificate, please visit http://www.orion4value.com/about-orion/registered-companies/

HDE HYUNDAI ELECTRIC FACTORY

CERTIFICATE

(LR / ABS/ DNV/ KR) & EXPLOSION PROOF CERT

CERTIFIED COPY

Certificate no: BUS 1601085
Page 1 of 1

Project: P.T PAL INDONESIA W000293

Client: Jin Gu Engineering Co., Ltd. Gimhae, Gyeongnam, Korea

Office: Busan Port

Client's Order Number: N/A

Date: 12 February 2016

Order Status: Complete

Inspection Dates
First: 26 January 2016
Final: 05 February 2016

This certificate is issued to **Messrs. Jin Gu Engineering. Co., Ltd., Gimhae, Korea to certify that the undersigned surveyors did at their request attend their works on the above dates for the purpose of inspecting and testing the undernoted equipments stated to be intended for the above project.**

"Two(2) off Rudder Stock with sleeve"
(2174L mm x 384Dia' mm)

The following scopes of inspections and tests have been carried out, and all have been found to be satisfactory. :

1. Review of DAD No. BTS/SST/H153803 dated on 20 November 2015
2. Material identification against LR Certificate (BUS1505754, BUS1507180)
3. Review of dimension check in accordance with approved drawing
4. Witness of NDE (MPI) at final machined condition and visual examination

For identification purpose, "**LR BUS 1601085 BWK**" was hard stamped on 2 sets of Rudder Stock with sleeve & 12 sets of reamer bolts and nuts.

B. W. Kim for self and J. M. Kang
Surveyor to Lloyd's Register Asia

a member of the Lloyd's Register group.

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Form 1123 (2015.08)

DNV·GL

CERTIFICATE
FOR SPADE RUDDER

Certificate No:
CHW-1530688

Particulars of Vendor and Purchaser

Vendor: **Jin Gu Engineering Co.,**
Vendor reference:
Purchaser: **HanKook Engineering PteLtd**
Purchaser reference:

Particulars of Product

The product is intended for
Yard: **Singapore Technologies Marine Ltd.**
Yard No: **BO 668**
Name of vessel: **"-"**
DNV GL Id No: **33268**

This is to certify

that the product: **2 x Rudder with Rudder Stock**
Type designation: **spade rudder**
Application/context: **Rudder**
Serial/tag no: **N.A.**

Has been found to comply with relevant requirements in:
DNV Rules for Classification of High Speed, Light Craft and Naval Surface Craft (2012-07)

The product / material has been marked: NV CHW-1530668 on: body

Issued at **Gimhae MC & FIS** on **2015-04-27**

for **DNV GL**
This document has been digitally signed and will therefore not have handwritten signatures.
Eom, Chang Hyun
Surveyor

Form code: TL 03a Revision: 2014-10 www.dnvgl.com Page 1 of 2
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AMERICAN BUREAU OF SHIPPING

Customer Name: HYUNDAE ELECTRIC MFG CO., LTD
Attending Office: Busan Port
First Visit Date: 02-Feb-2018
Purchase Order No.: N/A
Report Number: BK3448579-A
Last Visit Date: 05-Feb-2018

Certification Of: Switchboard
Manufacturer: HYUNDAE ELECTRIC MFG CO., LTD
Quantity : One (1)

Survey Location : Busan, Korea

Equipment Data

Item Name	Main Switchboard
Manufacturer Number(S. No.)	HD-MSB 18001
Destination Vessel (Class Number)	YY271727
Builder/Shipyard	HERMA SHIPYARD INC.
Builder I.D./Hull No.	H-115
Purchaser Name	HERMA SHIPYARD INC.

Design Details

Design State	Design Approved/Reviewed
ABS Reviewing Organization	Busan Engineering Services
Drawing Number	HD-16063 / T1670213 dated 28 September 2017

Additional Data

ABS Stamping + BK3448579-A

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

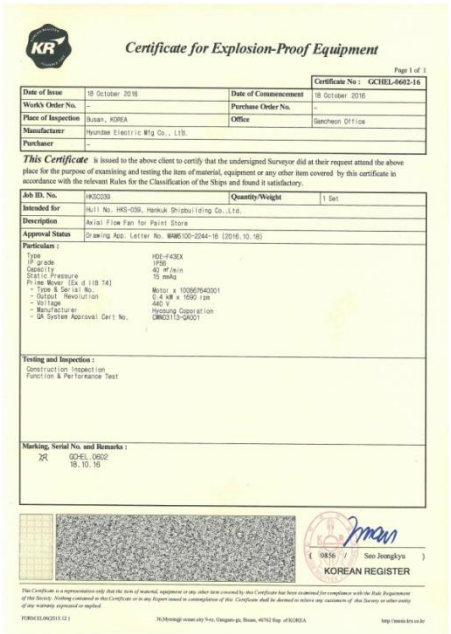
Traceability of materials used on this project has been verified.
The principal data has been verified in accordance with the applicable Rules/specifications and applicable approved plans, and confirmed to be within acceptable tolerances.
All testing (pressure/load/operational/etc.) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.
Testing machines are maintained in a satisfactory condition and records of their recheck or calibration dates confirmed.
All parts of the machinery/equipment satisfactorily complied with the approved drawings. Amendments, if any, verified to be rectified and considered satisfactory.
Asbestos-free declaration verified and supporting documentation reviewed.
Final markings for identification confirmed.

Rating and Current: AC 440 V, 60 Hz, 3 P, 90 kW, 112.5 kVA x 3 and 147.6 A
Layout of Panel: No.1/No.2/No.3 Diesel Generator Panels, Synchro Panel, No.1/No.2 AC 440 V Feeder Panels, AC 220 V Feeder Panel
Installation: Floor mounting and self standing

The one (1) main switchboard was examined, tested (Report No. HD-TR18001) as follows and considered satisfactory.

1) Appearance and construction
2) Insulation resistance test

Page 1 of 2



Certificate for Explosion-Proof Equipment

Page 1 of 1
Certificate No : GCHEL-0602-16

Date of Issue	18 October 2016	Date of Commencement	18 October 2016
Work's Order No.	-	Purchase Order No.	-
Place of Inspection	Busan, KOREA	Office	Gaecheon Office
Manufacturer	Hyundae Electric Mfg Co., Ltd.		
Purchaser	-		

This Certificate is issued to the above client to certify that the undersigned Surveyor did at their request attend the above place for the purpose of examining and testing the item of material, equipment or any other item covered by this certificate in accordance with the relevant Rules for the Classification of the Ships and found it satisfactory.

Job ID. No.	HKCC039	Quantity/Weight	1 Set
Intended for	Hull No. HKS-039, Hankuk Shipbuilding Co., Ltd.		
Description	Axial Flow Fan for Paint Store		
Approval Status	Drawing App. Letter No. MAB100-2244-16 (2016.10.18)		

Particulars :

Type	HDF-F43EX
IP grade	IP56
Capacity	40 ㎥/min
Static Pressure	15 mmAq
Prime Mover (Ex d IIB T4)	
- Type & Serial No.	Motor x 10056764001
- Output Revolution	0.4 kW x 1690 rpm
- Voltage	440 V
- Manufacturer	Hyosung Corporation
- QA System Approval Cert No.	QM003113-QA001

Testing and Inspection :
Construction Inspection
Function & Performance Test

Marking, Serial No. and Remarks :
XR GCHEL 0602
16. 10. 18

(0836 / Seo Jeongkyu)
KOREAN REGISTER

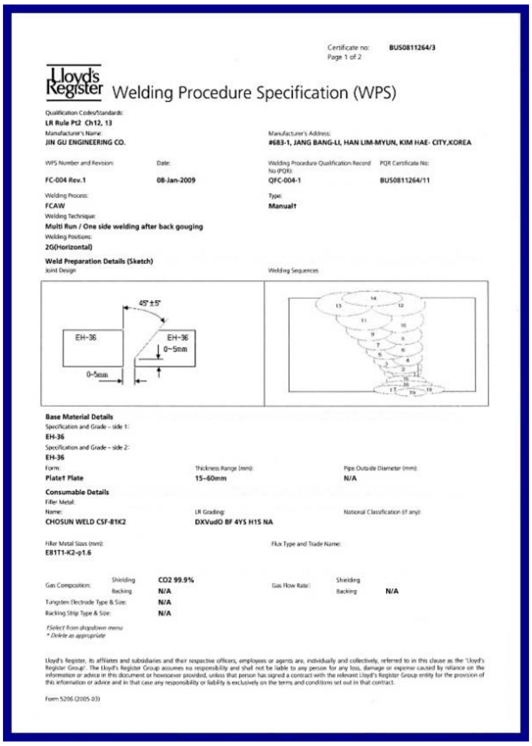
This Certificate is a representation only that the item of material, equipment or any other item covered by this Certificate has been examined for compliance with the Rule Requirement of the Society. Nothing contained in this Certificate or in any Report issued in contemplation of this Certificate shall be deemed to relieve any customers of the Society or other entity of any warranty expressed or implied.

FORM ELAN(2015.12) 36,Myeongji ocean city 9-ro, Gangseo-gu, Busan, 46762 Rep. of KOREA http://www.krs.co.kr

HDE HYUNDAI ELECTRIC FACTORY

WPS CERTIFICATE FOR CORPORATE COMPANY(JIN GU ENGINEERING CO.)

WPS (LR / DNV / ABS)



Certificate no: BUS0811264/3
Page 1 of 2

Lloyd's Register

Welding Procedure Specification (WPS)

Qualification Codes/Standards:
LR Rule Pt2 Ch12, 13

Manufacturer's Name:
JIN GU ENGINEERING CO.

Manufacturer's Address:
#683-1, JANG BANG-LI, HAN LIM-MYUN, KIM HAE- CITY,KOREA

WPS Number and Revision:	Date:	Welding Procedure Qualification Record No (PQR):	PQR Certificate No:
FC-004 Rev.1	08-Jan-2009	QFC-004-1	BUS0811264/11

Welding Process:
FCAW

Type:
Manual†

Welding Technique:
Multi Run / One side welding after back gouging

Welding Positions:
2G(Horizontal)

Weld Preparation Details (Sketch)

Joint Design

Welding Sequences

Base Material Details

Specification and Grade – side 1:
EH-36

Specification and Grade – side 2:
EH-36

Form:	Thickness Range (mm):	Pipe Outside Diameter (mm):
Plate† Plate	15~60mm	N/A

Consumable Details

Filler Metal:

Name:	LR Grading:	National Classification (if any):
CHOSUN WELD CSF-81K2	DXVudO BF 4YS H15 NA	

Filler Metal Sizes (mm):
E81T1-K2-φ1.6

Flux Type and Trade Name:

Gas Composition: Shielding CO2 99.9%; Backing N/A
Gas Flow Rate: Shielding; Backing N/A
Tungsten Electrode Type & Size: N/A
Backing Strip Type & Size: N/A

†Select from dropdown menu
** Delete as appropriate*

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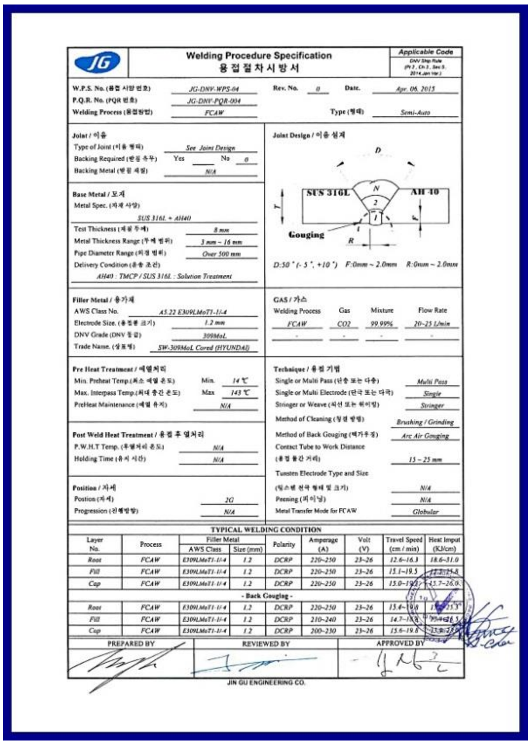
Form 5206 (2005.03)



JG

Welding Procedure Specification
용접절차시방서

Applicable Code: DNV Ship Rule (Pt.2, Ch.3, Sec.5, 2014.Jan Ver.)

W.P.S. No.: JG-DNV-WPS-04 | Rev. No.: 0 | Date: Apr. 06, 2015
P.Q.R. No.: JG-DNV-PQR-004
Welding Process: FCAW | Type: Semi-Auto

Joint / 이음
Type of Joint: See Joint Design
Backing Required: Yes ___ No 0
Backing Metal: N/A

Joint Design / 이음 설계

Base Metal / 모재
Metal Spec.: SUS 316L + AH40
Test Thickness: 8 mm
Metal Thickness Range: 3 mm ~ 16 mm
Pipe Diameter Range: Over 500 mm
Delivery Condition: AH40 : TMCP / SUS 316L : Solution Treatment

Filler Metal / 용가재
AWS Class No.: A5.22 E309LMoT1-1/-4
Electrode Size.: 1.2 mm
DNV Grade: 309MoL
Trade Name.: SW-309MoL Cored (HYUNDAI)

GAS / 가스

Welding Process	Gas	Mixture	Flow Rate
FCAW	CO2	99.99%	20~25 L/min
-	-	-	-

Pre Heat Treatment / 예열처리
Min. Preheat Temp.: Min. 14 ℃
Max. Interpass Temp.: Max 143 ℃
PreHeat Maintenance: N/A

Technique / 용접 기법
Single or Multi Pass: Multi Pass
Single or Multi Electrode: Single
Stringer or Weave: Stringer
Method of Cleaning: Brushing / Grinding
Method of Back Gouging: Arc Air Gouging
Contact Tube to Work Distance: 15 ~ 25 mm
Tunsten Electrode Type and Size: N/A
Peening: N/A
Metal Transfer Mode for FCAW: Globular

Post Weld Heat Treatment / 용접 후 열처리
P.W.H.T Temp.: N/A
Holding Time: N/A

Position / 자세
Postion: 2G
Progression: N/A

TYPICAL WELDING CONDITION

Layer No.	Process	Filler Metal AWS Class	Filler Metal Size (mm)	Polarity	Amperage (A)	Volt (V)	Travel Speed (cm / min)	Heat Input (KJ/cm)
Root	FCAW	E309LMoT1-1/-4	1.2	DCRP	220~250	23~26	12.6~16.3	18.6~31.0
Fill	FCAW	E309LMoT1-1/-4	1.2	DCRP	220~250	23~26	15.1~19.5	[illegible]
Cap	FCAW	E309LMoT1-1/-4	1.2	DCRP	220~250	23~26	15.0~19.[illegible]	15.7~26.0
- Back Gouging -								
Root	FCAW	E309LMoT1-1/-4	1.2	DCRP	220~250	23~26	15.4~19.[illegible]	[illegible]
Fill	FCAW	E309LMoT1-1/-4	1.2	DCRP	210~240	23~26	14.7~1[illegible]	[illegible]
Cap	FCAW	E309LMoT1-1/-4	1.2	DCRP	200~230	23~26	15.6~19.8	[illegible]

PREPARED BY	REVIEWED BY	APPROVED BY

JIN GU ENGINEERING CO.

ABS

MISCELLANEOUS SURVEY REPORT

Page 1 of 2

SURVEY OF:
WELDING PROCEDURE QUALIFICATION TEST

Report No.: BK819783-B	Date: 28 May 2007	Port: Busan, Korea
Vessel's Name: -		ABSID/PID/CID: 18690
Manufacturer: JIN GU ENGINEERING CO.		Mfg.No.: -
Purchaser/Builder/S.Y.: -		PO No./Hull No.: -
Location: BUSAN, KOREA		Rating (WP/HP/KW): -
Serial Number: -	Weight: -	Test Pressure: -
Material Test Report No. or Mill Sheets Verified: -		Service Use: -
Drawing No. and Date Approved or for Multiple Drawing, Plan Approval Office: TASK No.228388 DATED 26 FEBRUARY 2007, BUSAN ENG'G OFFICE		ABS Markings: -

THIS IS TO CERTIFY that the undersigned Surveyor to this Bureau attended for the above survey and reports as follows:

The following welding procedures approval test were carried out in accordance with approved welding procedure specifications, examined, tested as required and considered satisfactory.

WPS No.	: FC-003	: FC-004
PQR No.	: QFC-003-1 / QFC-003-2	: QFC-004-1 / QFC-004-2
Welding Process	: FCAW	: FCAW
Welding Position	: 2G(for QFC-003-1) / 3G (for QFC-003-2)	: 2G(for QFC-004-1) / 3G (for QFC-004-2)
Type of Joint	: Groove(1/2 V) with Back Gouging	: Groove(1/2 V) with Back Gouging
Base Metal	: Cast Steel(30t)+NV/EH36(30t)	: AB/EH36(30t) + NV/EH36(30t)

Filler Metal : 81-K2(Hyundai Super Cored) / φ1.6 (AWS A5.29 / E81T1-K2) for Base Metal Cast Steel (ASTM A148 Gr.90-60) and ABS Higher-strength Structural steel (AB/EH36)
Shielding Gas : CO2 99.9%

For result of test, please refer to the approved procedure qualification test records.
This welding procedures to be approved subject to final review of procedure qualification test records by ABS technical office.

Jong-Tak Kim, Surveyor, American Bureau of Shipping
Surveyor, American Bureau of Shipping

(If additional space is required, use other side of this form)

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AB 113 | Revision 9

HDE HYUNDAI ELECTRIC FACTORY

HYUNDAI ELECTRIC FACTORY

OUR PRODUCTS

MAIN SWITCH BOARD (MSBD)
BRIDGE CONTROL CONSOL (BCC)
ENGINE ROOM CONTROL CONSOL (ECC)

MAIN SWITCH BOARD (MSBD)

MAIN SWITCH BOARD FOR TANKER

MSBD FOR SUBIC PHILIPPINES

MSBD FOR KOREAN GOVERNMENT VESSEL

SUMEC CHINA (MSBD)

FEEDER PANEL

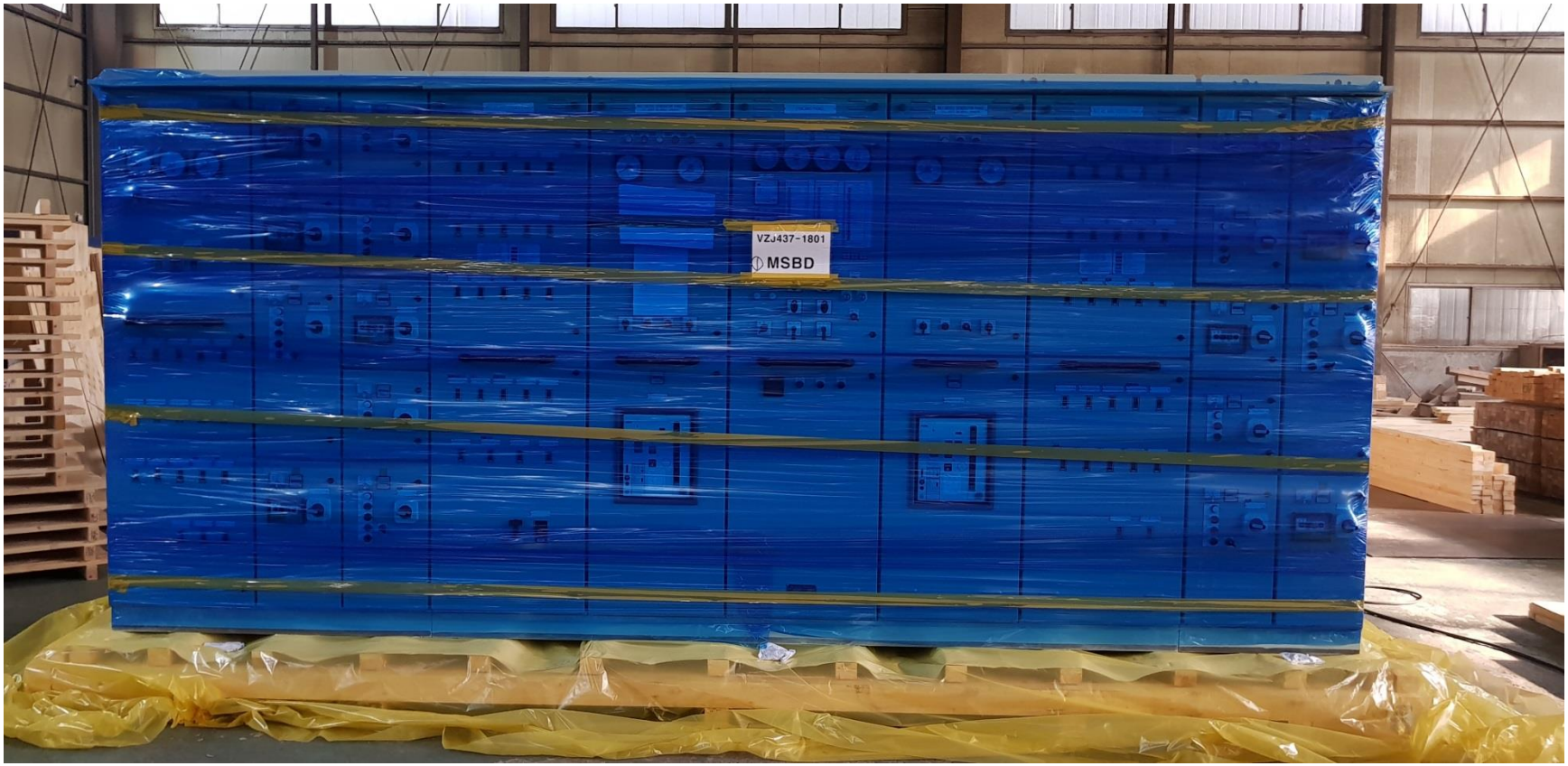
FEEDER PANEL

SUMEC CHINA
ENGINE ROOM CONSOL

EMERGENCY PANEL

SHOP TEST FOR MSBD

MSBD PACKING
(FOR SUMEC CHINA)



BRIDGE CONTROL CONSOL

FOR FLOATING CRANE

CONTROL CONSOL FOR 5000G/T CONSTRUCTION BARGE (HHI)

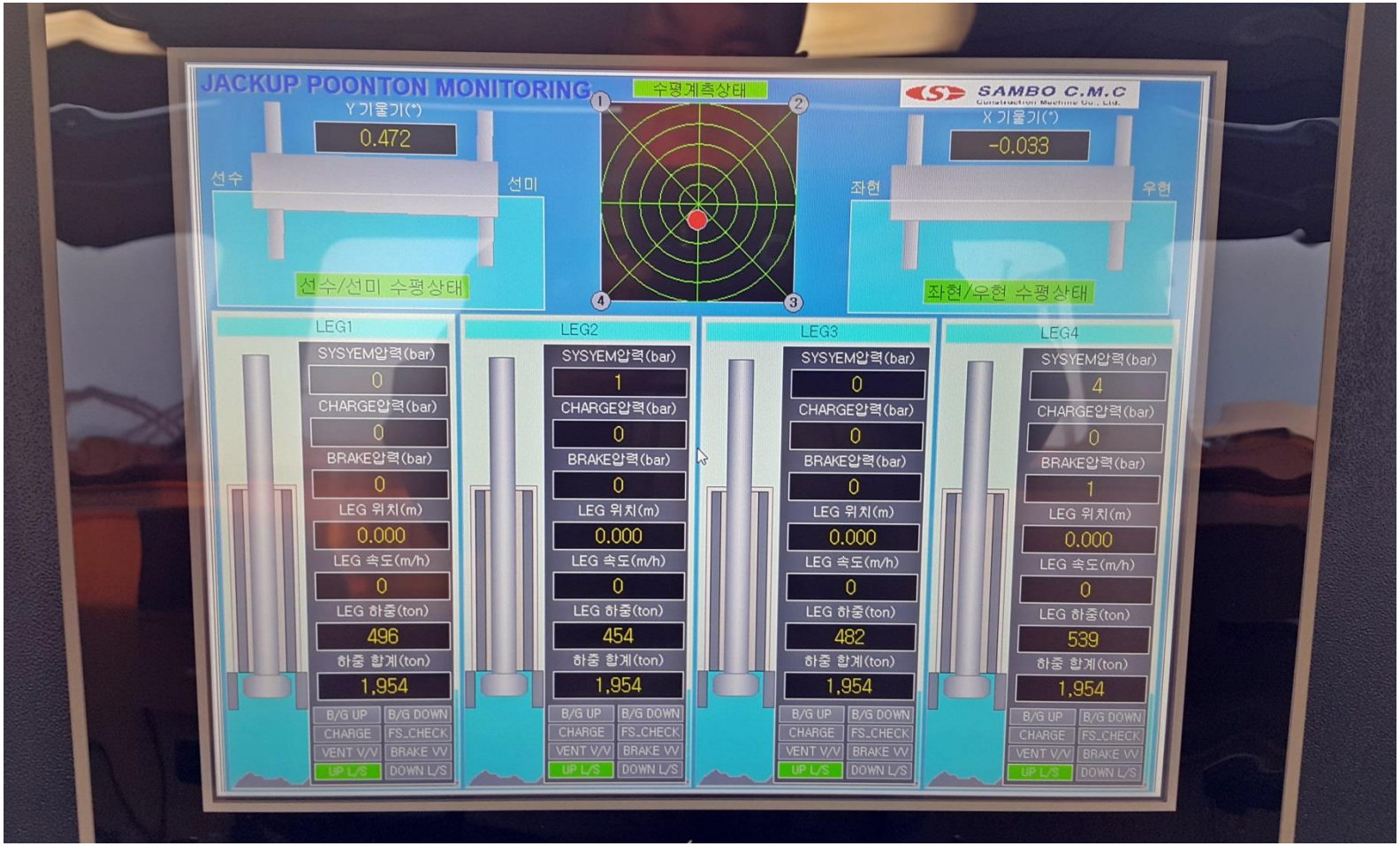
BRIDGE CONTROL CONSOL (FOR HHI CONSTRUCTION BARGE)

BRIDGE CONTROL CONSOL (FOR HHI CONSTRUCTION BARGE)

JACK UP BARGE BCC

BALLAST CONTROL CONSOL FOR JACK UP BARGE

JACK UP BARGE POONTON MONITORING



BRIDGE CONTROL CONSOL(BCC) FOR KOREAN NAVY VASSEL

BCC FOR RESEARCH VESSEL

BCC FOR KOREAN GOVERNMENT VESSEL

BCC FOR COAST GUARD

BCC FOR KOREAN GOVERNMENT VESSEL

BCC FOR PATROL SHIP

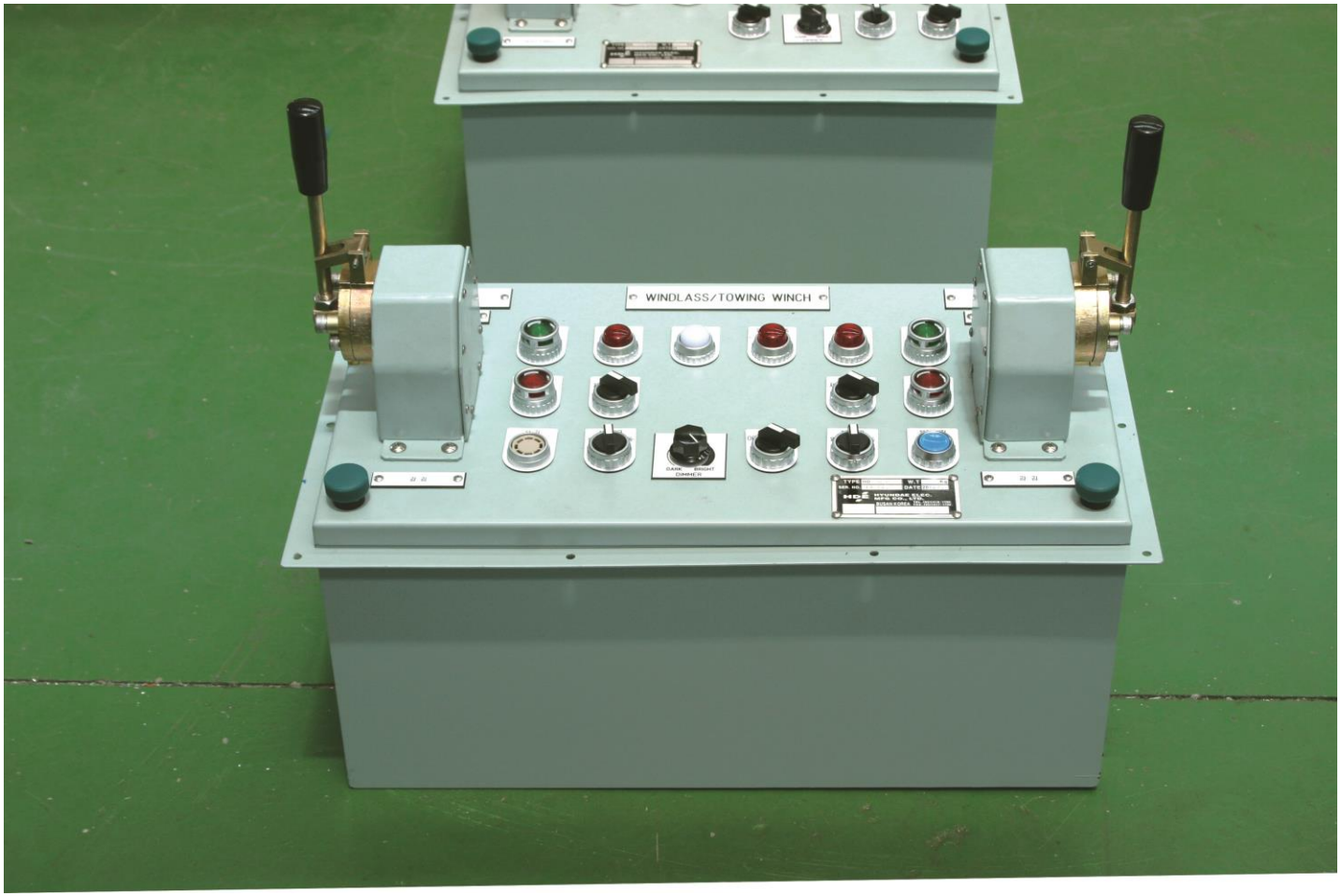
STEERING GEAR CONTROL (OWNER'S INSPECTION)

BCC FOR KOREAN NAVY

BCC FOR KOREAN NAVY

WINCH & DAVIT REMOTE CONTROL CONSOL FOR HOPPER DREDGER

WINDLASS / TOWING WINCH REMOTE CONTROL FOR TUG



WING CONSOL

NAVIGATION CONSOL

GPS

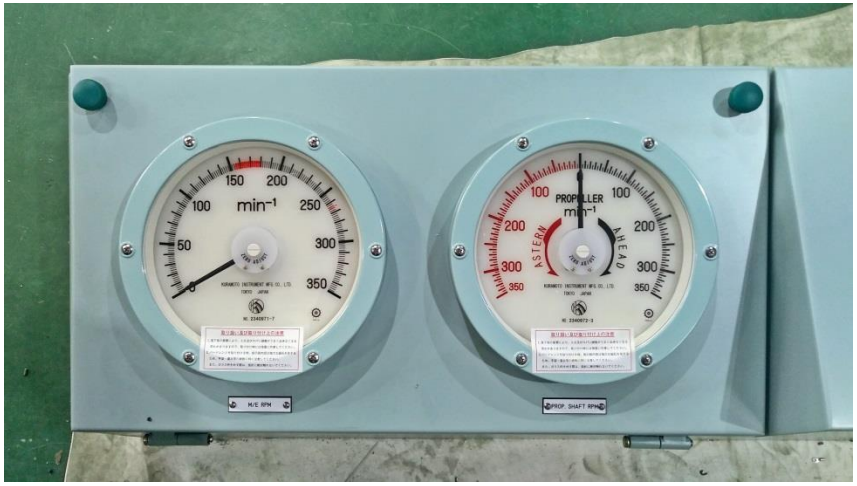
GYRO CONSOL

WHEEL HOUSE HEAD DISPLAY

WHEEL HOUSE HEAD DISPLAY

ANEMOMETER & SPEED LOG DISPLAY

RPM DISPLAY PANEL



ENGINE ROOM CONTROL CONSOL (ECC)

ECC FOR SUBIC HEAVY (PHILIPPINES)

ECC FOR KOREAN GOVERNMENT VESSEL

ECC FOR KOREAN NAVY

ECC FOR FLOATING CRANE

OWNER’S INSPECTION

CLASS INSPECTION

HYUNDAI ELECTRIC FACTORY

OUR PRODUCTS

CONTROL & DISTRIBUTION PANEL

BATTERY CHARGING & DISCHARGING BOARD

STARTER & VARIOUS KIND PANEL

SHORE CONNECTION & TRANSFORMER

ALARM PANEL

FLOATING CRANE'S WINCH REMOTE WINCH CONTROL

SALCO 3600G/T FLOATING CRANE BRIDGE CONTROL

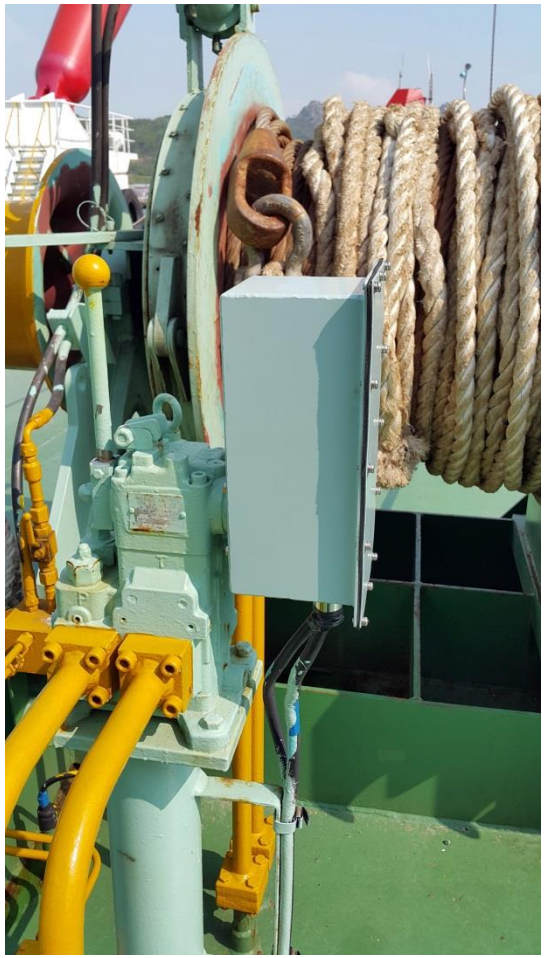
SALCO 3600G/T FLOATING CRANE BRIDGE CONTROL

HOPPER DREDGER WINCH &DAVIT CONTROL

REMOTE CONSOL FOR G/T 8000 HOPPER DREDGER

ELEC. WINCH CONTROL FOR 5000GT FLOATING CRANE

GEARED TRANMITTER FOR WINCH AND HYDR. EQUIPMENT



DISTRIBUTION PANEL & LOAD BANK

DISTRIBUTION PANEL

LOAD BANK

BATTERY CHARGING & DISCHARGING BOARD

SHORE CONNECTION

EMERGENCY ALARM PANEL

ALARM UNIT


NO1
NO2
STEERING GEAR
SOURCE
RUN
MAIN SOURCE FAIL
PHASE FAIL
OVER LOAD
OIL LOW LEVEL
AUTO-PILOT POWER FAIL
SPARE
SPARE
SPARE
YOO WON M-TECH
WATER MIST REPEATER
MAIN ENGINE
SPARE
SPARE
SPARE
SPARE
SYSTEM READY
TEST BUTTON
SYSTEM STATUS
SEAPLUS
SIGNAL BOARD SLB-2000
SIGNAL LIGHT COLUMN
Err1
Err2
P

STEERING GEAR
STARTER & ALARM PANEL

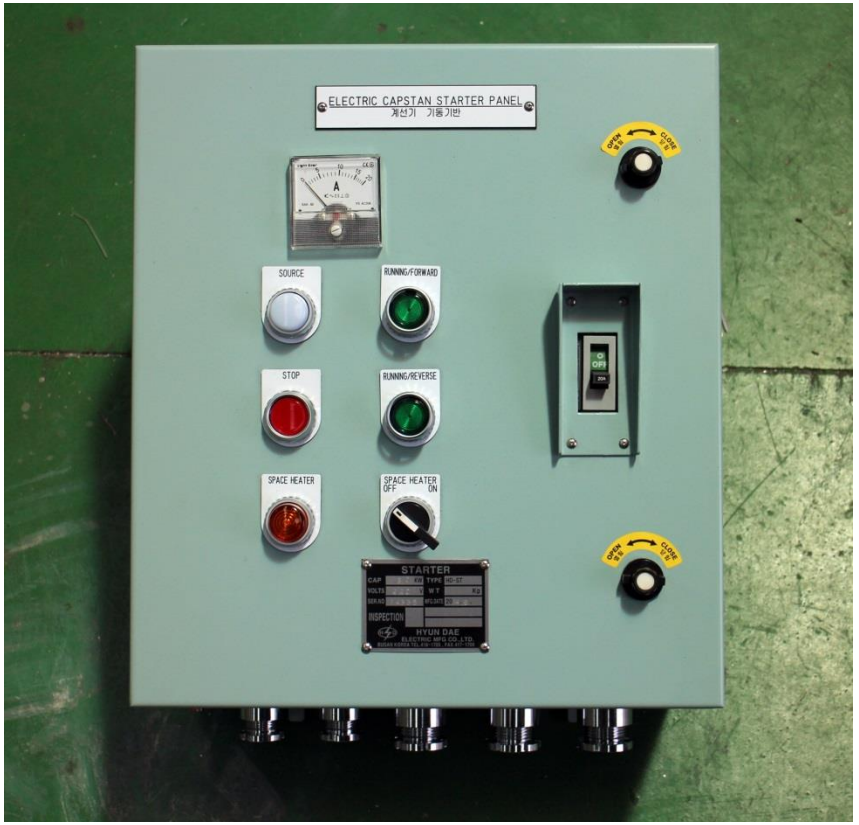
FEEDER PANEL

WINCH STARTER PANEL

CAPSTAN STATER & REMOTE BOX

ELEC. CAPSTAN

STARTER



STARTER

BALLAST PUMP STARTER

HABOR GEN. STARTER

AIR & WATER CONTROL PANEL

PUMP CONTROL & STARTER

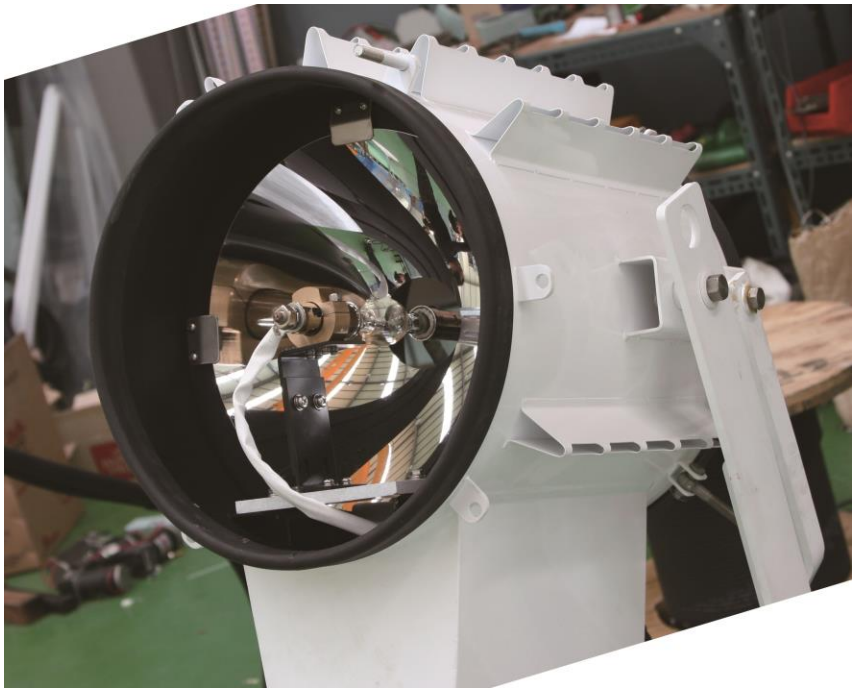
HYUNDAI ELECTRIC FACTORY

OUR PRODUCTS

SEARCH LIGHT & LIGHT TRANSFORMER
AXIAL FLOW FAN

XENON SEARCH LIGHT

SEARCH LIGHT



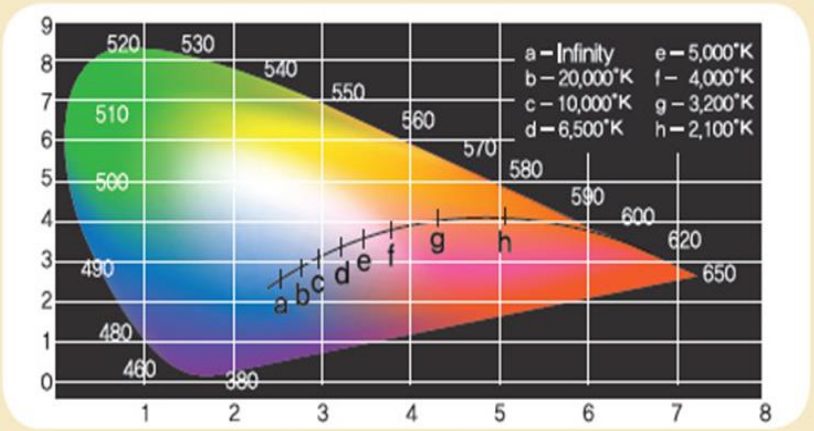
SEARCH LIGHT STARTER & REMOTE

FISHING LAMP

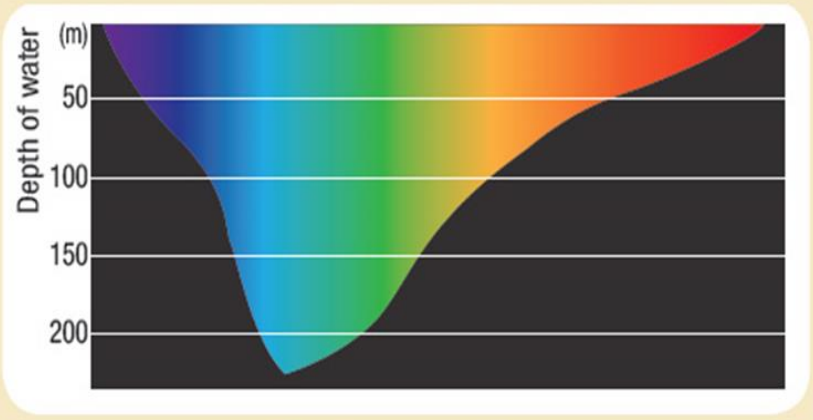
METAL HALIDE LAMP

· High luminance & high efficiency

· High luring ability by sun color



Color comparison



Depth penetration

METAL HALIDE LAMP

POWER 1,500W ~4,000W

METAL HALIDE SLIM LAMP

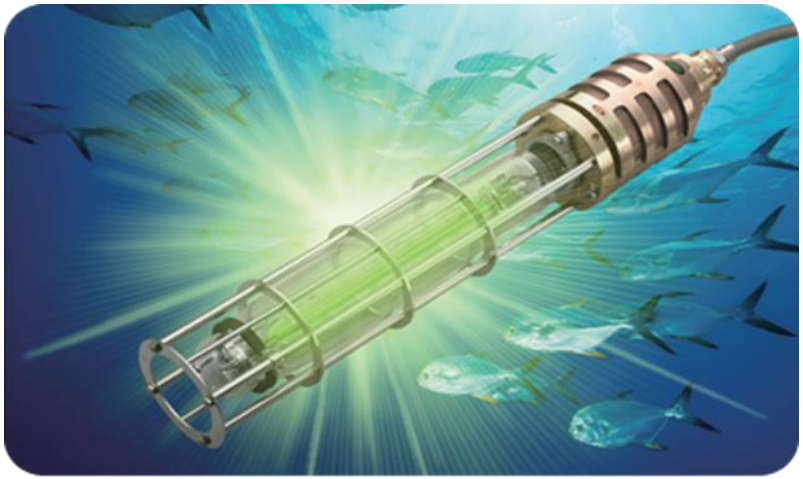
- Compact and light enough to make it easy to use

1,500W

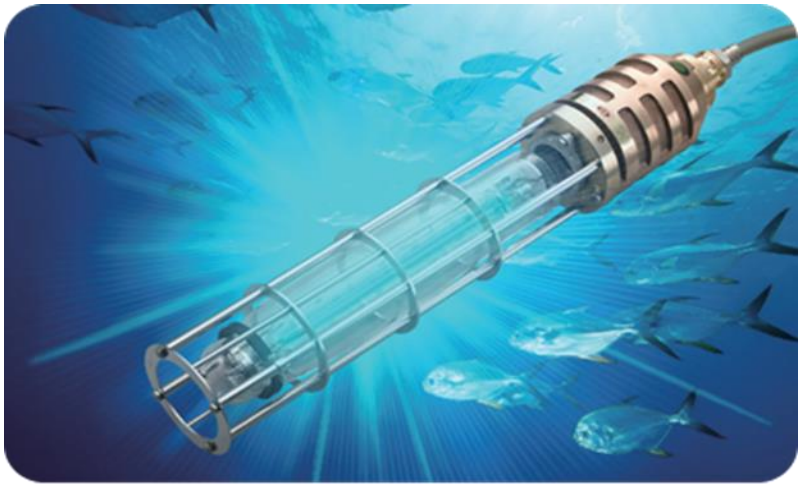
4,000W

METAL HALIDE UNDERWATER LAMP

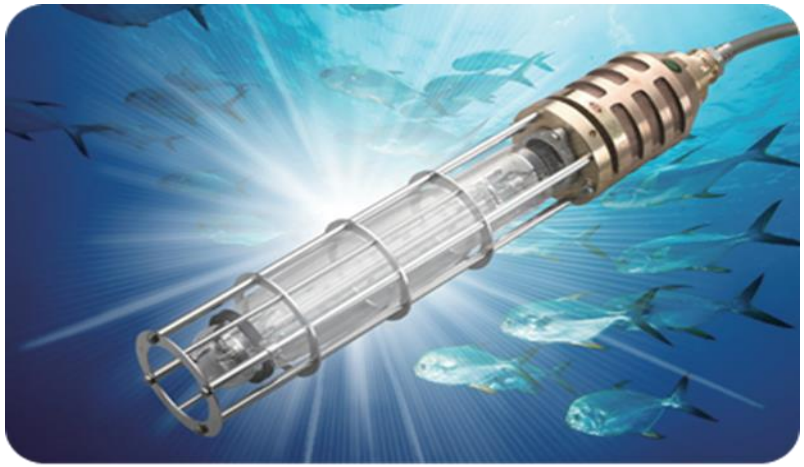
·Various lamp colors in green, white and blue
·Available in depth of 400m using exclusive lamp holder



Green color <G>



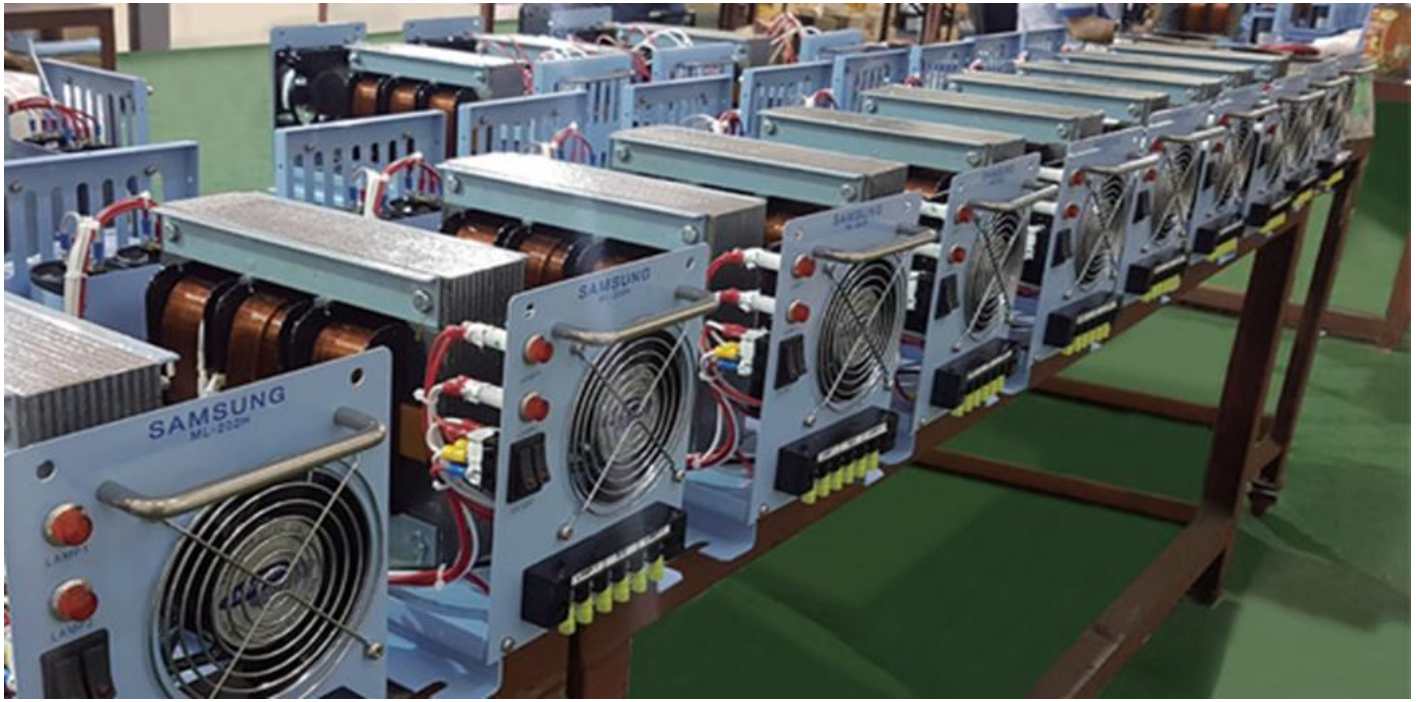
Blue color <B>



White color <W>

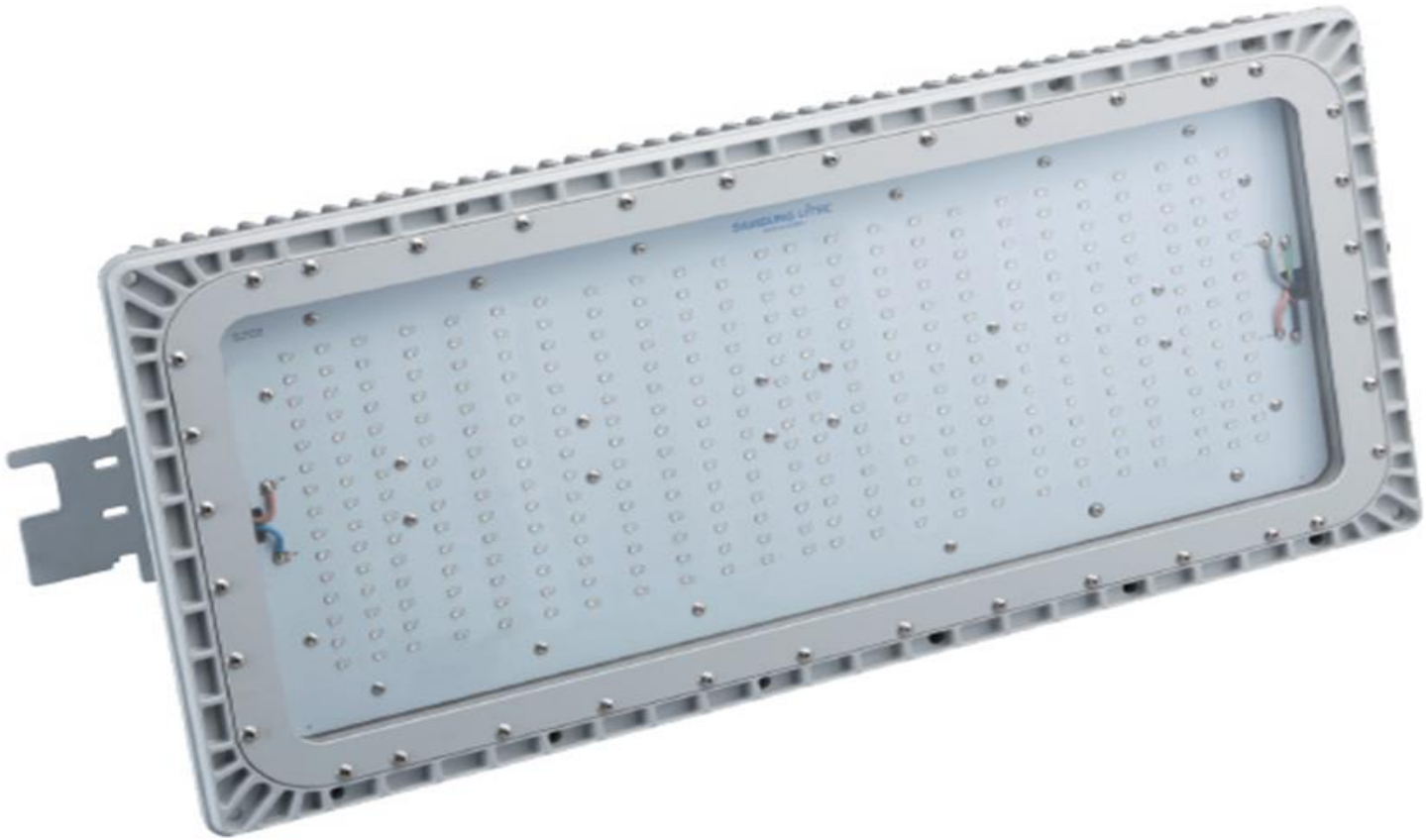
STABILIZER

- Highly efficient & good starting ability by lead peak type(RC-Type)
- Resistant to moisture & vibration by coiling coil around bobbins



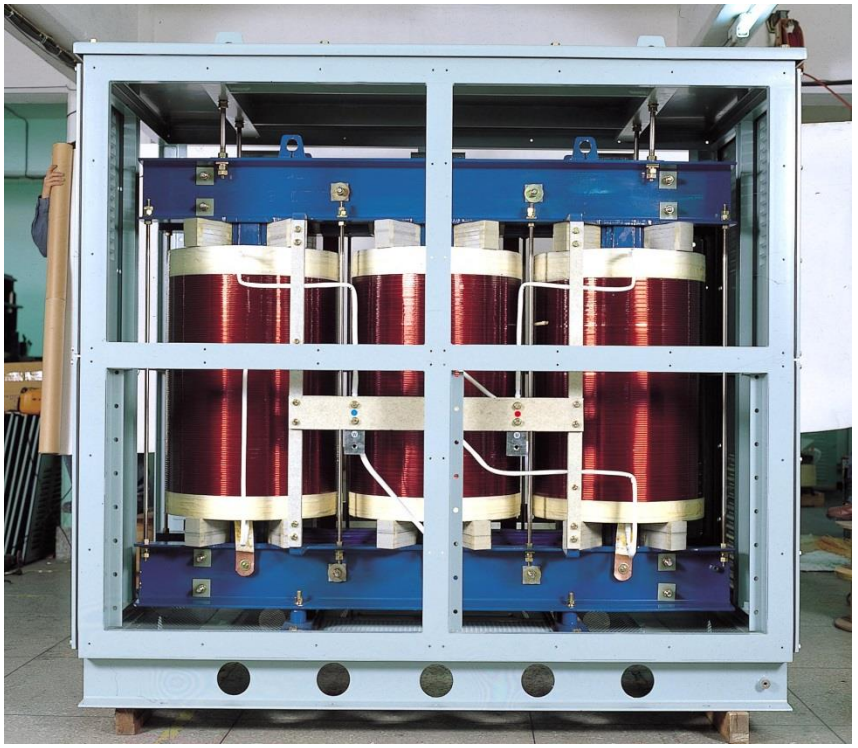
STABILIZER

LED FISHING LAMP



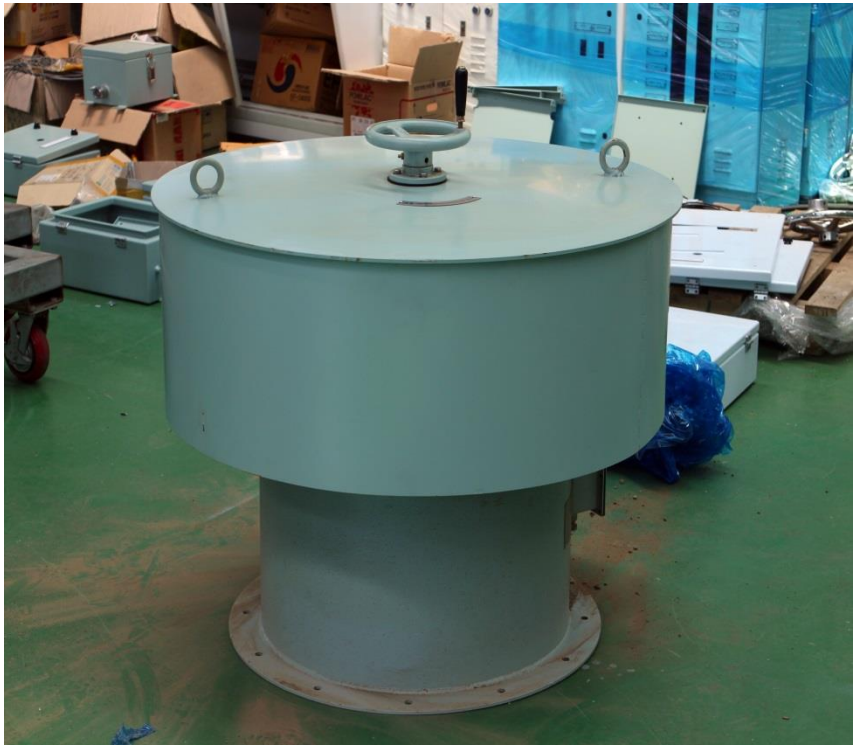
TRANSFORMER

TRANSFORMER

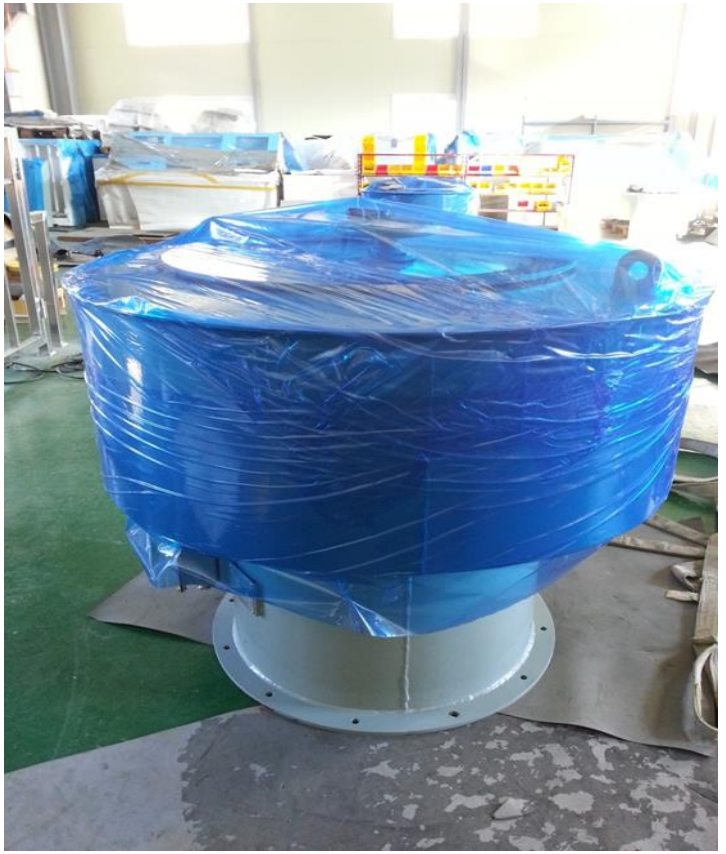


TRANSFORMER

AXIAL FLOW FAN



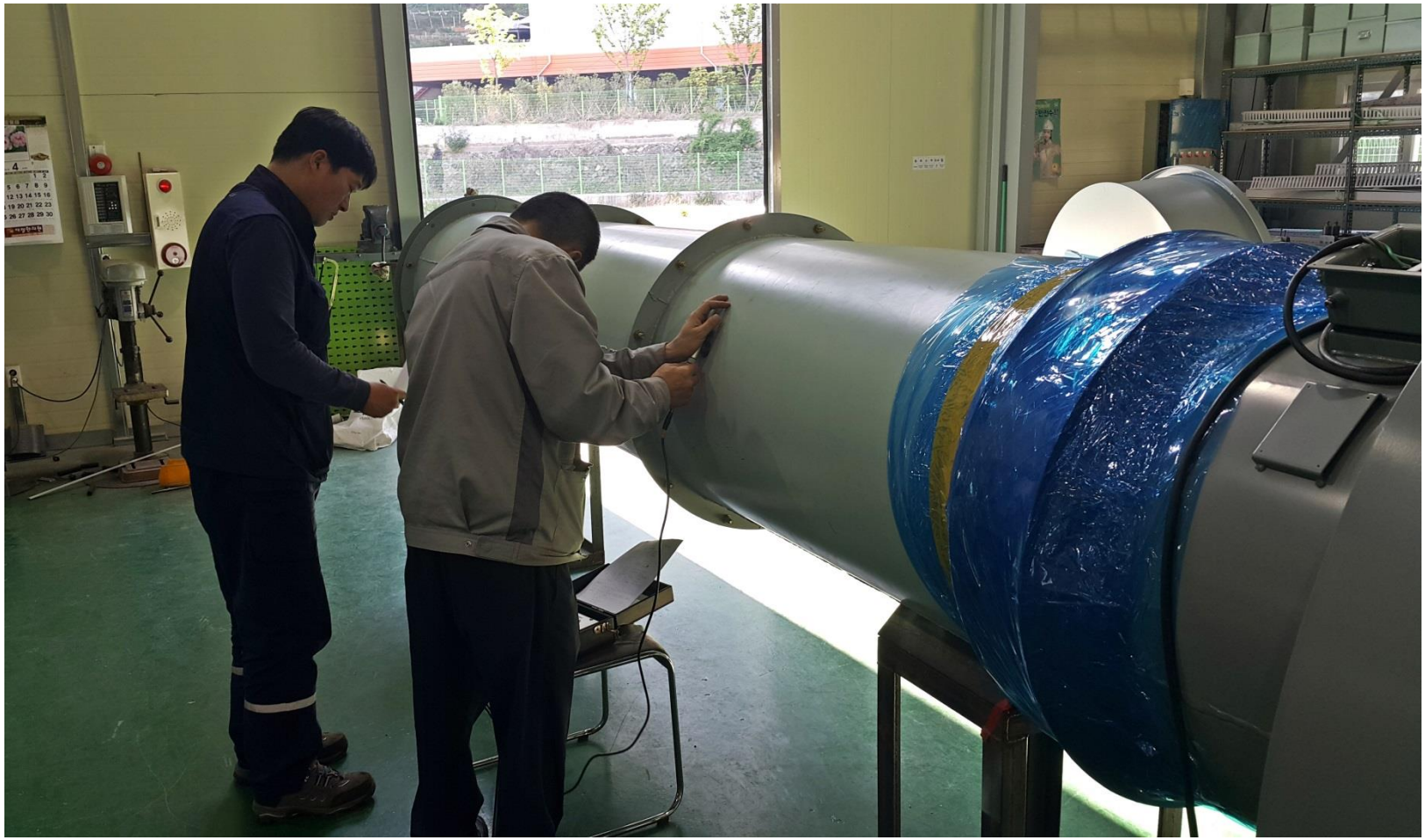
AXIAL FLOW FAN



FAN ASSEMBLY

FAN & STARTER

CLASS INSPECTION



THANK YOU!