

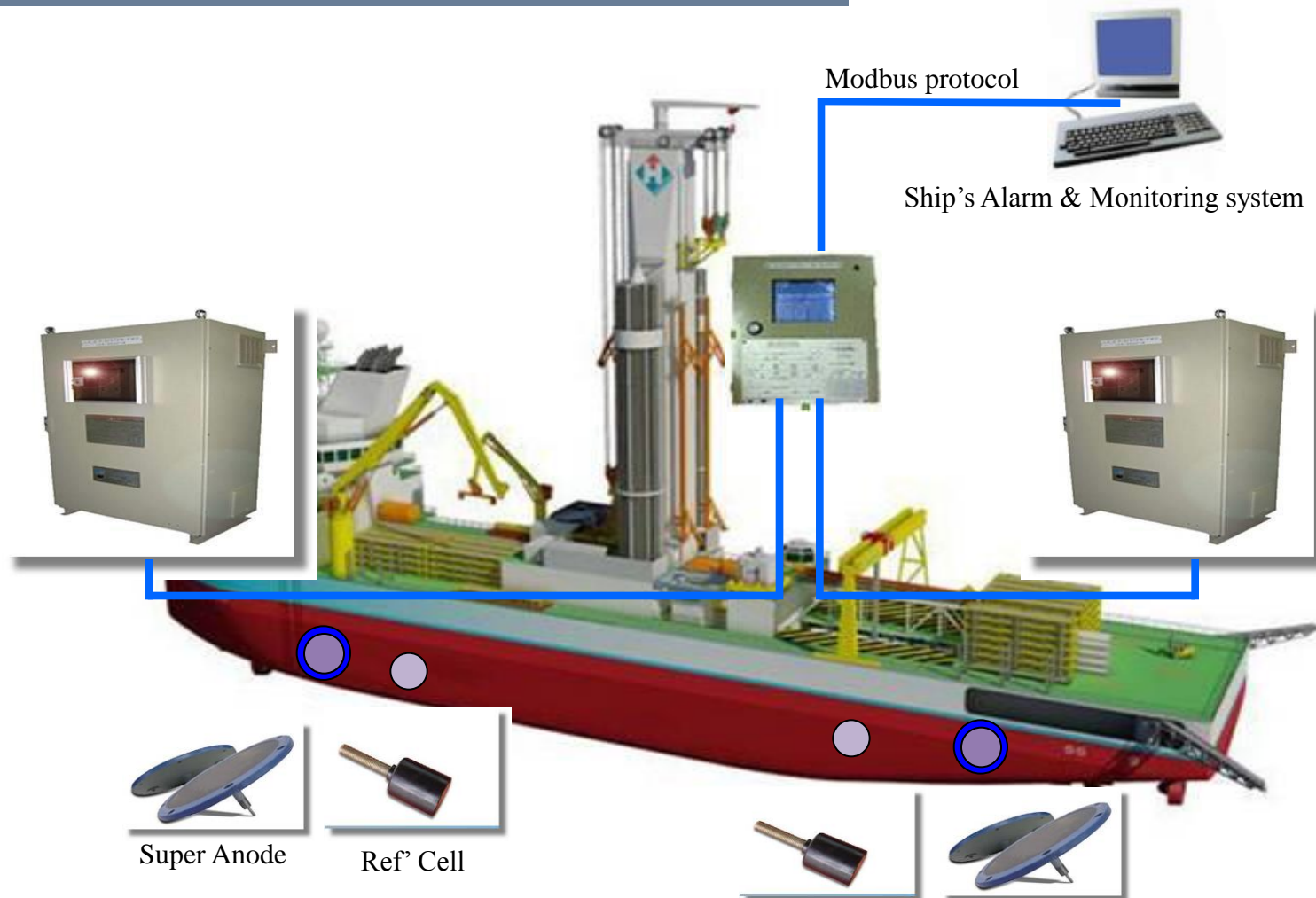
# ICCP/MGPS SYSTEM “PERFECT SOLUTION”

- CONTENTS -

1. ICCP SYSTEM
2. MGPS SYSTEM
3. SED SYSTEM



# 1. ICCP SYSTEM - COMPOSITION



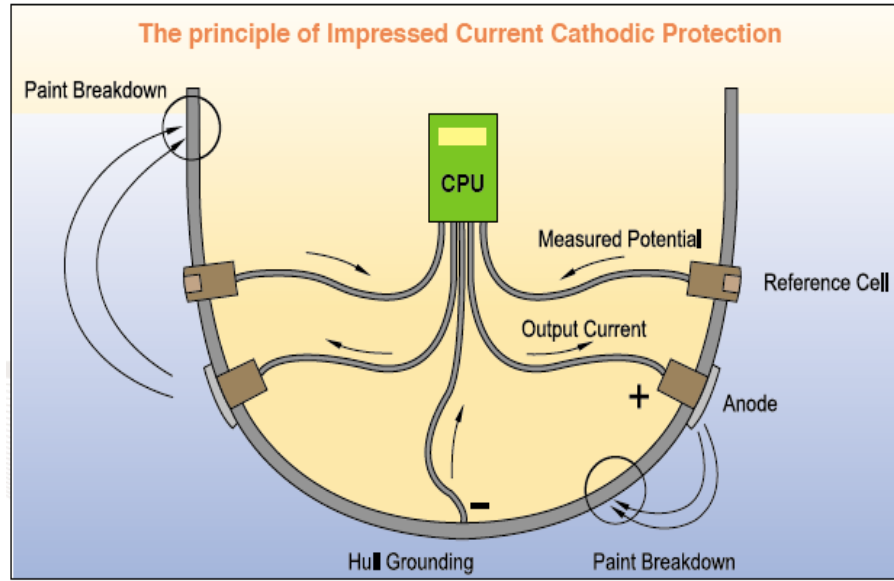
※ If ship's LOA is under 175m, ICCP system is only equipped to the stern part.

# 1. ICCP SYSTEM - PRINCIPLE

**ANODE**



**REFERENCE CELL**

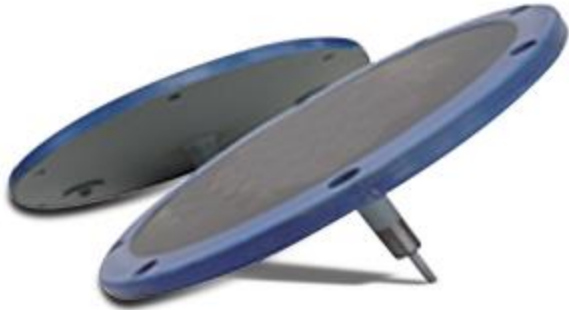


**CURRENT  
OUTPUT**

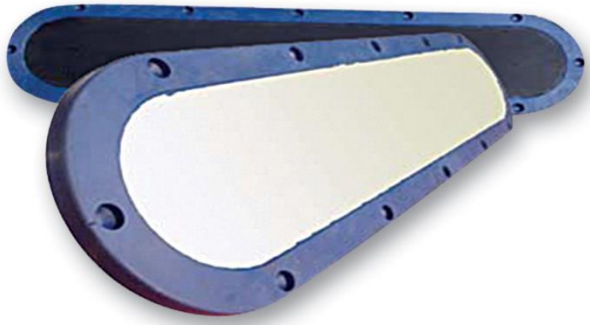


**MEASURED  
POTENTIAL**

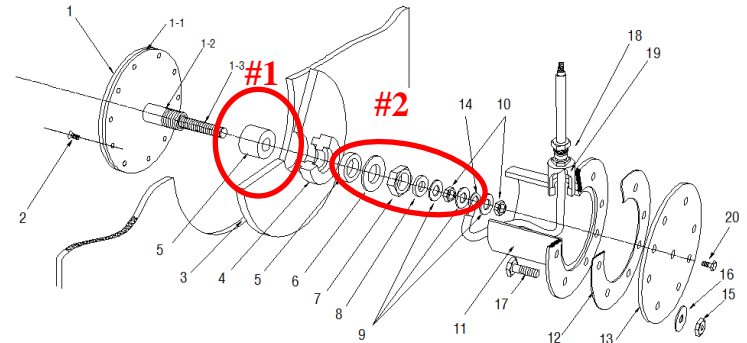
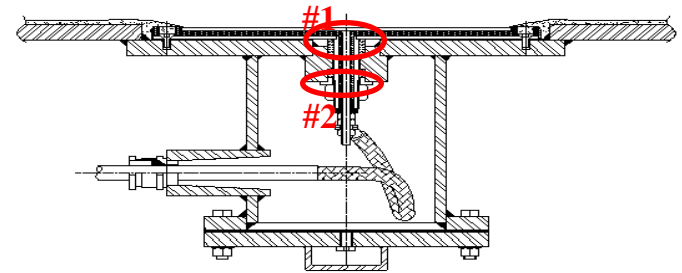
## 1. ICCP SYSTEM - COMPONENT



<CIRCULAR YTYPE ANODE>



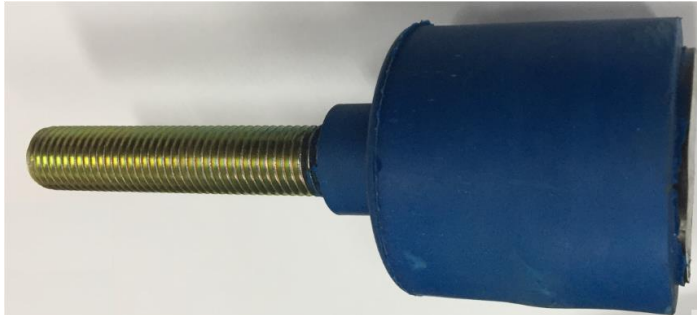
<LINEAR TYPE ANODE>



Sealing Part & Anode holding part

SEHONG : Strongly water tightened by Silicon rubber ring. M33 Nut hold the anode perfectly.

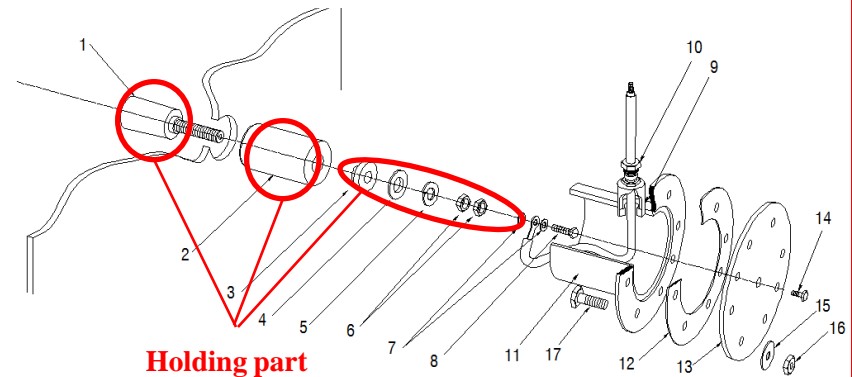
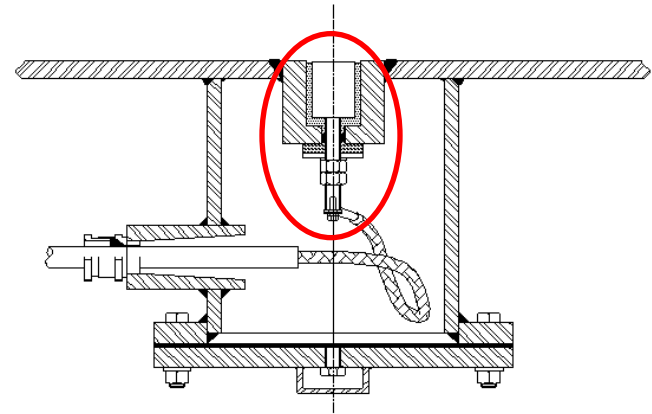
## 1. ICCP SYSTEM - COMPONENT



<Circular type Reference Cell >



<Oval type Reference Cell>



Sealing Part & Cell holding part

SEHONG : Strongly water tightened by Reference cell holder. And there is no leakage space. Holding part(thick stud) is tightened by two M16 nut.

## 2. MGPS SYSTEM - PRINCIPLE

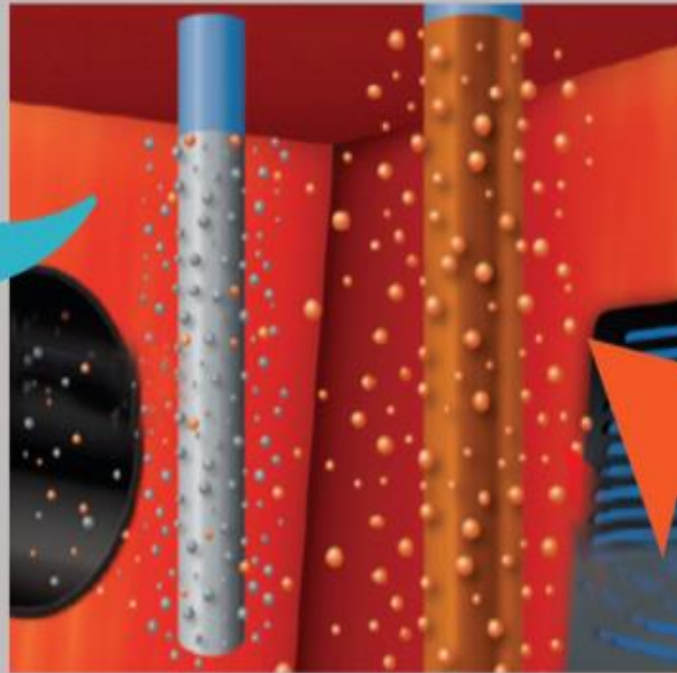
# IONIZATION OF ANODE

Treated Sea Water to the ship



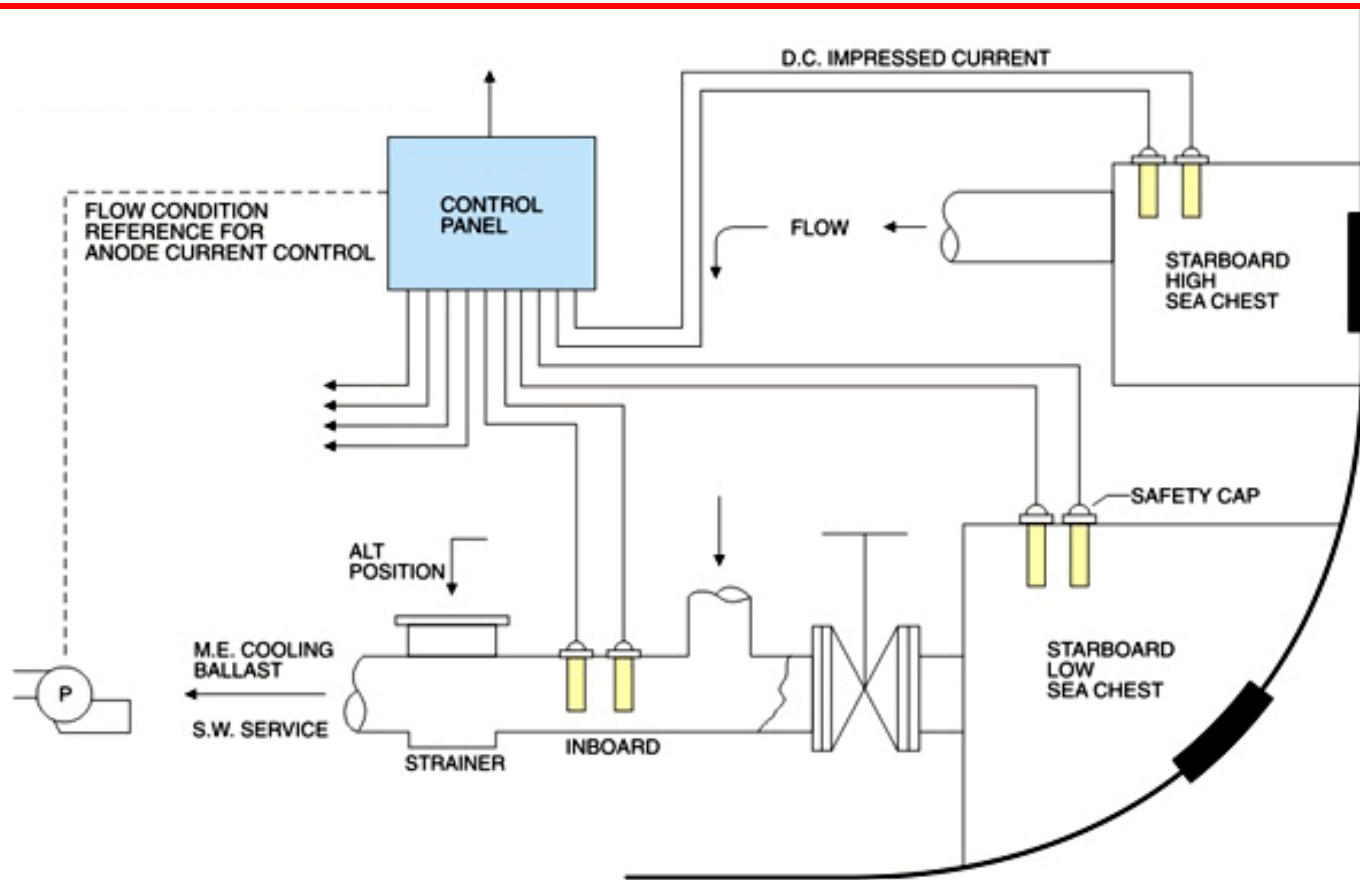
**Cu Anode : ANTI Fouling**  
Preventing settlement of  
marine micro organism

**Al(Fe) Anode : ANTI Corrosion**  
Preventing corrosion of sea chest  
and pipe line



Untreated Sea Water  
From the sea

## 2. MGPS SYSTEM – LAY OUT

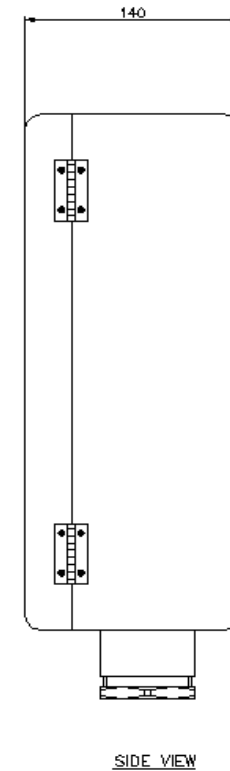
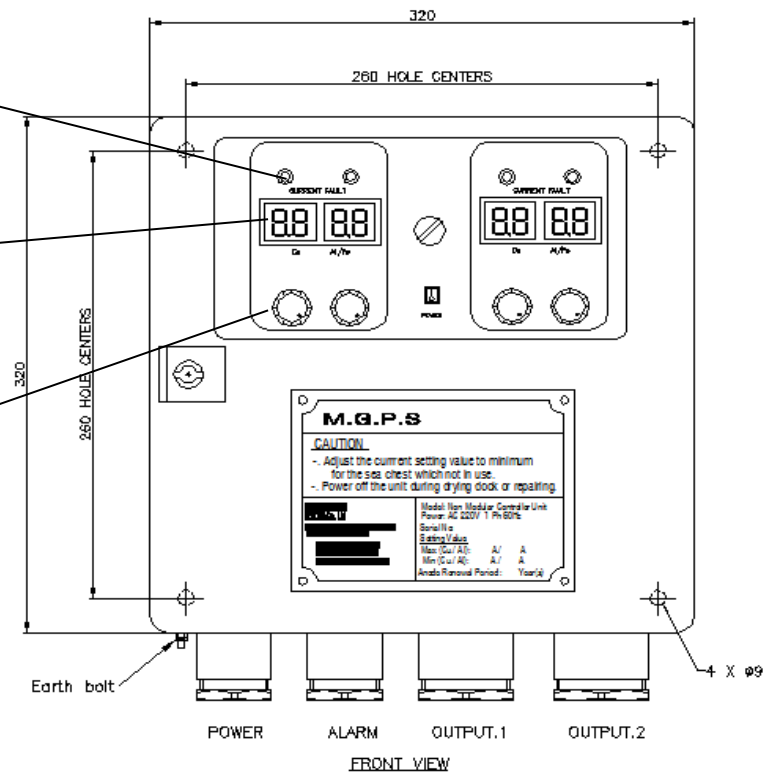


## 2. MGPS SYSTEM – COMPONENT

**ALARM  
LAMP**

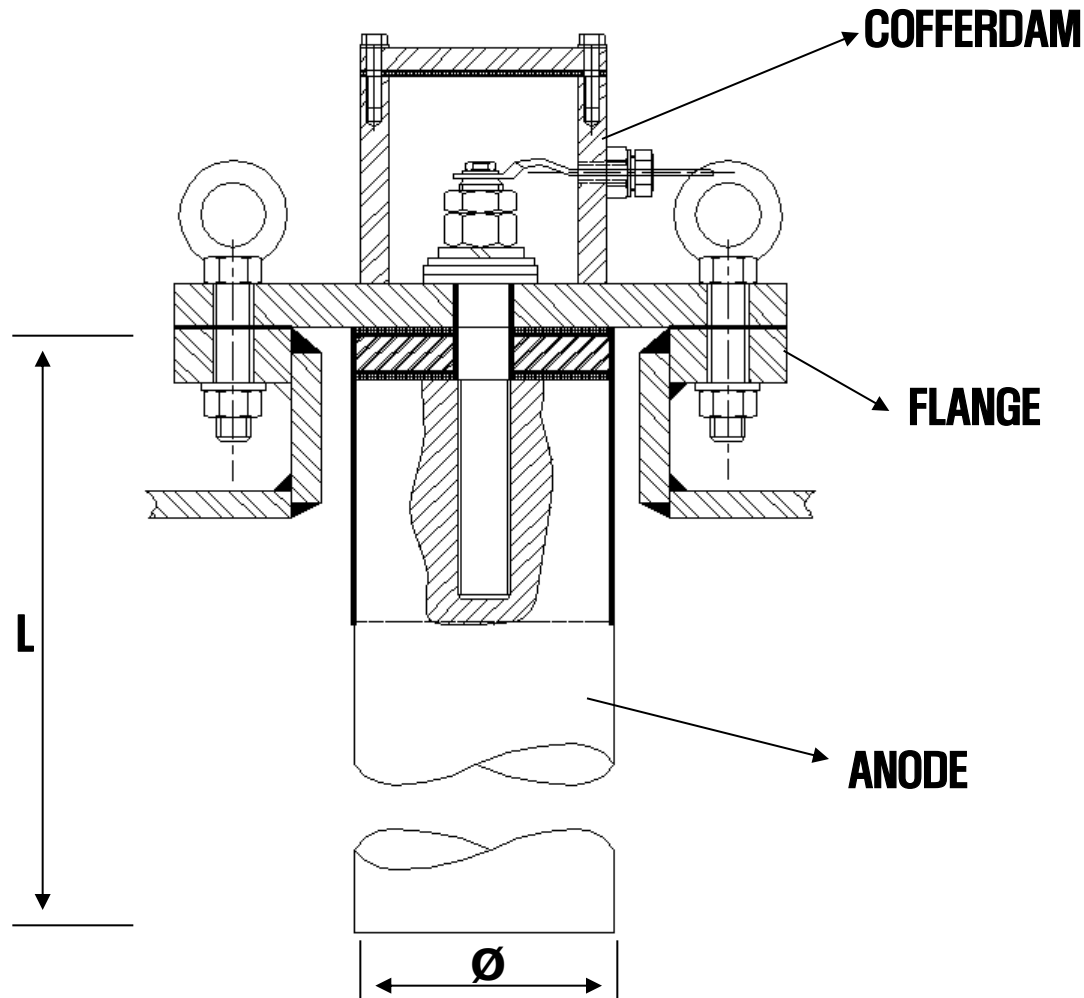
**DIGITAL  
DISPLAY**

**CONTROL  
VOLUME**



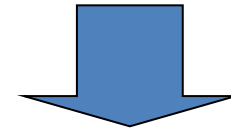


## 2. MGPS SYSTEM – COMPONENT



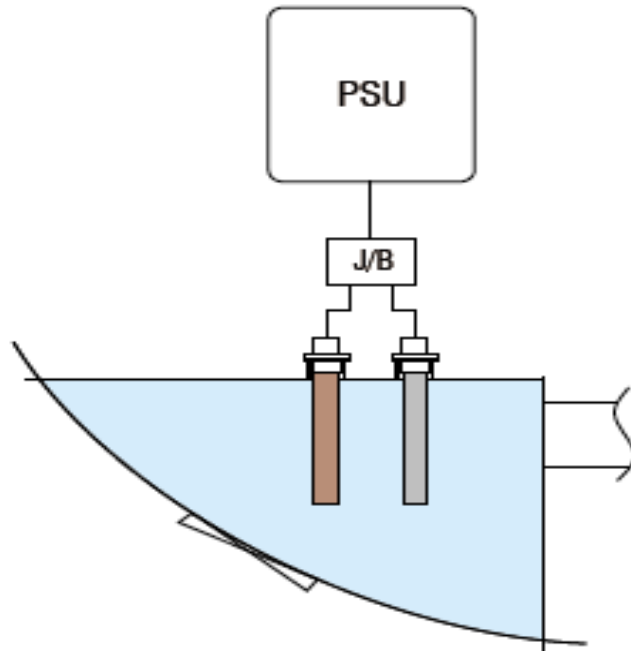
### ▣ Design element

1. Tank Flow rate ( $m^3/h$ )
2. Anode life time (years)
  - WORKING
  - SAPRE



- ▷ Anode weight (KG)
- ▷  $\text{Ø}$  (Dia) , L (Length)
  - Decided by Tank Size

## 2. MGPS SYSTEM - ARRANGEMENT(SEA CHEST TYPE)

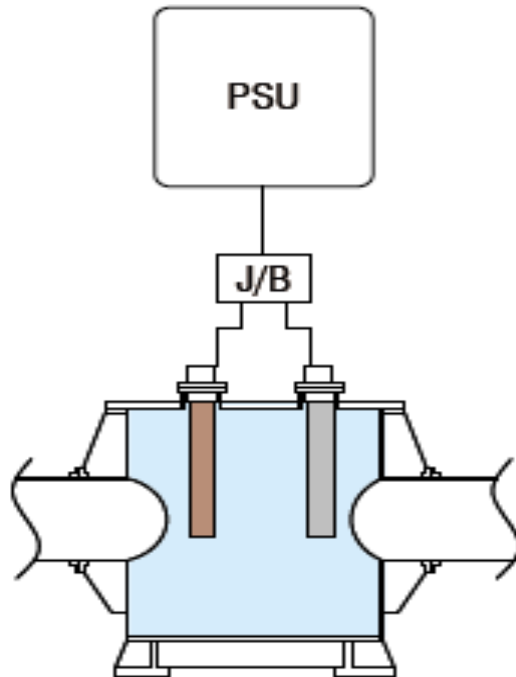


Installation on Sea Chest

※ Scope of Supply	
1set	PSU with Abnormal alarm
2set	Alloyed Cu anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Alloyed Al anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Junction Box with Plug & Receptacle
1set	Standard spare fuses with box.

< Installation on Sea Chest >

## 2. MGPS SYSTEM - ARRANGEMENT(STRAINER TANK TYPE)



Installation on Strainer

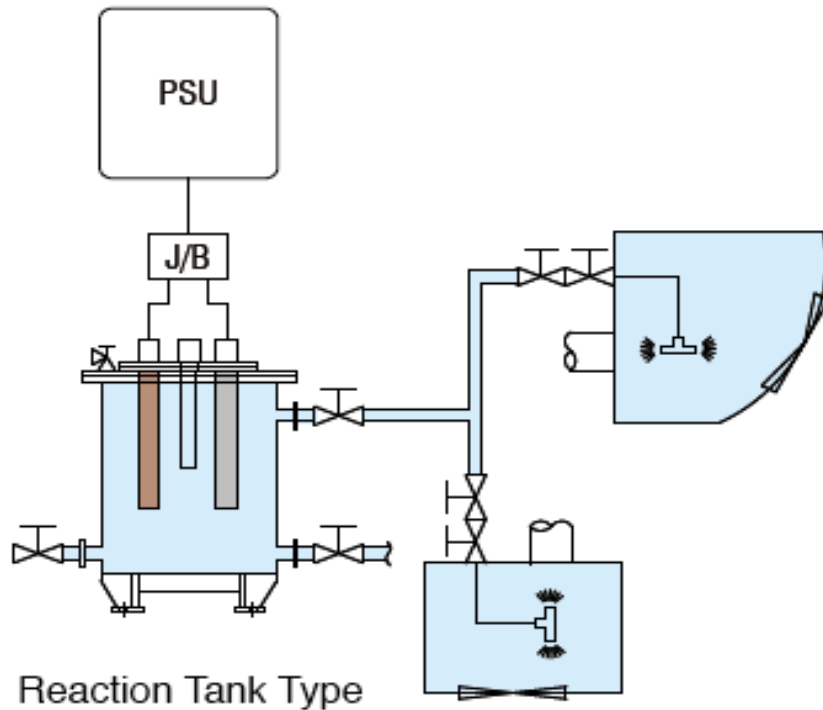
### ※ Scope of Supply

1set	PSU with Abnormal alarm
2set	Alloyed Cu anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Alloyed Al anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Junction Box with Plug & Receptacle
1set	Standard spare fuses with box.

### < Installation on Strainer >

※ This type is generally applied to the ship in Korean shipyard .

## 2. MGPS SYSTEM - ARRANGEMENT(REACTION TANK TYPE)



### ※ Scope of Supply

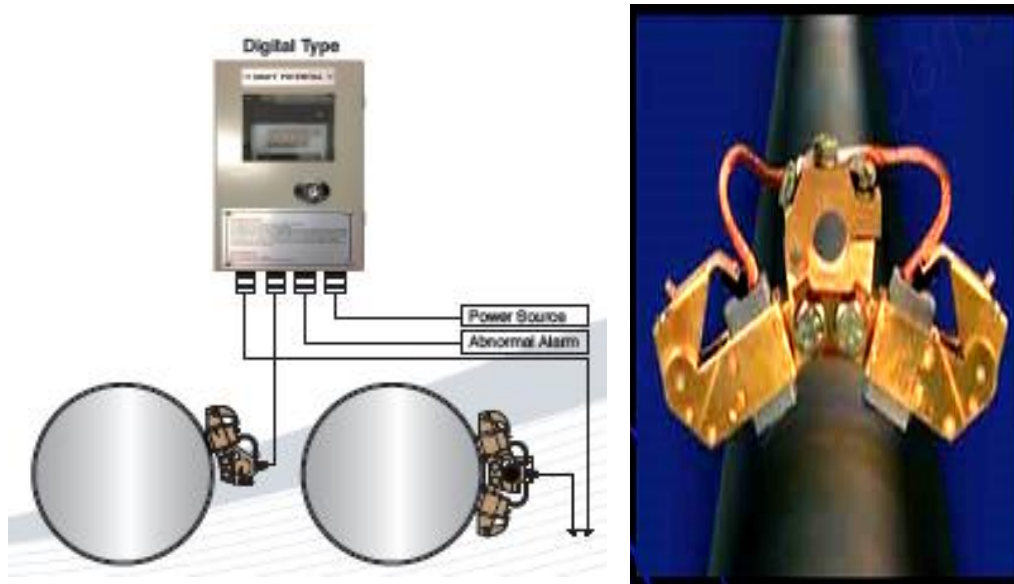
1set	PSU with Abnormal alarm
2set	Alloyed Cu anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Alloyed Al anodes with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
1set	SUS316 Cathode with with JIS 5K-XXXXA cofferdam ass'y XXX mm dia x XXX mm length, 5 mtr cable tail, Weight each: XXXkg
2set	Junction Box with Plug & Receptacle
1set	Anode Treatment tank(XXX A XXX L) with Air vent and drain valve
2set	Injection Nozzle SUS 316L
2set	Flow indicator
1set	Standard spare fuses with box.

### < Reaction Tank Type >

※ This type has same function as the chlorination type which is generally applied to the ship in Japanese shipyard .

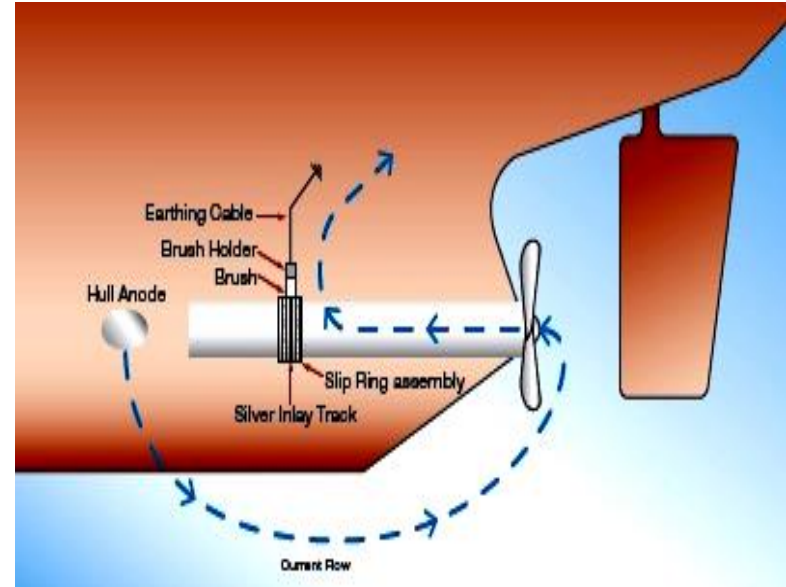
**Our reaction tank type is cheaper than chlorination type with same function and efficiency.**

### 3. SED SYSTEM - COMPOSITION & PRINCIPLE



<COMPOSITION>

- SLIPRING
- BRUSH HOLDER
- BRUSH (SILVER GRAPHITE)
- MILLIVOLT METER



<EARTHING OVERVIEW>

Reduce spark corrosion by electrical potential equilibrium between the shaft and the hull.