

No.1 DHT CORPORATION FORWARD IN THE WORLD

# Global value No.1 DHTech

**W**ATER TREATMENT SYSTEM

**C**OOLING TOWER

**S**OIL REMEDIATION



# Index

**01** COMPANY  
INTRODUCTION

---

**02** MAIN  
PRODUCT

**03** REFERENCE  
LIST

---

**04** CERTIFICATION  
PATENT



# 01 COMPANY INTRODUCTION



**1. LOCATION**

**BUSAN, SOUTH KOREA**

**2. ESTABLISHED DATE**

**1 / MARCH / 1993**

**3. EMPLOYEE**

**35**

**4. YEARLY SALE**

**USD 20,000,000**



# 01 COMPANY INTRODUCTION - HISTORY

1999

- 1993. 01 **Founded Dae Hwa Plant**
- 1999. 03 **Incorporated under the name of DH Tech (Dae Hwa Tech)**
- 1999. 07 Be selected as a supplier for POSCO

2000

- 2000. 01 Be selected as a supplier for POSCO E&C (COOLING TOWER B GRADE)
- 2000. 04 **Acquired ISO 9001 Certification (Ref. No. QSC02608)**
- 2000. 05 Moved the head office to 127-4, Gamjeon-dong, Sasang-Gu

2001~2003

- 2001. 10 Constructed ERP IT of Small and Medium Business Administration.
- 2003. 03 Be selected as an excellent company by POSCO E&C

2004~2005

- 2004. 09 **Founded a corporation in Qingdao, China**
- 2004. 12 Be selected as a clean workplace (Korea Occupational Safety & Healthy Agency)
- 2005. 03 Be selected as 2005 GOOD-QUALITY supplier by POSCO E&C
- 2005. 12 **Joined COOLING TECHNOLOGY INSTITUTE (CTI)**

2007~2008

- 2007. 04 Be selected as 2005 GOOD-QUALITY supplier by POSCO E&C
- 2007. 11 Be certified as INNO-BIZ
- 2008. 06 Be designated as a prospective exporter  
(Small Business Export Support Center in Busan and Ulsan)



# 01 COMPANY INTRODUCTION - HISTORY

## 2009~2010

- 2009. 11** Awarded USM 1 million export tower (Korea Traders Association)
- 2010. 03 Be selected as 2010 GOOD-QUALITY supplier by POSCO E&C
- 2010. 06 Being constructed for second DHT factory

## 2011~2013

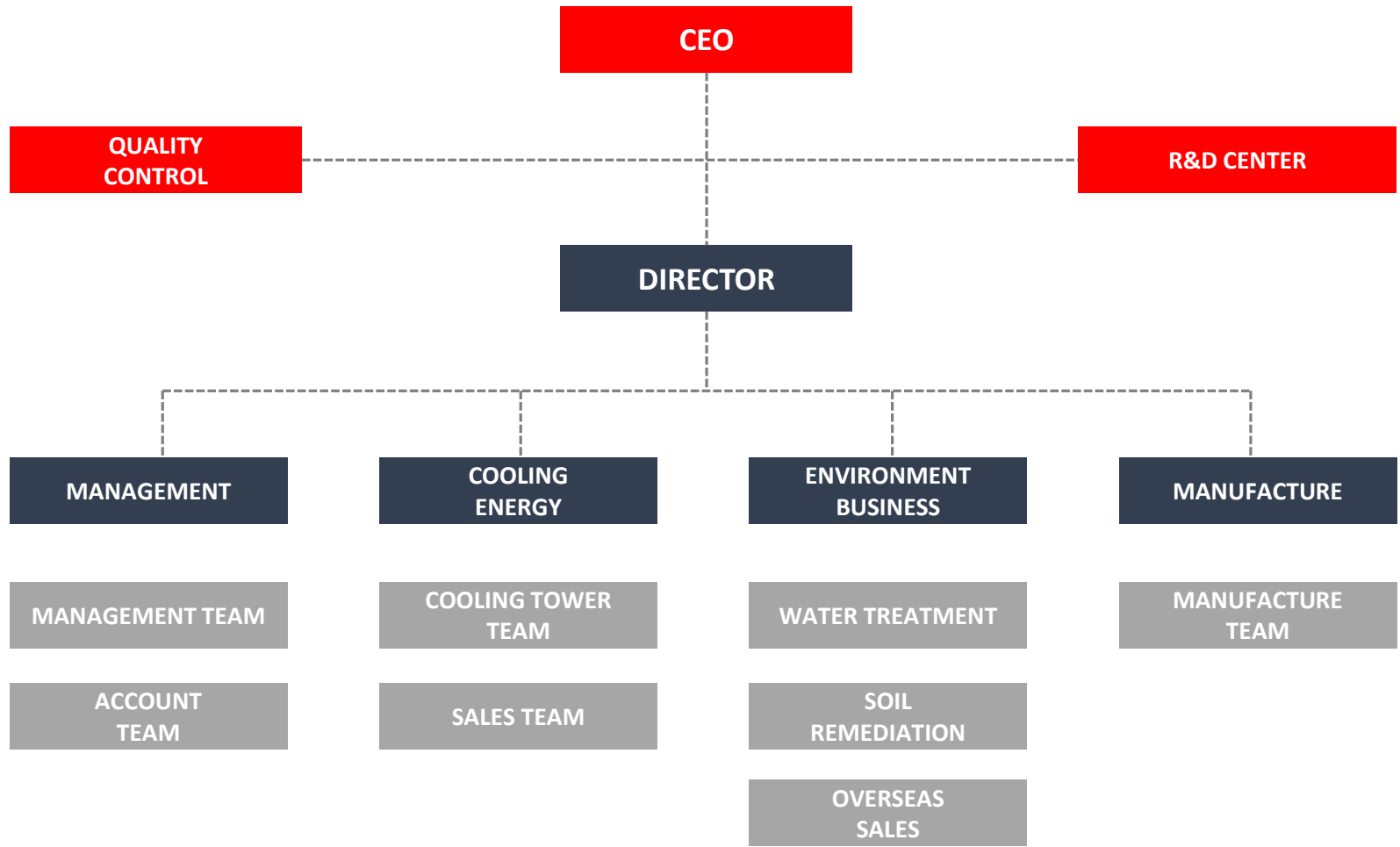
- 2011. 03** Acquired ISO 14001 certification
- 2011. 06 Be selected as a QSS-MASTER by POSCO
- 2011. 12 Be selected as a GOOD-QUALITY company by POSCO
- 2012. 02 Nothing disaster 11 multiple attainment
- 2012. 03 Be selected as a member of the Busan Techno Park.
- 2012. 12 Be designated as a leading company by Busan City (Green Energy Sector)
- 2013. 02 Nothing disaster 12 multiple attainment
- 2013. 06 Awarded the BEST-QUALITY supplier by POSCO E&C
- 2013. 07** Acquired OHSAS18001 certification (Ref. No. QA130218)
- 2013. 11** Awarded USD 3 million export tower (KOREA TRADERS ASSOCIATION)

## 2014~2015

- 2014. 01** Be selected as an excellent enterpriser by Busan City
- 2014. 02 Received a Korea Federation of Small and Medium Business citation
- 2014. 06** Be awarded the grand prize of safety culture by Busan City
- 2014. 07 Be selected as an leading environmental companies by Ministry of Environment in 2014
- 2014. 12 Be awarded a gold statue of Korea Environmental Energy Awards, part of technique
- 2015. 01 Nothing disaster 11 mulitiple attainment (Safety and Health Agency) Completed primary and secondary industry innovation movement Be selected as an PHP by POSCO
- 2015. 02 Be awared the best 2015 Busan innovative enterpriser award in management innovation
- 2015. 03 Be awared appreciation plaque of relevance to industry-academic exchange & cooperation by korea industrial complex corporation Received citation of the Minister of Commerce, Trade, Industry and Energy in the 42th Commerce & Industry day.



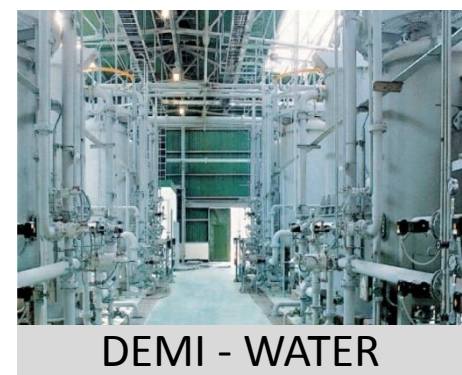
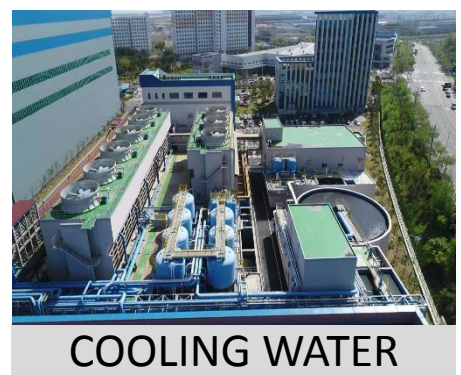
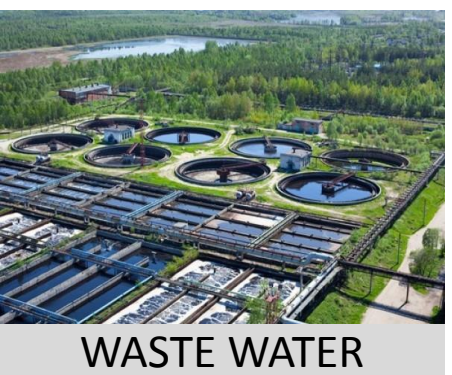
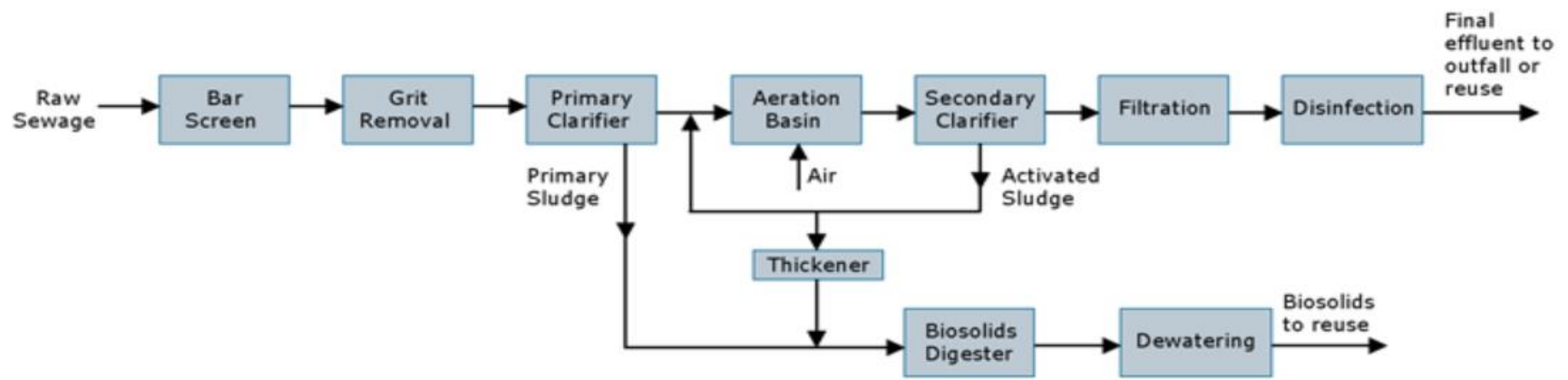
# 01 COMPANY INTRODUCTION - ORGANIZATION





# 02 MAIN PRODUCT – WATER TREATMENT SYSTEM

## ❖ WATER TREATMENT SYSTEM





# 02 MAIN PRODUCT – WATER TREATMENT SYSTEM

## ❖ OVERVIEW OF WASTE WATER TREATMENT SYSTEM

- This system is for harmful waste coming from industrial jobsites of dyeing, plating and leather. It physically, Chemically and biologically treats pollutants such as organic / inorganic matter and metals.

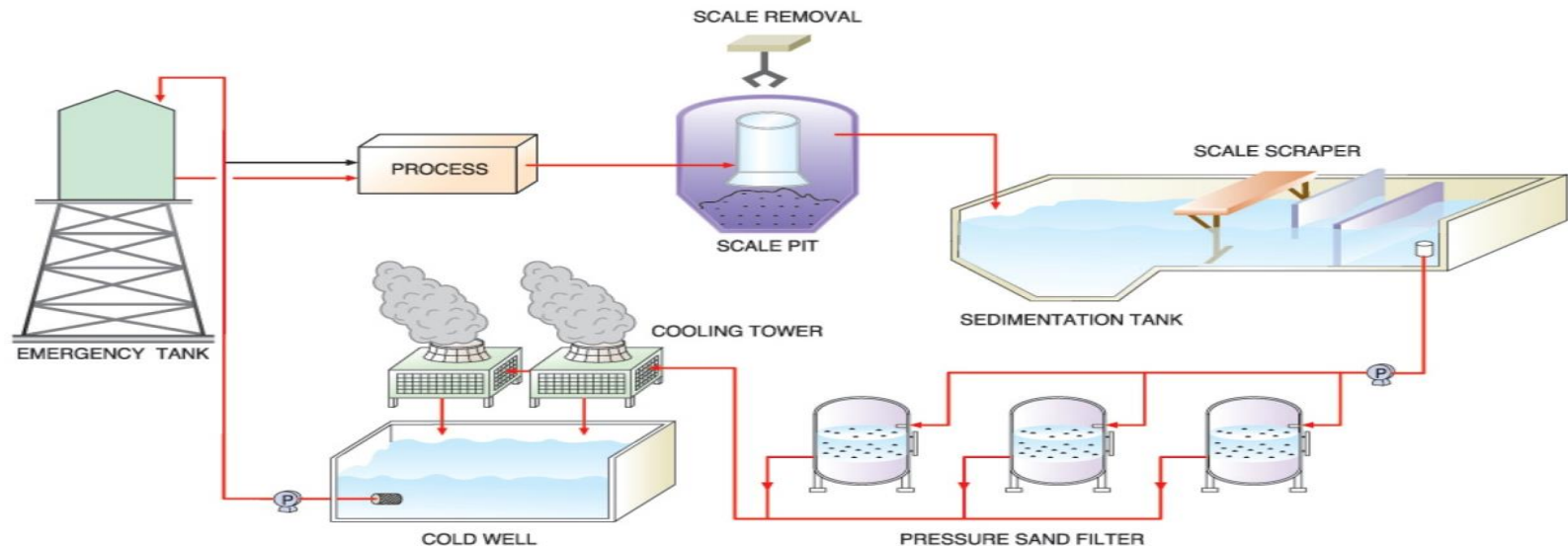
 <p style="text-align: right; font-size: small;">SEDIMENTATION TANK</p>	 <p style="text-align: right; font-size: small;">AERATION TANK</p>	
<p style="text-align: center;"><b>SEDIMENTATION TANK</b></p>	<p style="text-align: center;"><b>AERATION TANK</b></p>	<p style="text-align: center;"><b>SCALE PIT</b></p>
		
<p style="text-align: center;"><b>SAND FILTER</b></p>	<p style="text-align: center;"><b>CLARIFIER</b></p>	<p style="text-align: center;"><b>CHEMICAL TANK</b></p>





## ❖ OVERVIEW OF **COOLING WATER SYSTEM**

- This system is to supply cooling water to heat loading systems such as steel manufacturing and power generating facilities.
- Using the technologies of precipitation, filtering, isolation and cooling tower. It cools down hot water and recirculates.



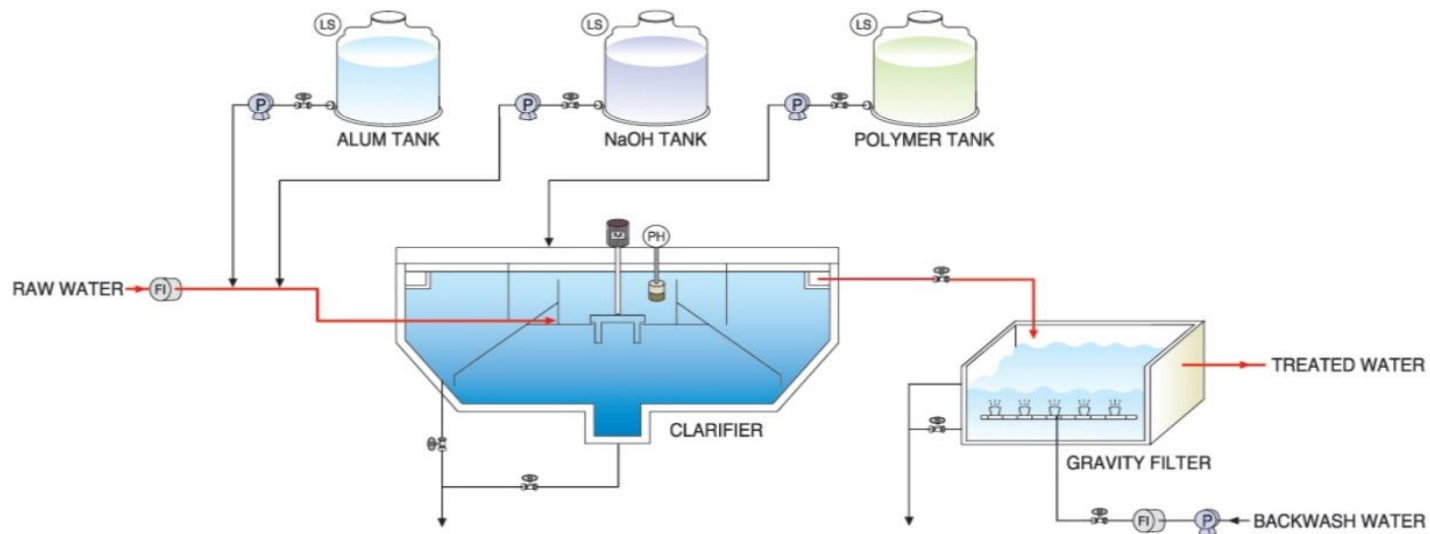


## 02 MAIN PRODUCT – WATER TREATMENT SYSTEM

10

### ❖ OVERVIEW OF PRE-TREATMENT SYSTEM

- It isolates **turbidity, chromaticity, mud, SS** and **organic/inorganic matters** from the surface water collected from a river or a lake using the gravity-sedimentation technique.
- The sludge which is precipitated at the bottom is moved to the thickener to be concentrated.



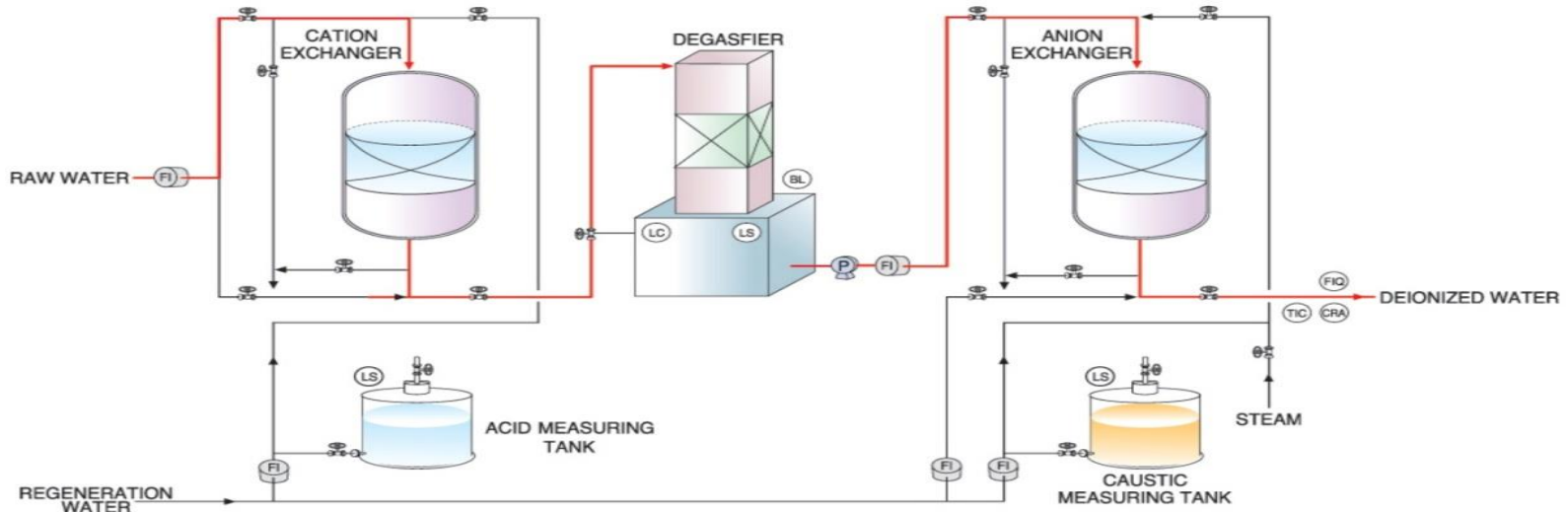


## 02 MAIN PRODUCT – WATER TREATMENT SYSTEM

11

### ❖ OVERVIEW OF **DEMINERALIZED WATER SYSTEM**

- It removes **cations, anions** and **particular harmful materials** from a solution using ion exchange resin.
- It is used for softening water, removing iron and manganese, and making pure water. With RO and MF system added, it can make ultra-pure water.





# 02 MAIN PRODUCT – WATER TREATMENT SYSTEM





# 02 MAIN PRODUCT – COOLING TOWER



INDUSTRIAL TYPE CT



COUNTER TYPE CT



CROSS TYPE CT



PACKAGE TYPE CT



CLOSE TYPE CT



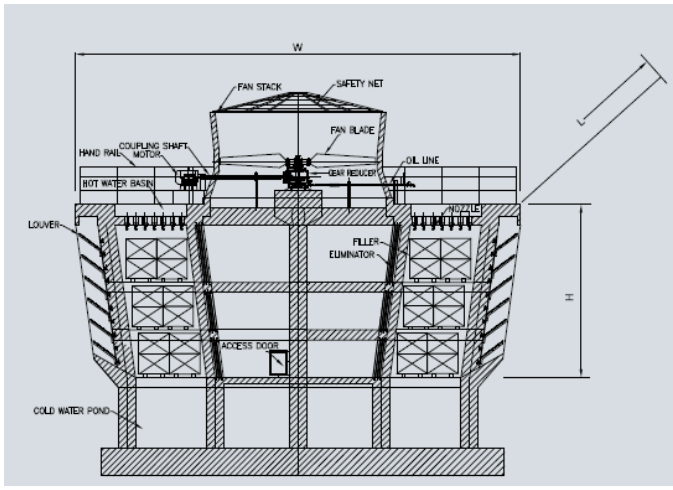
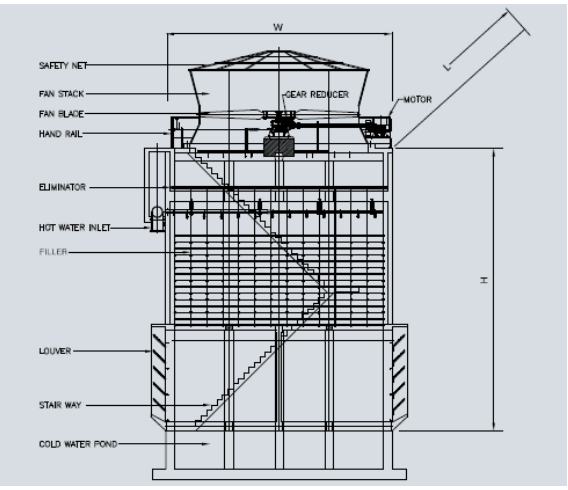
ROUND TYPE CT



# 02 MAIN PRODUCT – COOLING TOWER



INDUSTRIAL TYPE CT



## ❖ INDUSTRIAL TYPE COOLING TOWER

**CORROSION RESISTANCE**

The Kinds of frame are metal, RF CON’C and DOUGLAS FIR. Which is treated to preserve from decay with ACQ and all metal frames are coated with zinc alloy and casting is composed of zinc coated plate or CACB combined With FRP These features will give you high resistance of corrosion and guarantee high durability.

**EASY MAINTENANCE**

Prefabricated construction will be the most convenient to maintain the system

**ANTI-WATER DRIFT LOSS**

Excellent eliminator will prevent from any water drift loss

**LOW NOISE OPERATION**

Newly developed V-belt double reducer or geared double reducer and FRP fan will give water scattering to the Outside of tower.

**RECTIFICATION TYPE LOUVER**

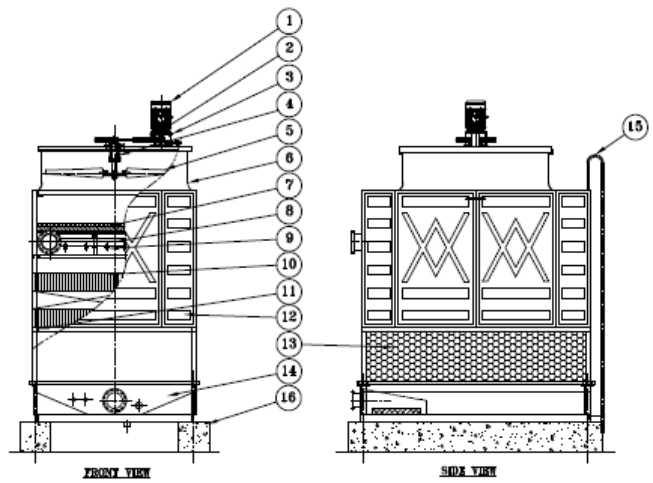
Utilizing rectification system increases the efficiency of filling and also prevents any water scattering to the outside of Tower.



# 02 MAIN PRODUCT – COOLING TOWER



COUNTER TYPE CT



NO	DESCRIPTION	MATERIAL
1	MOTOR	T.E.F.C
2	V-BELT	RUBBER
3	MOTOR SUPPORT	SS400+H.D.G
4	SHAFT	FC
5	FAN BLADE	F.R.P
6	FAN STACK	F.R.P
7	ELIMINATOR	P.V.C
8	NOZZLE PIPE	P.V.C or P.E
9	NOZZLE	P.P
10	FILLER	P.V.C
11	FILLER SUPPORT	SS400+HDG
12	CASING(BODY)	F.R.P
13	LOUVER	P.V.C
14	COLD WATER BASIN	F.R.P
15	LADDER	S.P.P.W
16	FOUNDATION	CON'C

## ❖ COUNTER TYPE COOLING TOWER

**FILLER OF HIGH EFFICIENCY**

The weak point which the cooling water leaned to one side is removed by the air velocity which is sucked and the heat exchange efficiency is maximized. The interval maintenance method of filler was especially designed and the air resistant minimized.

**DUPLEX DISTRIBUTION SYSTEM**

We improved the efficiency of heat exchange by jetting out the cooling water sufficiently through the SERIAL TARGET NOZZLE and the DISTRIBUTION EQUIPMENT which is added at the top of the filler.

**WIDE AIR TRAVEL**

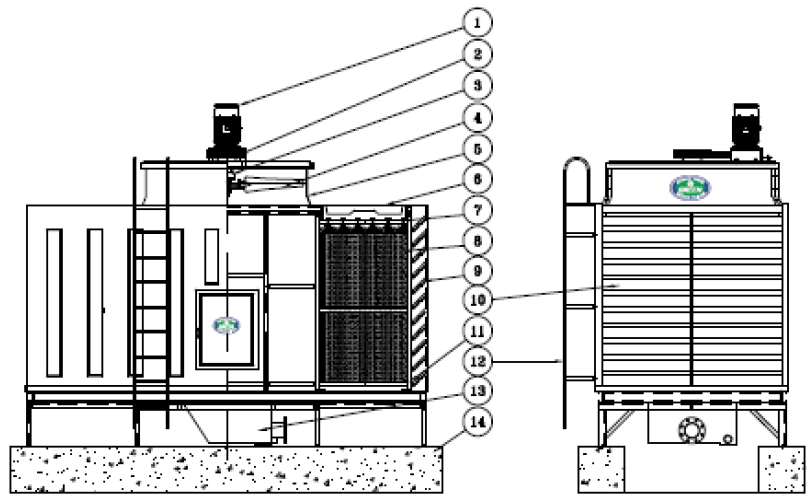
The width of filler was made longer.

**PROFITABLE DESIGN AIR FLOW**

Optimum arrangement in fan and filler removed DEAD SPACE of air flow and promoted the efficiency



# 02 MAIN PRODUCT – COOLING TOWER



NO	DESCRIPTION	MATERIAL
1	MOTOR	T.E.F.C
2	V-BELT	RUBBER
3	REDUCER	FC
4	FAN ASS'Y	F.R.P
5	FAN STACK	F.R.P
6	HOT WATER BASIN	F.R.P
7	NOZZLE	P.P
8	FILLER / ELIMINATOR	P.V.C
9	LOUVER	P.V.C
10	CASING	F.R.P
11	STRUCTURE	SS400+H.D.G
12	LADDER	S.P.P.W
13	COLD WATER BASIN	F.R.P
14	FOUNDATION	CON'C

## ❖ CROSS TYPE COOLING TOWER

**MINIMIZATION  
LIGHTWEIGHT**

Installation space is reduced and operation weight is minimized, using high efficiency packing materials specially designed for cooling tower of vertically alternating current.

**ENERGY  
SAVING**

The power of fan is reduced by smoothing air flow due to bell mouth-shaped fan stack and energy is saved, using packing materials with less pressure loss.

**CORROSION  
RESISTANCE**

It has made been semi-permanent by using PP and PVC not to corrode, water to touch all parts within cooling tower, and made corrosion resistant FRP for hot water basin, cold water basin and casing

**BUILT-UP  
TYPE**

The cooling tower shall be manufactured, assembled and installed in the factory at same time, so it has good quality due to simple and rapid installation. The kind under 500R/T cannot need assembling process

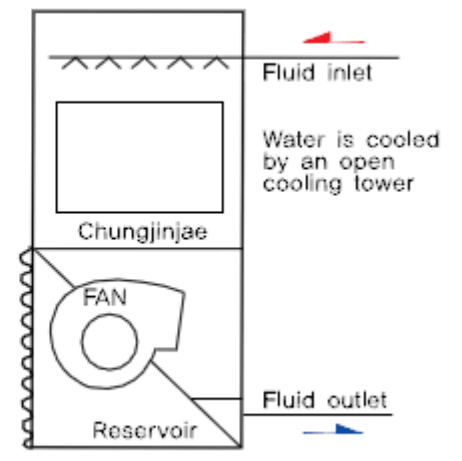
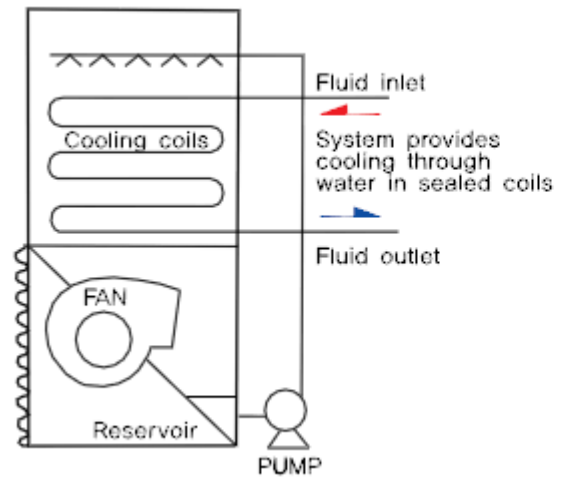




## 02 MAIN PRODUCT – COOLING TOWER



CLOSE TYPE CT



### ❖ CLOSE TYPE COOLING TOWER

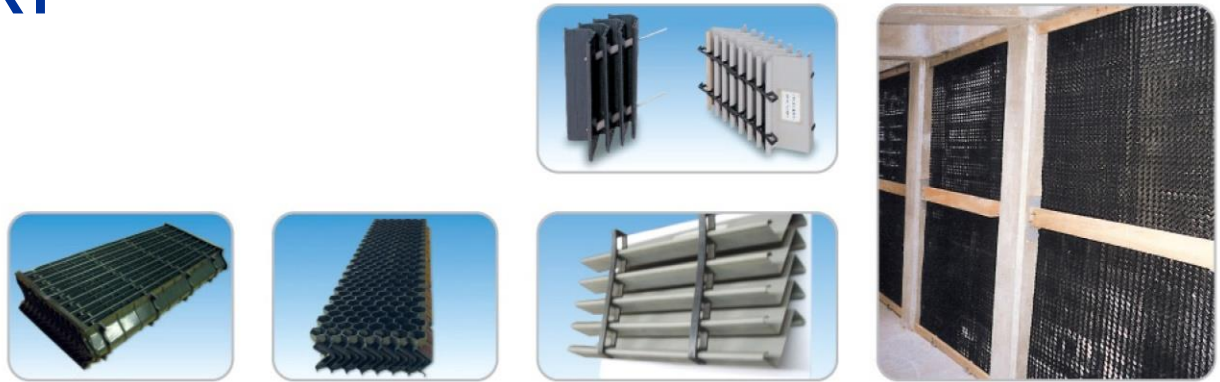
- 2-stage heat transfer is contained within a single unit, improving cooling efficiency and yielding lower temperatures.
- Lower volumes of circulating water are required compared to the cooling water + heat exchanger method. This allows optimization of pump capacity to minimize capacity and power requirements.
- Much less tubing is required as well. The coils are integrated within the unit, doing away with the need for tubing between the cooling tower and heat exchanger.



# 02 MAIN PRODUCT – COOLING TOWER

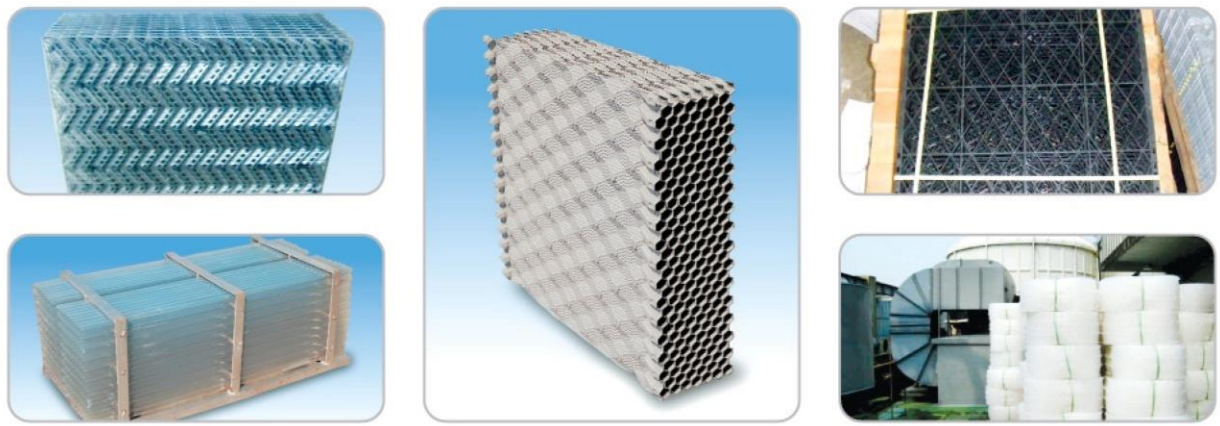
## ELIMINATOR PART

Eliminator, which prevents the loss of water caused by scattering and evaporation, is made of PP, PVC, HIPS, or wood. Depending on the type of the cooling tower, other material, which is excellent at heat resistance and acidity removal and has long lifetime, can be used.



## FILLER PART

The filler makes the heat transfer area of water and air and the heat exchange time large. A splash type and a film type are available. Wood, PP, PVC, or HIPS, which is heat-resistant enough to stand hot water, is used.





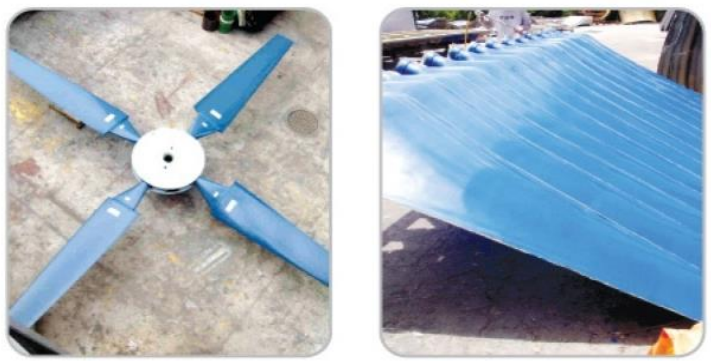
# 02 MAIN PRODUCT – COOLING TOWER

## DISTRIBUTION PART



The filler makes the heat transfer area of water and air and the heat exchange time large. A splash type and a film type are available. Wood, PP, PVC, or HIPS, which is heat-resistant enough to stand hot water, is used.

## FAN PART



It is designed to determine the direction of air flow and to increase the cooling effect. FRP or aluminum is used.



# 03 REFERENCE LIST – MAIN CUSTOMER





# 03 REFERENCE LIST – MAIN CUSTOMER



**SAMSUNG**  
SAMSUNG  
ELECTRO-MECHANICS



**SAMSUNG**  
삼성엔지니어링



**HYOSUNG**

HYOSUNG GOODSPRINGS  
**PUMPS  
& WATER**



**HYOSUNG EBARA**



**SK hynix**



**한화케미칼**  
Hanwha Chemical

**DaehanSteel**  
대한제강



**DK**  
동국제강



**SeAH**  
세아제강



**TAEWOONG**



**HANJIN HEAVY INDUSTRIES  
& CONSTRUCTION GROUP**



# 03 REFERENCE LIST – MAIN CUSTOMER

**Hansol**  
EME

**한일시멘트**

**부산환경공단**

**부산광역시**  
BUSAN METROPOLITAN CITY

**포항시**

**LS 산전**  
LS Industrial System

**YOJIN**  
요진건설산업

**NIPPON STEEL & SUMITOMO METAL**

**Kawasaki**  
Kawasaki Heavy Industries, Ltd.

**TAIHEIYO CEMENT**

**ساب**  
SULB COMPANY شركة صلب

**صليب ستيل**  
**SOLB STEEL**



# 04 CERTIFICATION AND PATENT

### 사업자등록증 (법인사업자)

등록번호 : 603-81-37585

법인명 (단체명) : 디에이치테크(주)  
대표자 : 황소용

제출년월일 : 1999년 03월 01일 법인등록번호 : 190111-0279174

사업장 소재지 : 부산광역시 강서구 화전산로66000길 20 (화전동)  
본점소재지 : 부산광역시 강서구 화전산로66000길 20 (화전동)

사업의 종류 : **제조업** 제조업  
제조업 : **화학제품, 공작기계, 배기장치, 자동차 부품, 자동차 부품, 자동차 부품, 자동차 부품**

국방사업 : **없음**

2013년 07월 15일  
부산상세서장

Business License

### 공장등록증명(신청서)

신청인명 : 디에이치테크(주)

소재지 : 부산광역시 강서구 화전산로66000길 20 (화전동)

등록번호 : 603-81-37585

공장소재지 : 부산광역시 강서구 화전산로66000길 20 (화전동)

공장면적 : 1,200.00㎡

2013년 11월 23일  
한국산업단지공단

Factory Registration Certification

### CREDIT RATING

기업명 : 디에이치테크(주) (D&E TECH. CO., LTD.)

사업장소재지 : 603-81-37585 (부산광역시 강서구 화전산로66000길 20 (화전동))

평가등급 : **BBB-**

신용등급 : **A**

2013년 11월 23일  
신용평가정보(주)

Credit Report (DNA/BBB-)

### 신용평가등급 확인서

신용평가등급 : **AA**

평가대상 : 디에이치테크(주)

2013년 11월 23일  
신용평가정보(주)

Credit Report

### 특목업 제후환수-3호

대기수질 환경전문공사업 등록증

수용·진동

1. 업 제 명 : 디에이치테크(주)  
2. 대표자의 성명 : 황소용  
3. 대표자의 생년월일 : 1959.12.05  
4. 환경전문공사업의 종류 : 수질 환경전문공사업  
5. 영업소 소재지 : 부산광역시 강서구 화전산로66000길 20 (화전동)  
6. 등록 조건 : 환경관련 법규 준수

2012년 1월 17일  
부산광역시

Special Construction Business Of Water Quality Environment

### 건설업등록증

업종 : **제조업** 제조업

등록번호 : 603-81-37585

2013년 07월 15일  
부산상세서장

Construction Business Registration Certification

### 品質經營시스템認證書

ISO 9001:2009 / ISO 9001:2008

2012년 08월 02일부터 ~ 2015년 08월 01일까지

2012년 11월 17일  
크리비즈

ISO9001 CERTIFICATION

### 기술혁신형 중소기업(INNO-BIZ) 확인서

2013년 11월 11일

중소기업청

Certificate of INNO-BIZ

### 수출유망중소기업지정증

2013. 06. 01.

부산·울산지방중소기업지원(수출지원센터)장

Promising Export Small Business Certification

### 회원증

2013년 11월 25일  
November 25, 2013

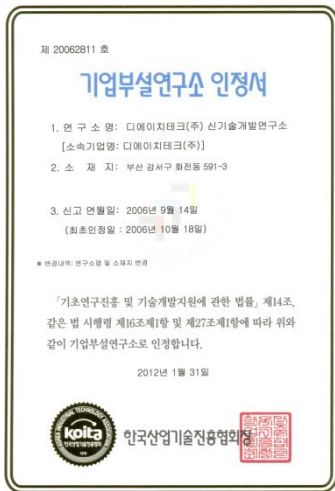
2013년 11월 25일  
November 25, 2013

회원명 : 디에이치테크(주)  
대표자 : 황소용

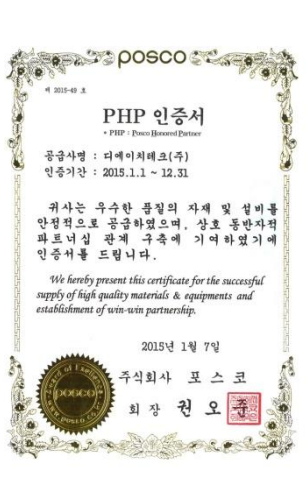
Member of KITA



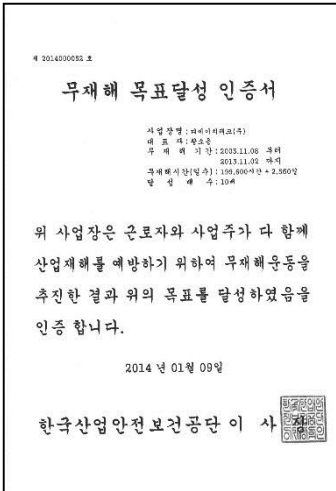
# 04 CERTIFICATION AND PATENT



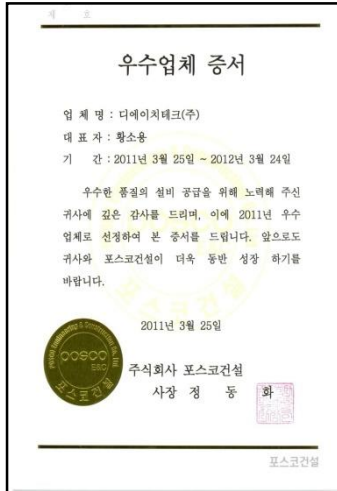
Certificate of Research Institute



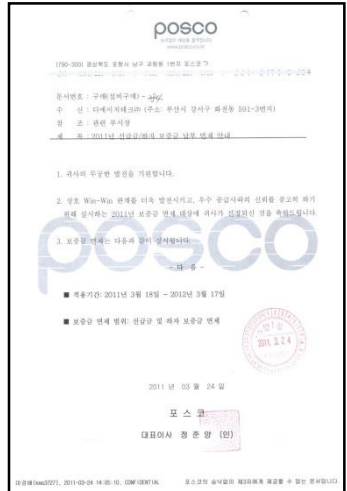
Certificate of PHP (POSCO)



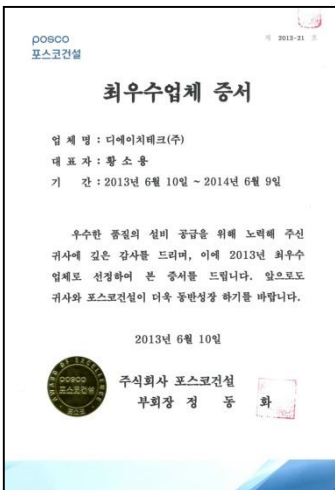
Certificate of ZERO-HAZARD Goal Attainment



Certificate of Leading Company By POSCO E&C



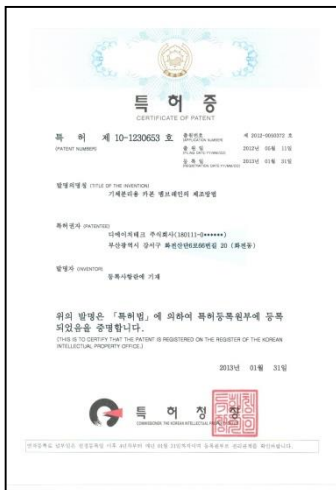
Certificate of Leading Company by POSCO



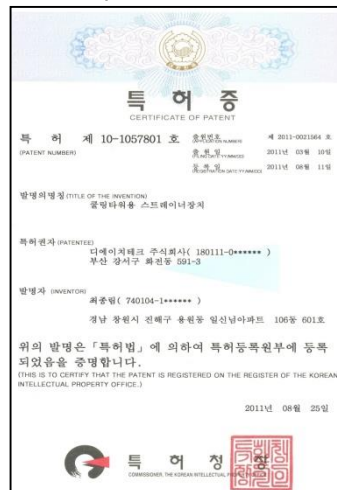
Certificate of Leading Company By POSCO E&C



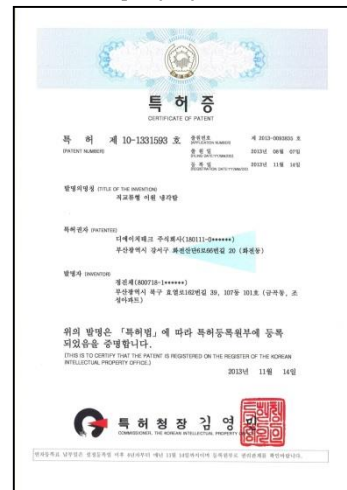
OHSAS18001



PATENT [Carbon Membran]



PATENT [Cooling Tower]



PATENT [Cooling Tower]





# THANK YOU



Contact Point :

(48471) 20, 66BEON-GIL, HWAJEONSANDAN6-RO, GANGSEO-GU, BUSAN, KOREA

TEL : 82-51-314-3321 FAX : 82-51-316-3321

E-mail : [dht@dh3321.com](mailto:dht@dh3321.com)

