



鋁原能源股份有限公司
AREA Energy Inc.

鋁璟營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Presenting

AREA

The Name Provides Best in Quality

ASME Certificate holder : U 、 U2 、 S

Ability / Reliability / Efficiency / Advance

AREA, a professional **E**ngineering,
Procurement, and **C**onstruction (**EPC**) Provider
on Project, including,

- Nuclear Power Plant
- Thermal Power Plant
- Pharmaceutical factory
- Civil/ Structural/ Architectural Construction

Company Profile

- Headquarters: Taipei, Taiwan
 - Company Founded: October 1989
 - Chairman: Mr. C.K. Shih
 - Company Capitals
 - (AE) : US\$ 10,000,000
 - (AW): US\$ 3,333,333
 - Employees: (Labors are not included)
Total 100 Staffs
-

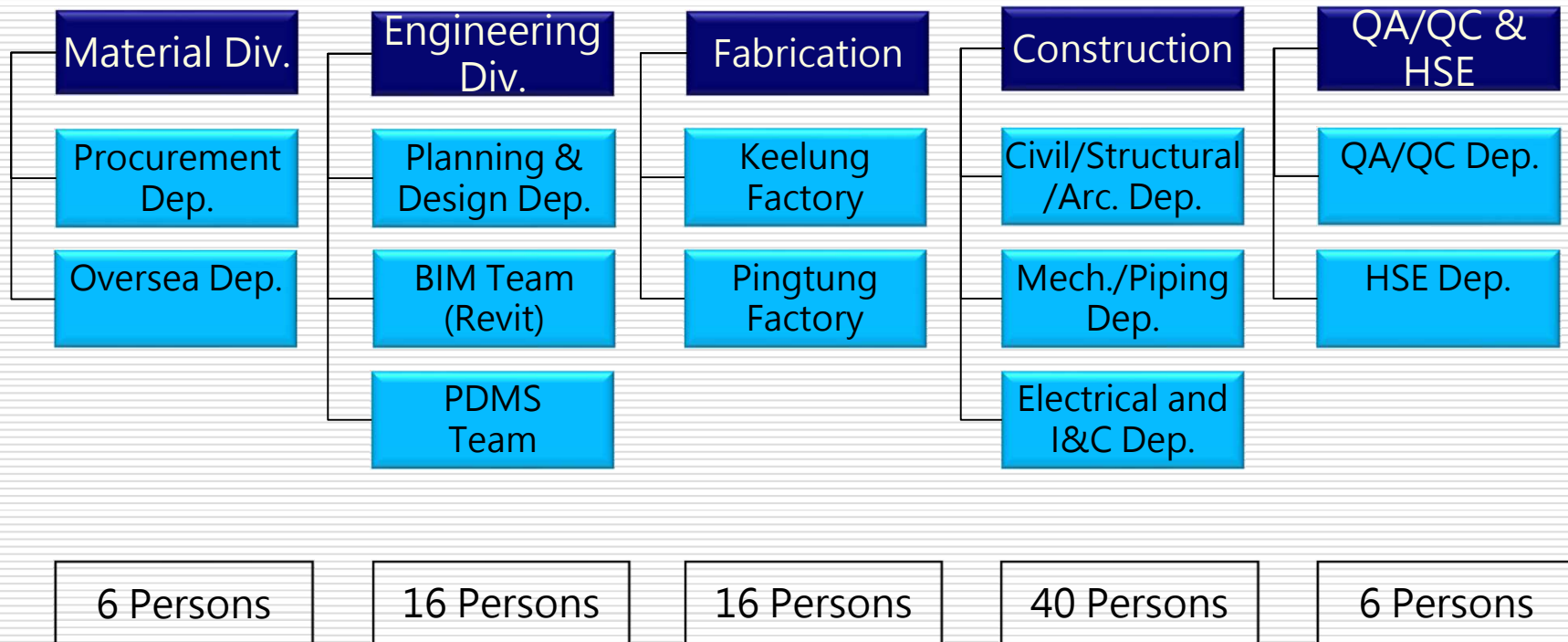


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AREAWELL Construction, Inc.

Organization Chart

AREA GROUP





鋁原能源股份有限公司
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AREAWELL Construction, Inc.

Quality Assurance Program (U/ U2/ S)

For Boiler and Pressure Vessel:

● ASME SEC.VIII Boiler and Pressure Vessel Code

The American Society of Mechanical Engineers



CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

AREA Energy Inc.
No.16, Yuanxi Street,
Qianjhih
Pingtung City 900
Taiwan

SCOPE:

Manufacture of pressure vessels at the above location and field sites controlled by the above location (This authorization does not cover impregnated graphite)

AUTHORIZED: September 04, 2019
EXPIRES: September 04, 2022
CERTIFICATE NUMBER: 45247

David E. Tuttle
Board Chair, Conformity Assessment

Joseph L. Boudreau
Managing Director, Conformity Assessment



CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

AREA Energy Inc.
No.16, Yuanxi Street,
Qianjhih
Pingtung City 900
Taiwan

SCOPE:

Manufacture of Class 1 and Class 2 pressure vessels at the above location and field sites controlled by the above location

AUTHORIZED: September 4, 2019
EXPIRES: September 04, 2022
CERTIFICATE NUMBER: 45248

David E. Tuttle
Board Chair, Conformity Assessment

Joseph L. Boudreau
Managing Director, Conformity Assessment



CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

AREA Energy Inc.
No.16, Yuanxi Street,
Qianjhih
Pingtung City 900
Taiwan

SCOPE:

Manufacture and assembly of power boilers at the above location and field sites controlled by the above location

AUTHORIZED: September 4, 2019
EXPIRES: September 04, 2022
CERTIFICATE NUMBER: 45246

David E. Tuttle
Board Chair, Conformity Assessment

Joseph L. Boudreau
Managing Director, Conformity Assessment





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Quality Assurance Program

For Nuclear Power Plant Safety Related:

- **ASME NQA-1: Nuclear Quality Assurance. (*)**
AREA held N, NPT, NS Certificates until 2018/4/10.
If the project need the N stamp supplier, AREA can complete the extension of certificates within 6 to 8 months.
 - **10 CFR 50 Appendix B: U.S. Federal Government nuclear QA program.**
-

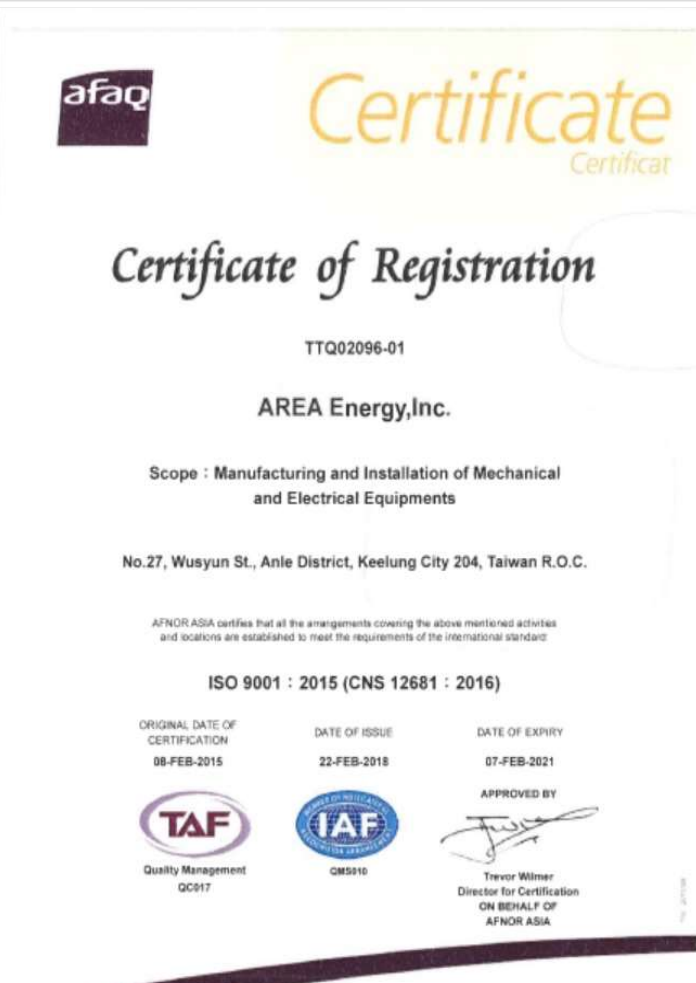
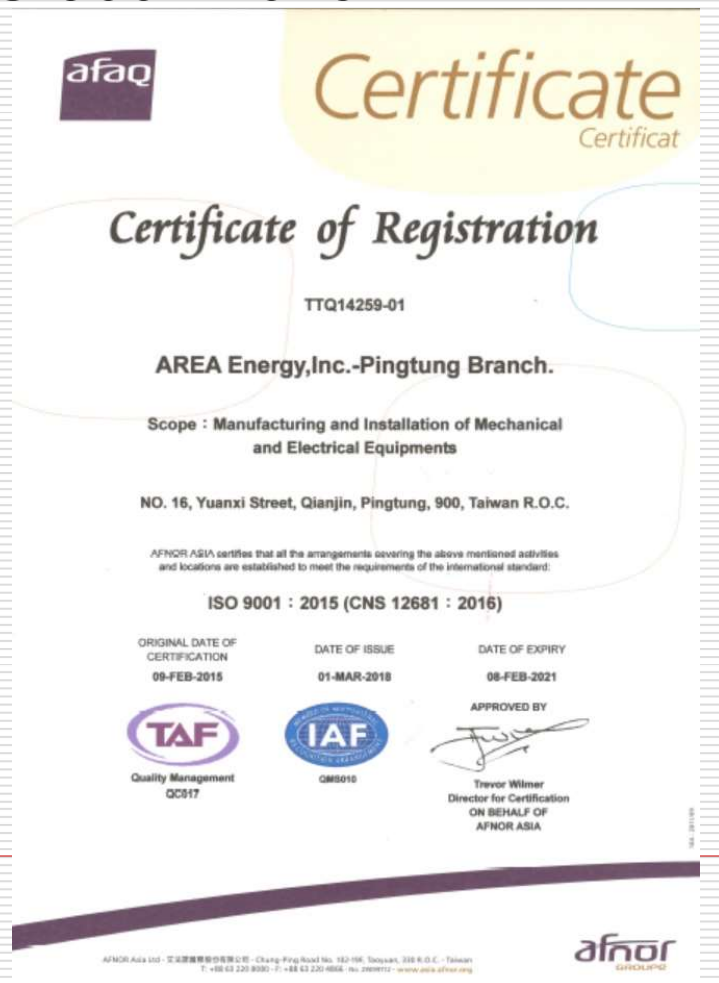


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Quality Assurance Program

● ISO 9001:2015



Design Ability

- **Kaohsiung Design Center**: for Mechanical, Electrical, Plumbing, CICS, Tanks...etc.
- **Keelung Design Dept.**: for Mechanical, Electrical, Plumbing, CICS, Civil, Architecture...etc.



Kaohsiung



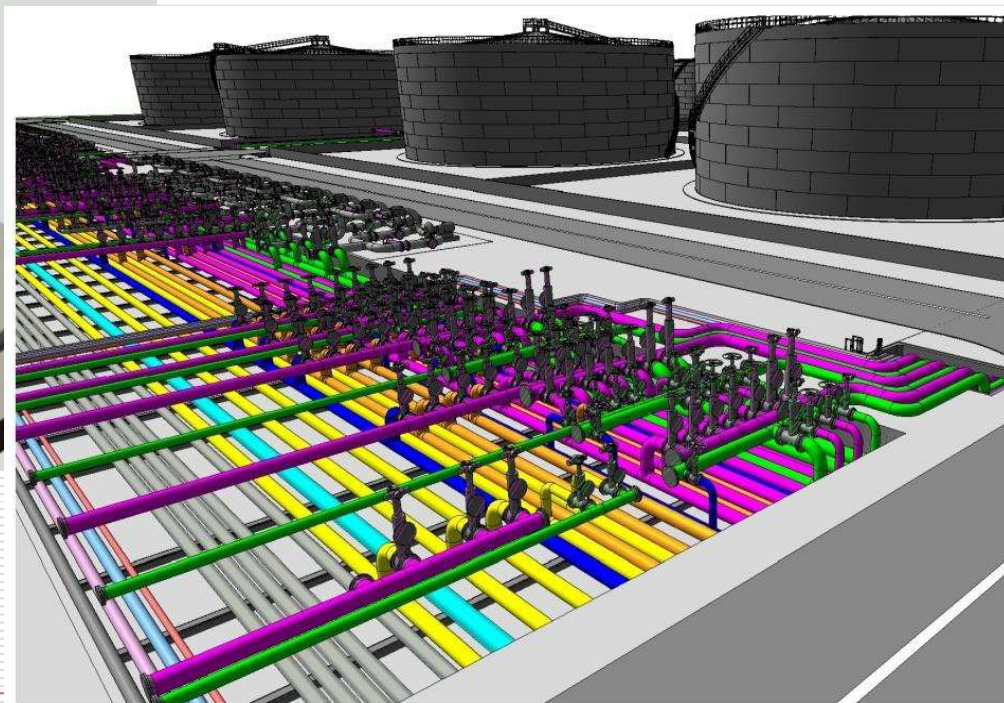
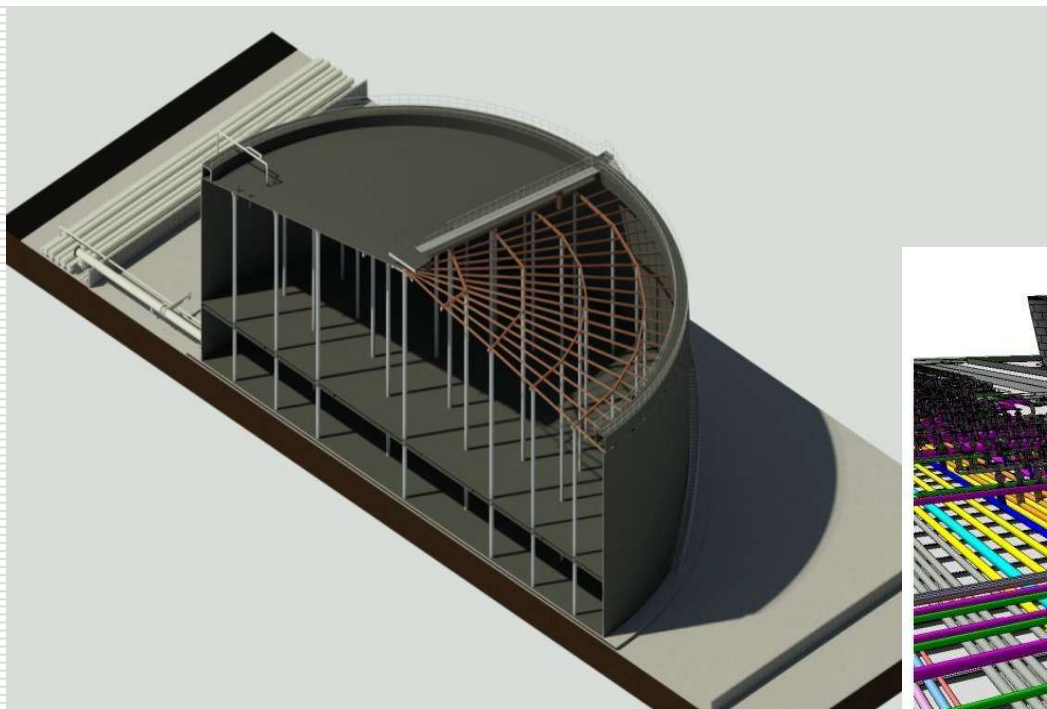
Keelung



Design Software



BIM : Building Information Modeling, 3D Modeling



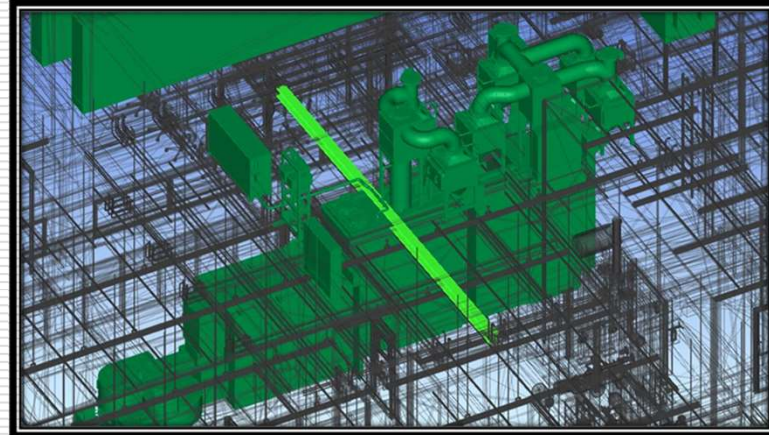
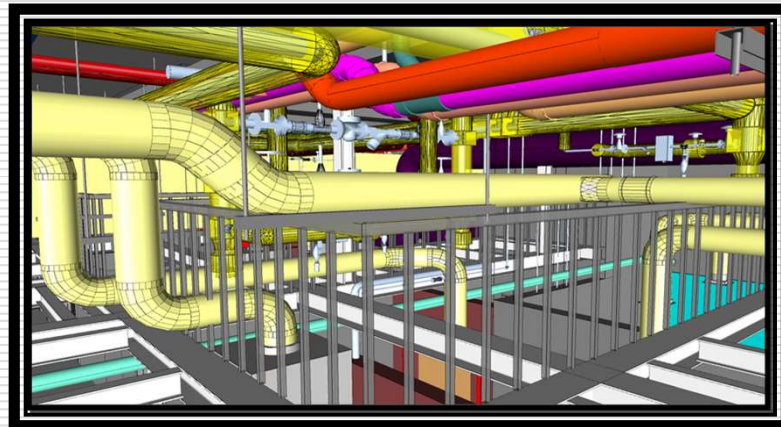
For 12 tanks project



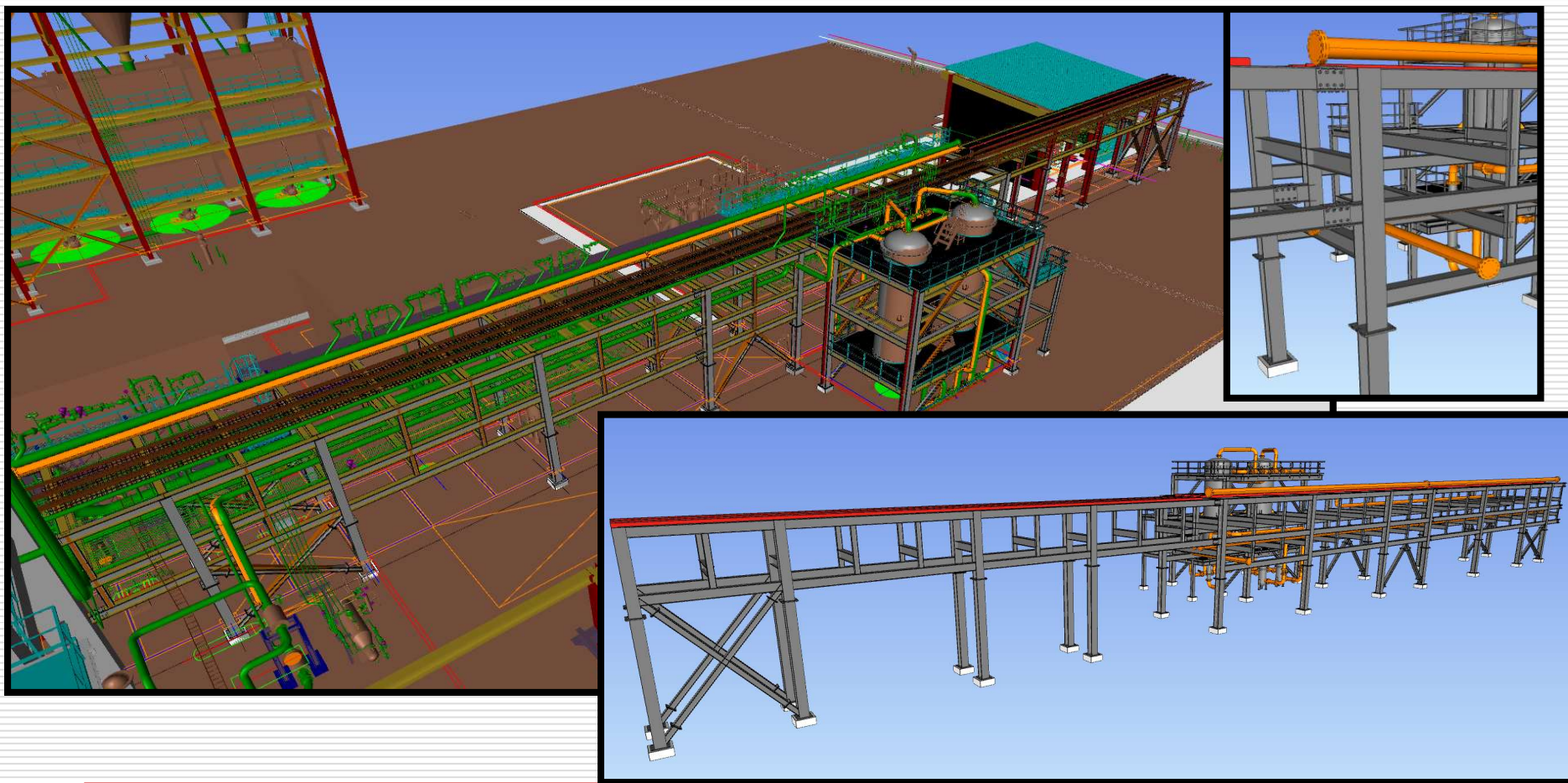
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BIM : Building Information Modeling, 3D Modeling



BIM : Building Information Modeling, 3D Modeling



BIM : Building Information Modeling, 3D Modeling

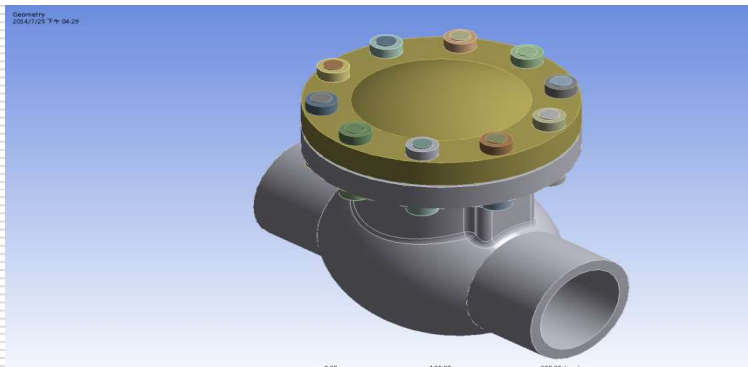




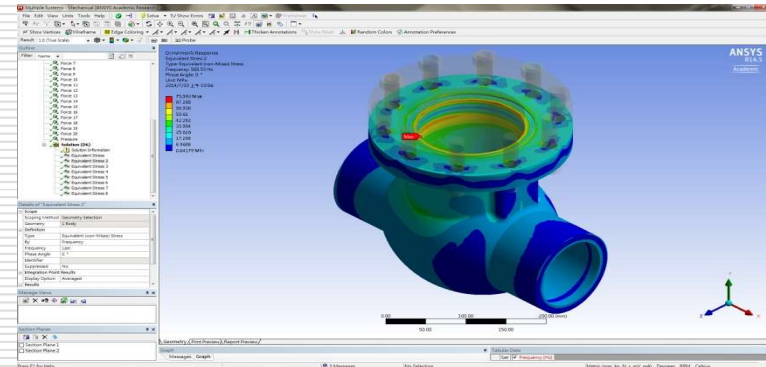
鋁原能源股份有限公司
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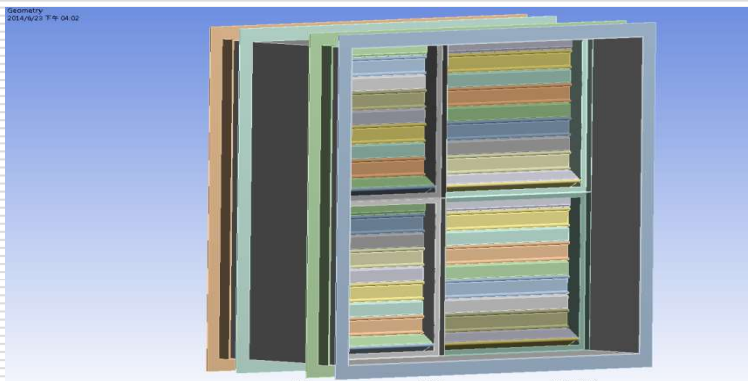
3D Engineering Equipment Drawing and Stress Analysis



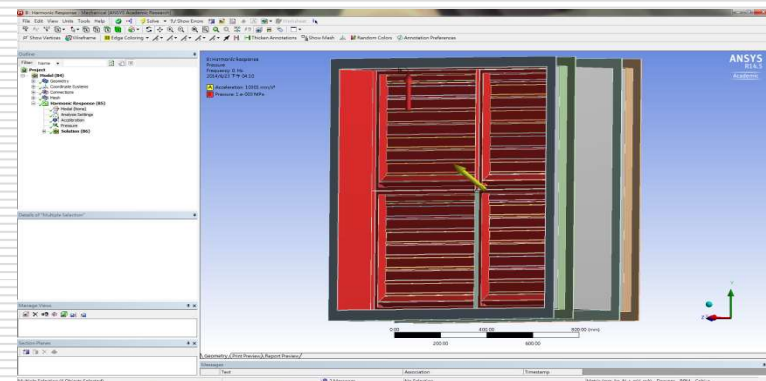
3D Drawing of Valve



3D Analysis of Valve



3D Drawing of Fire Damper



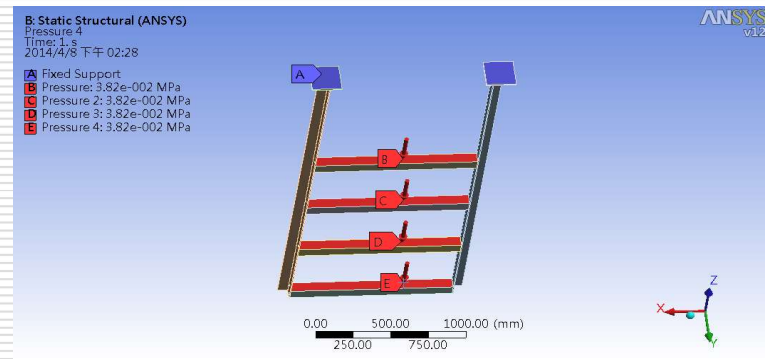
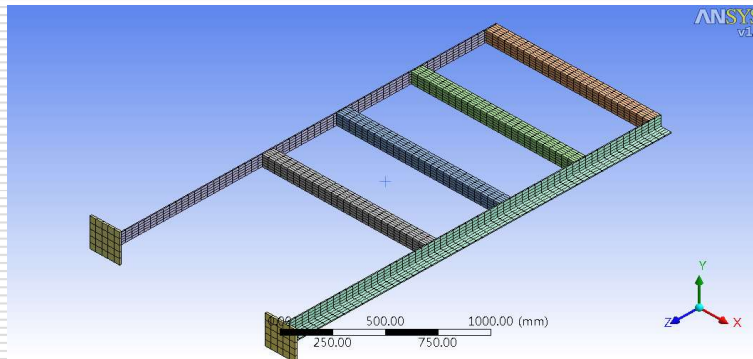
3D Analysis of Fire Damper



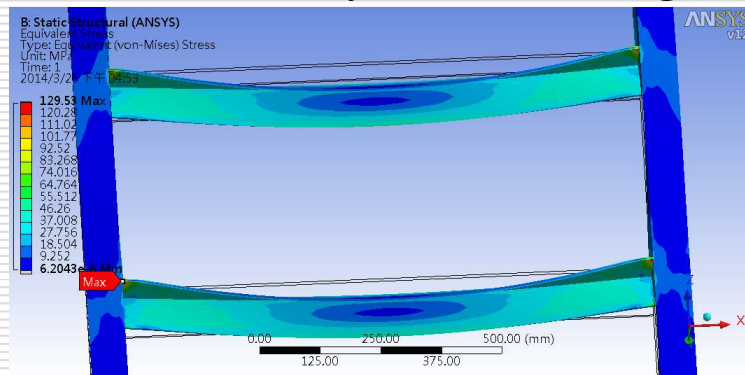
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Cable Tray Drawing and Construction Analysis

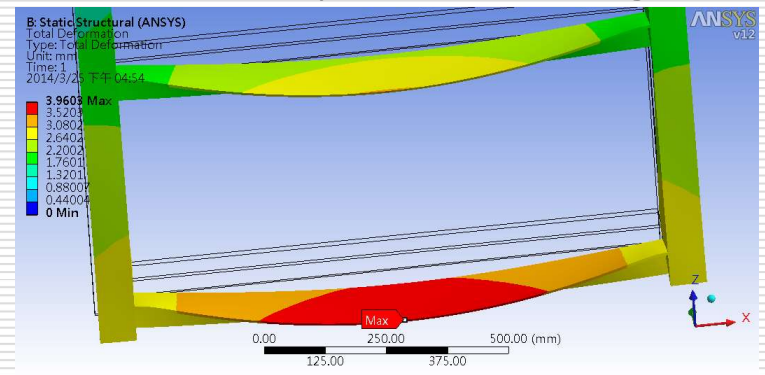


Trellis Analysis Drawing



Stress Analysis Drawing

Force Analysis Drawing



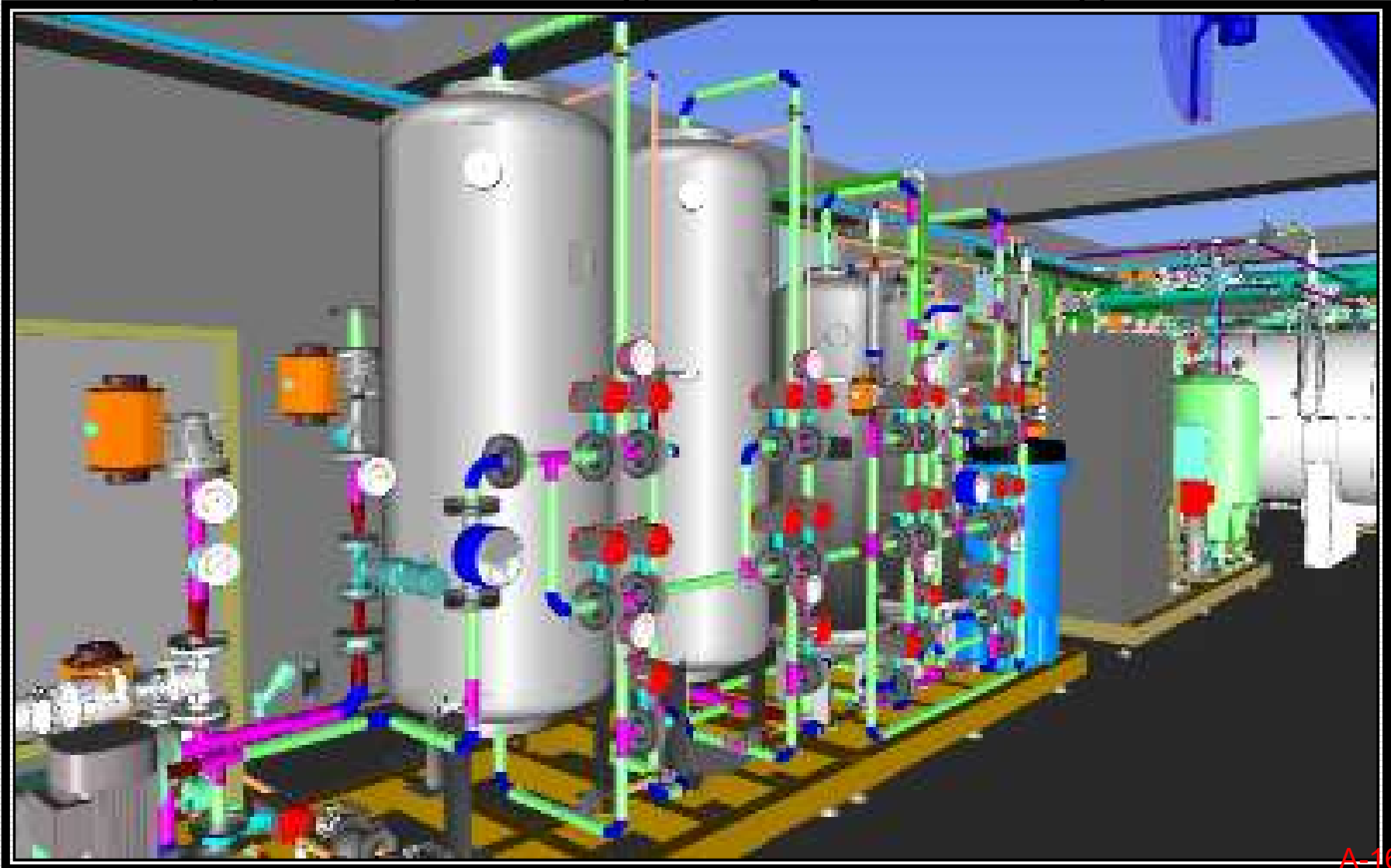
Deflection Analysis Drawing



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3D Engineering Drawing and Space Management

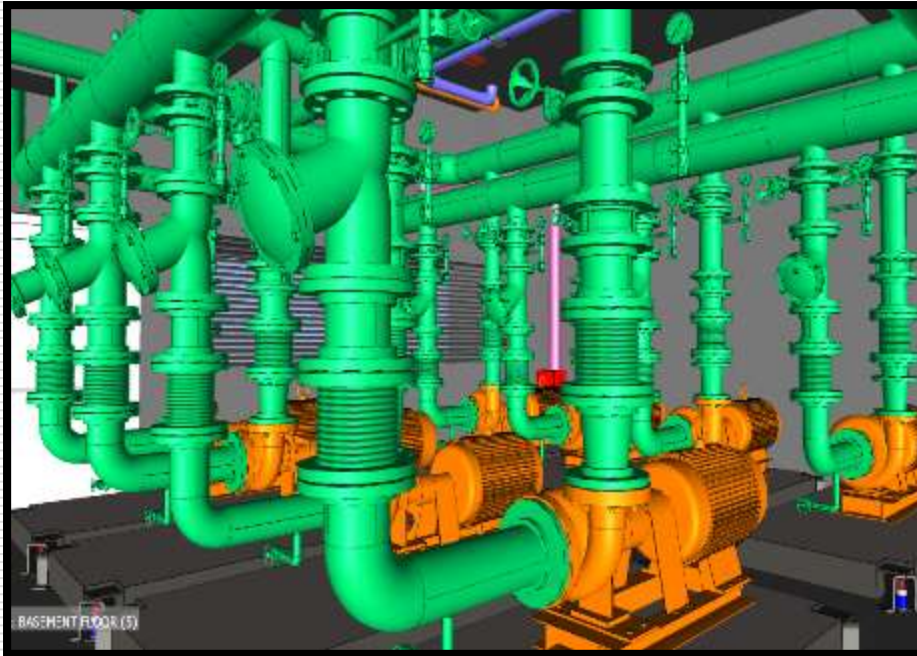




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3D Engineering Drawing and Space Management



In 3D Module



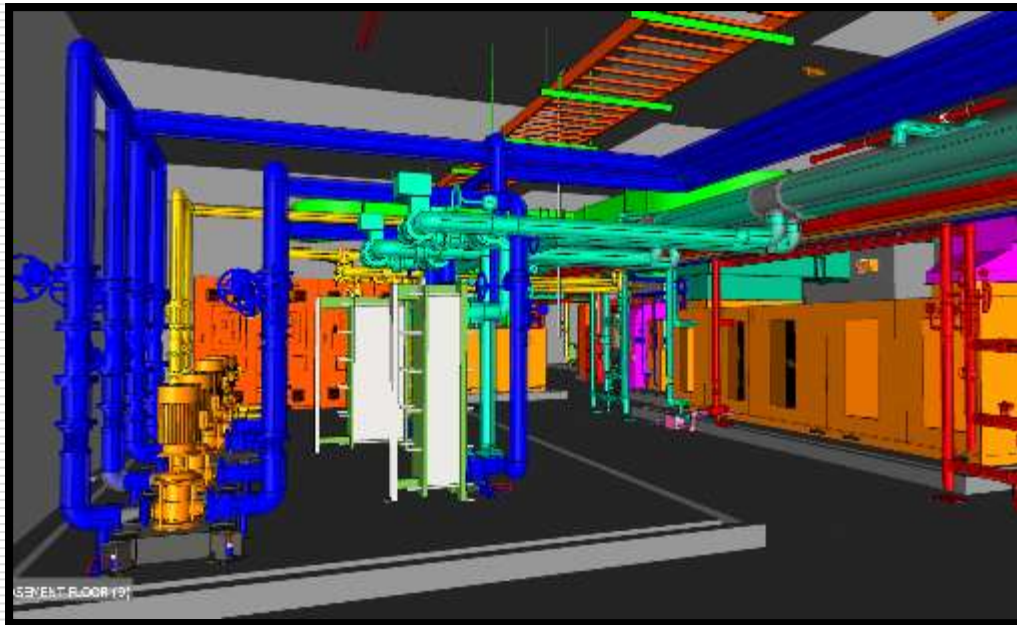
Complete Build at Jobsite



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AREAWELL Construction, Inc.

3D Engineering Drawing and Space Management



In 3D Module



Complete Build at Jobsite

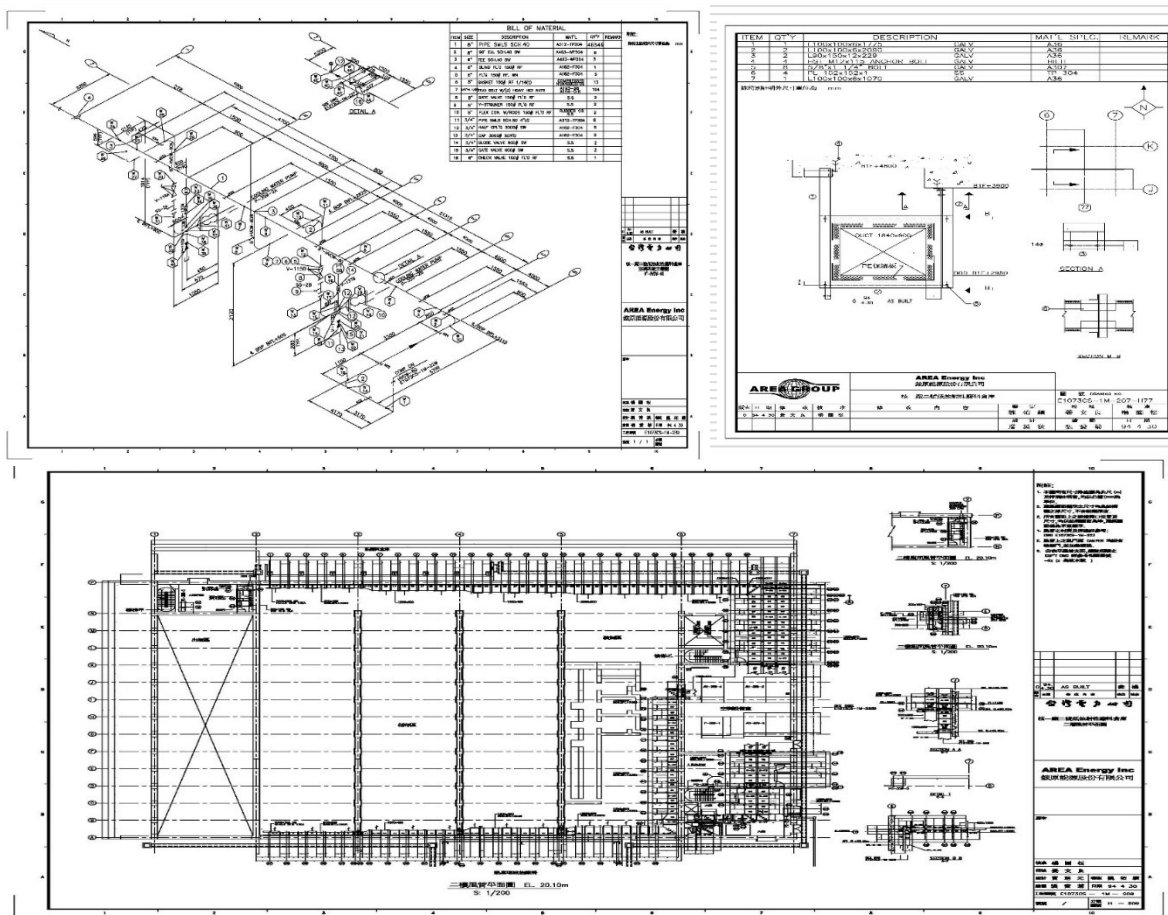


Design, Fabrication, Installation, Test

Provide Experienced Design for Components, Equipments , and ISO Drawings

鎂璟營造股份有限公司 (CLASS A)

AREAWELL Construction, Inc.





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Comparison of Keelung & Pingtung Factory

Description	Keelung Factory (North of TW)	Pingtung Factory (South of TW)
Fabrication Area	3,200 M2 (Span: 11m/bay, 2 bays)	10,000 M2 (Span: 16m/bay, 4 bays)
Office Area	1,068 M2	740 M2
Capacity of Fabrication	Steel Structure: 300MT/M	Steel Structure: 900MT/M
Overhead Crane	30 Ton: 1 set, 20 Ton: 1 set, 10 Ton: 1 set, 2.8 Ton: 2 set,	30 Ton: 4 sets 2.8 Ton: 8 sets



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Keelung Factory – Design & Fabrication



Keelung Factory/Warehouse ▲

The Keelung Factory has space of **3,200 M2**, and operation started from April 2007.

Keelung Office:
Design Department for
Mechanical, Electrical, Plumbing,
CICS, Civil, Architecture...etc.



Pingtung Factory – Fabrication



Pingtung Factory ▼

The Pingtung Factory has space of **10,000 M2**, and operation started from May 2011.

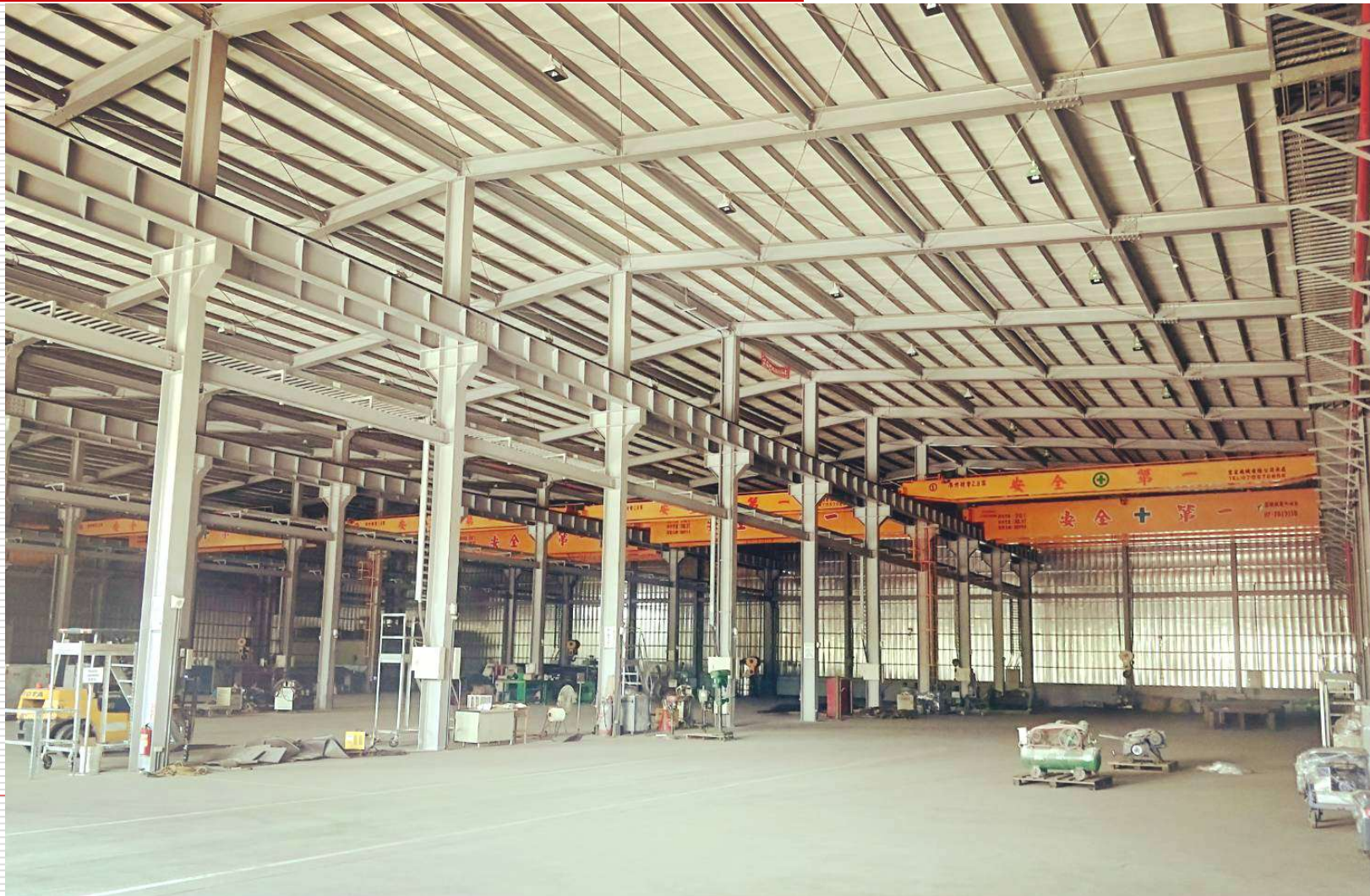




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Work Shop Area of Pingtung Factory (4 Bays)



WorkShop Area of Pingtung Factory (1st Bay)





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WorkShop Area of Pingtung Factory (2nd Bay)





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WorkShop Area of Pingtung Factory (3rd Bay)





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WorkShop Area of Pingtung Factory (4th Bay)



Rolling Machine



Type: MCO 3060
No. of rolls: 3
Rolls length: 3100mm
Thickness: 60mm



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Pingtung Factory – Document Control Center





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Project Performance (Electrical)

For Single Project: (NI of Lungmen NPP Unit #1, 2)

- **The largest contract value: USD 160,000,000.**
 - **Working peak: 900 Labor/ day**
 - **Cable supply/ install: more than 600,000 meters.**
 - **Conduit supply/ install: more than 500,000 meters.**
 - **Support supply/ install: more than 110,000 sets.**
-

Project Performance (Electrical)

Material Supply, Installation, Test



Project Performance (Electrical)

Material Supply, Installation, Test



Project Performance (Electrical)

Material Supply, Installation, Test





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AREAWELL Construction, Inc.

Project Performance (I&C)

For Single Project: (I&C in Lungmen NPP Unit #1 & #2)

- **The largest contract value: USD 45,000,000.**
- **Cable supply/ install: More than 1,600,000 meters**
- **Tubing supply/ install: More than 200,000 meters**
- **Support supply/ install: More than 160,000 Kgs**



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Project Performance (I&C)



Seismic I Instrumentation Rack



**Control Center for Nuclear
Power Plant**



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Project Performance (Security System)

- **The largest contract value: US\$ 12,000,000**

Including equipment **Procurement, Installation, and Integration:**

1. Intrusion Alarm & Access Control Subsystem

(Revolving Door, Host Computer, E-Field, Card Reader and Controller)

2. CCTV Surveillance

3. Search and Admittance Control Subsystem

(Explosive Detector Equipment and X- ray Inspection Equipment)



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Lungmen Nuclear Power Plant- Security System





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鋁環營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Rad Waste Automatic Storage Warehouse

Design, Fabrication, Procurement, Installation, Integration, Commissioning



WDIS

**Computerized Inventory
Control System (CICS)**



AGV



Conveyor



Panels



Crane



鈹原能源股份有限公司
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鈹璟營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Rad Waste Automatic Storage Warehouse

**Complete 4 Automatic
Radwaste Storage
facilities for Nuclear
Power Plants.**



Project Performance (Mechanical)- 1350MW





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Cogeneration - Kaohsiung

Description



(100% RT)- More than 6000 welds

Project Performance (Mechanical)- HVAC



Design, Procurement, Installation, Commissioning



鋁原能源股份有限公司
AREA Energy Inc.

鋁璟營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Project Performance (Mechanical)- HVAC



AHU



AFU-3x8, 48000CFM



Chiller



Design, Procurement, Installation, Commissioning



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AREA Energy Inc.

鋁環營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Project Performance (Piping)



AREA Energy manufactures the Insulation and installs them in the Nuclear Power Plants, especially “the Reflective Metal Insulation (RMI). “





鋈原能源股份有限公司
AREA Energy Inc.

鋈璟營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Project Performance (Piping)

Fire Protection System:



Procurement, Installation, Commissioning



A-45



鋹原能源股份有限公司
AREA Energy Inc.

鋹環營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Project Performance (Piping)



Project Performance (Piping)





鉅環營造股份有限公司 (CLASS A)
AREAWELL Construction, Inc.

Support and Accessories for Piping System





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Pingtung Factory- Pre-fabrication

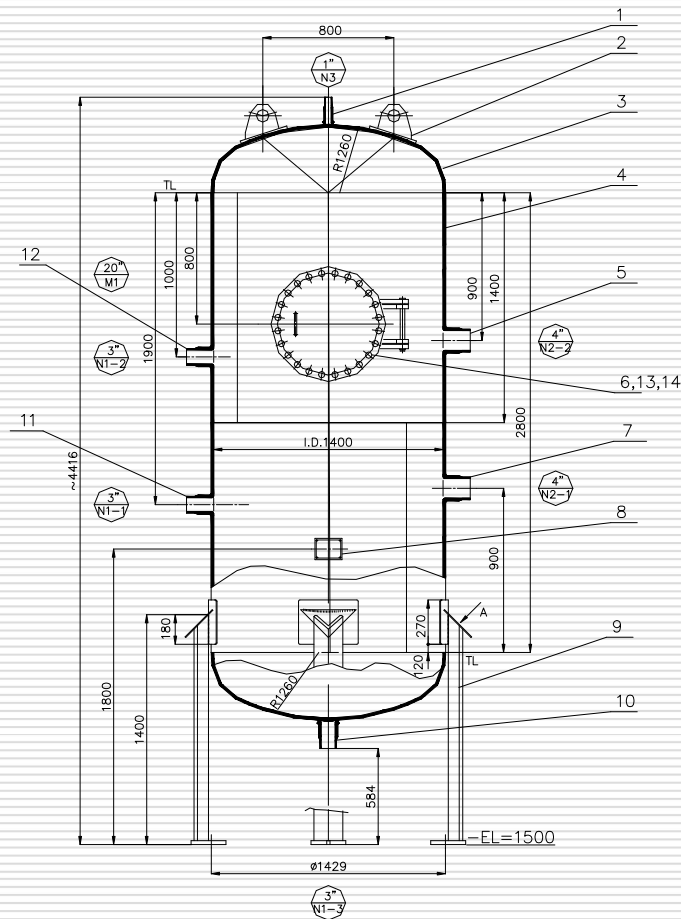




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鉅環營造股份有限公司 (CLASS A)
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Pingtung Factory (Pressure Vessel Manufactured)



AREA Energy

We provides pressure vessel, metal container, the vessel designed and manufactured in accordance with the requirements given in ASME Boiler and Pressure Vessel Code, Sec. III Division 1 and ASME Boiler and Pressure Vessel code, Section VIII, Division 1 or other specifications.

We can manufacture the vessel of capacity and materials as below:

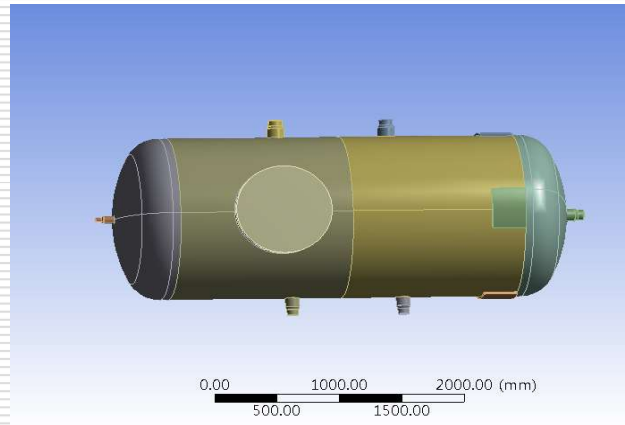
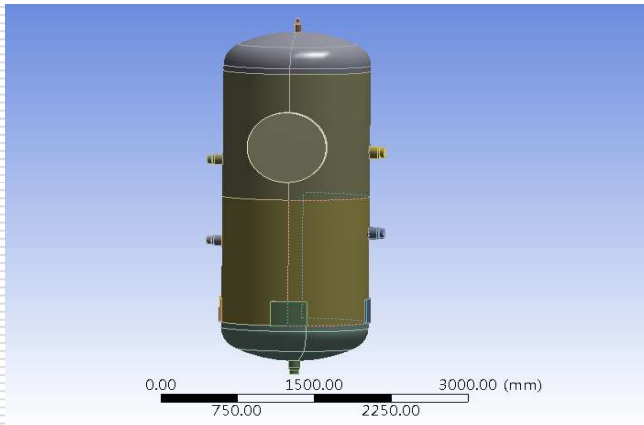
1. The max. dia.: 4200mm.
2. Monthly yield: 150 tons.
3. Materials: carbon steel and stainless steel.



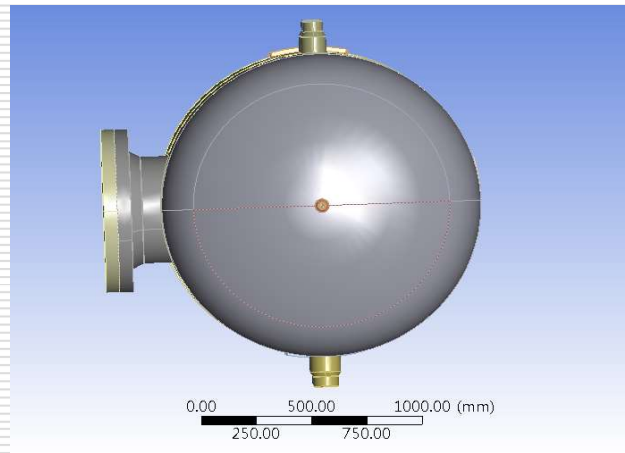
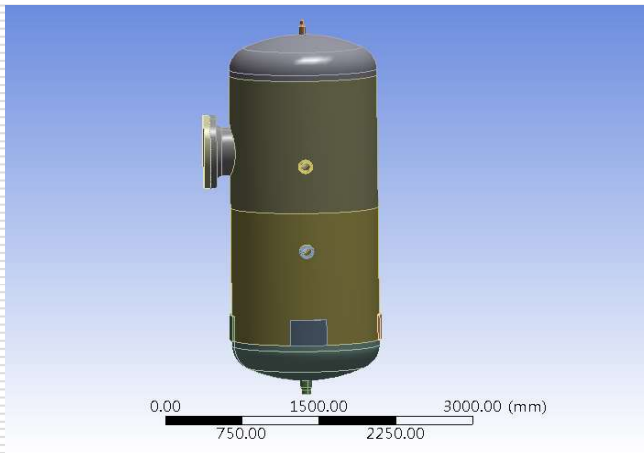
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Pingtung Factory (Pressure Vessel Manufactured)



The computer
program of
ANSYS software.
& Finite Element
Analysis Model
for Pressure
Vessel.



Pingtung Factory (Pressure Vessel Manufactured)



**Storage Tank
manufactured
in accordance
with client's
required data
for the First
Nuclear Power
Plant in North
of Taiwan.**



Pingtung Factory (Pressure Vessel Manufactured)



Air Storage Tank
manufactured in
accordance with
client's required
data for the Talin
Thermal Power
Plant in South of
Taiwan. (1)



Pingtung Factory (Pressure Vessel Manufactured)



Air Storage Tank
manufactured in
accordance with
client's required
data for the Talin
Thermal Power
Plant in South of
Taiwan. (2)



Pingtung Factory (Plate Heat Exchangers – N Stamp)



SUBCONTRACTOR : HISAKA WORKS, LTD. JAPAN

Design, Fabrication, Installation, Test-Special Work

**Fuel Pool for Nuclear
Power Plant**



**LOCA system
(Loss of Coolant Accident)**





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Civil / Architectural Construction



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Civil / Architectural Construction



ShuangLien Slope (1) New Construction Army Camp



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Civil / Architectural Construction

Contract Value:
USD 40,000,000

Site Area :
184,500m²
Total Floor Area :
44,141m²

Average Labor:
300 persons/ day





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Civil / Architectural Construction

Rigid Road (service for tanks passing)

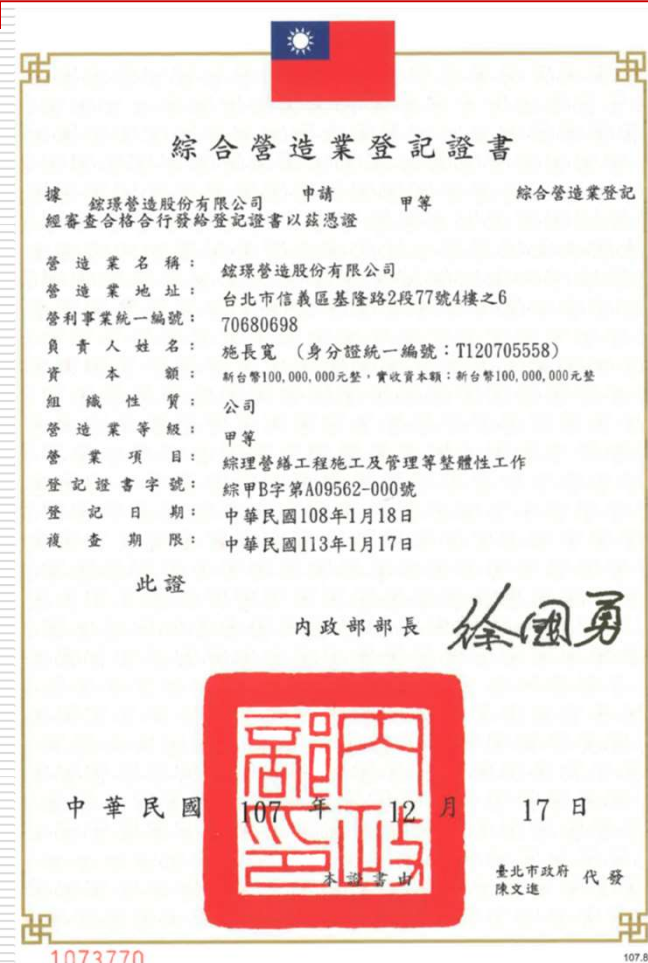




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Company Certificate- Class A Construction Company





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Contact us

<http://www.areagroup.com.tw>

**Address: NO.27, Wusyun St., Anle District, Keelung,
Taiwan 204**

Contact : Sherry Shih / Cell : 0988-706-089

Tel: +886-2-2434-2339 # 118

Fax: +886-2-2434-2319

Email: sherryshih@areagroup.com.tw
