



## VIPCO's BRIEF HISTORY



- April 1979 - Establish Company.
- Set up VIPCO 1 Workshop, performed erection and fabrication work for minor scale work.
  
- July 1986 - Started major fabrication and erection work for Cement Plant Construction Work and later on became one of the major players of Cement Plant Construction mechanical contractor until 1997.
  
- May 1996 - Started fabrication non pressure parts of HRSG for MHI - local Wang Noi CC I Project
  
- June 1997 - Set up VIPCO 2 as main workshop.
  
- Sep 1998 - Started export work by delivery Co-oxidizer to Taiwan, Formosa Petrochemical Project.
  
- Dec 1998 - Started fabrication work of Pulverizer Casing for export to Europe with order awarded from CPAG.
  
- Jan 1999 - Started export HRSG Stack to Abu Dhabi.
  
- Nov 2000 - TIS/ISO 9002 : 1994 - certified by MASCI.
  
- June 2000 - Start export HRSG Duct and Casing to USA.
  
- Aug 2004 - TIS/ISO 9001 : 2000 - certified by MASCI.
  
- March 2004 - U & S ASME certified.
  
- April 2005 - Signed contract with Fin Tube Technology to set up finned tube facility in new VIPCO's workshop, Laemchabang Industrial Estate, Thailand. LCB workshop was located in Export Promotion Zone (EPZ), so operation and export products from this EPZ will be free from import tax.



## VIPCO's BRIEF HISTORY



- Aug 2005 - LCB ( LaemChachabang ) work shop is partially completed and be used to assembly VIPCO's first order of HRSG module boxes while three tube finning machines were under erection and commissioning.
- Dec 2005 - Start export HRSG Module Boxes assembled from LCB work shop to CA , USA for Siemens Power Plant Project.
- Jan 2006 - Start export finned tube from LCB workshop under order released and production controlled by Fin Tube Technology.
- Feb 2008 - VIPCO decided to purchase and took control all of finning equipment in LCB facility.
- April 2012 - VIPCO acquired 50,000 m2 area located 20.4 km from Laem Chabang Port to develop new VIPCO 5 for expanding capacity of HRSG harps and fire heater / WHRU coil works. Facilities are expected to ready for operation by October 2013.
- October 2013 - VIPCO started harp fabrication and box assembly at new established Nong Kham branch work shop. Shop coding assigned for this work shop is VIPCO 5 while Lam Chabang branch work shop will be VIPCO 4 alone and will focus only fin tube manufacturing.
- Jan 2014 - Nong Kham shop ( VIPCO 5 ) got U & S ASME certificate
- Jan 2015 - VIPCO started the expansion of Nong Kham shop ( VIPCO 5 ) by adding another 9,600 m2 covered work shop to support increasing demand in HRSG & Heater / WHRU module boxes.
- Jan 2016 - VIPCO started the expansion of Nong Kham shop ( VIPCO 5 ) to build 5,500 m2 new finned tube work shop right next to harp & box shop. The first phase building will have space to install 8 finning machines and work shop is expected to finish within Oct 2016.



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June, 2016



# GENERAL COMPANY INFORMATION



## COMPANY NAME, ADDRESS & CONTACT NUMBERS

Visavakit Patana Corporation Limited.

URL : [www.vipco-thai.com](http://www.vipco-thai.com), general e-mail address : [vipco@vipco-thai.com](mailto:vipco@vipco-thai.com)

### Registered office

215/148-149 Pracharad 1 Road, Bangsue, Bangkok 10800

☎ + 66 (0) 2 - 585-2556 to 8, 585-4306 Fax. + 66 (0) 2 - 587-6068

### Main Workshop (VIPCO 2)

42, 52 Moo 7, Ku-Bang-Luang, Ladlumkaew, Pathumthani 12140

☎ + 66 (0) 2- 979-4001 to 8 Fax. +66 (0) 2 - 979-4010

### VIPCO 1 Workshop (VIPCO 1)

28/2 Moo 4, Soi Chai-Ua, Near Nonthaburi Bridge, Pathumthani 12000

☎ + 66 (0) 2 - 975-2814 Fax. +66 (0) 2 - 975-2815

### Laemchabang Branch Workshop (VIPCO 4)

220-220/1 Moo 3, Toong Sukhla, Sriracha, Chonburi 20230

☎ + 66 (0) 38 - 401-207 Fax. +66 (0) 38 - 401-206

### Nong Kham Branch Workshop (VIPCO 5)

599/9 Moo 1, Nong Kham, Sriracha, Chonburi 20110

☎ + 66 (0) 38 -110-709 to 716 Fax. +66 (0) 38- 110-720

## PRINCIPAL PERSONNEL

Managing Director	: Phaithul Khositsakul	: k.phaithul@vipco-thai.com
Director, Operations	: Weerachart Ariyasajakul	: a.weerachart@vipco-thai.com
Production Manager	: Pasuchet Khositsakul	: k.pasuchet@vipco-thai.com
Business Development	: Nopadon Chawegunrat	: <a href="mailto:c.nopadon@vipco-thai.com">c.nopadon@vipco-thai.com</a>
Sales & Estimation	: Panudet Ruangsuk	: r.panudet@vipco-thai.com
Quality Assurance	: Nopadon Somboon	: <a href="mailto:s.nopadon@vipco-thai.com">s.nopadon@vipco-thai.com</a>
Operation Manager (LCB)	: Viriya Saksophon	: s.viriya@vipco-thai.com
Purchasing Manager	: Suphakrit Khositsakul	: k.supakrit@vipco-thai.com

## GENERAL & FINANCIAL INFORMATION ( Privately owned , no annual reports published )

Year of Establishment 1979

Registered Capital - Baht 250 million

(all figures millions of Baht)	2010	2011	2012	2013	2014	2015
Total Assets	1021.3	1049.4	1210.5	1307.1	1313.7	1553.9
Current Assets	671.5	686.8	766.2	759.3	703.5	825.2
Other Assets	349.8	362.6	444.3	547.8	610.2	728.7
Less - Current Liabilities	682.8	701.5	762.5	839.6	764.6	905.8
- Long Term Debt	-	-	-	49	37	25
Revenue	1495.3	1445.8	1771.1	1663.6	2046.2	2452.3

Principal bankers to whom reference can be made :

### Krung Thai Bank Limited

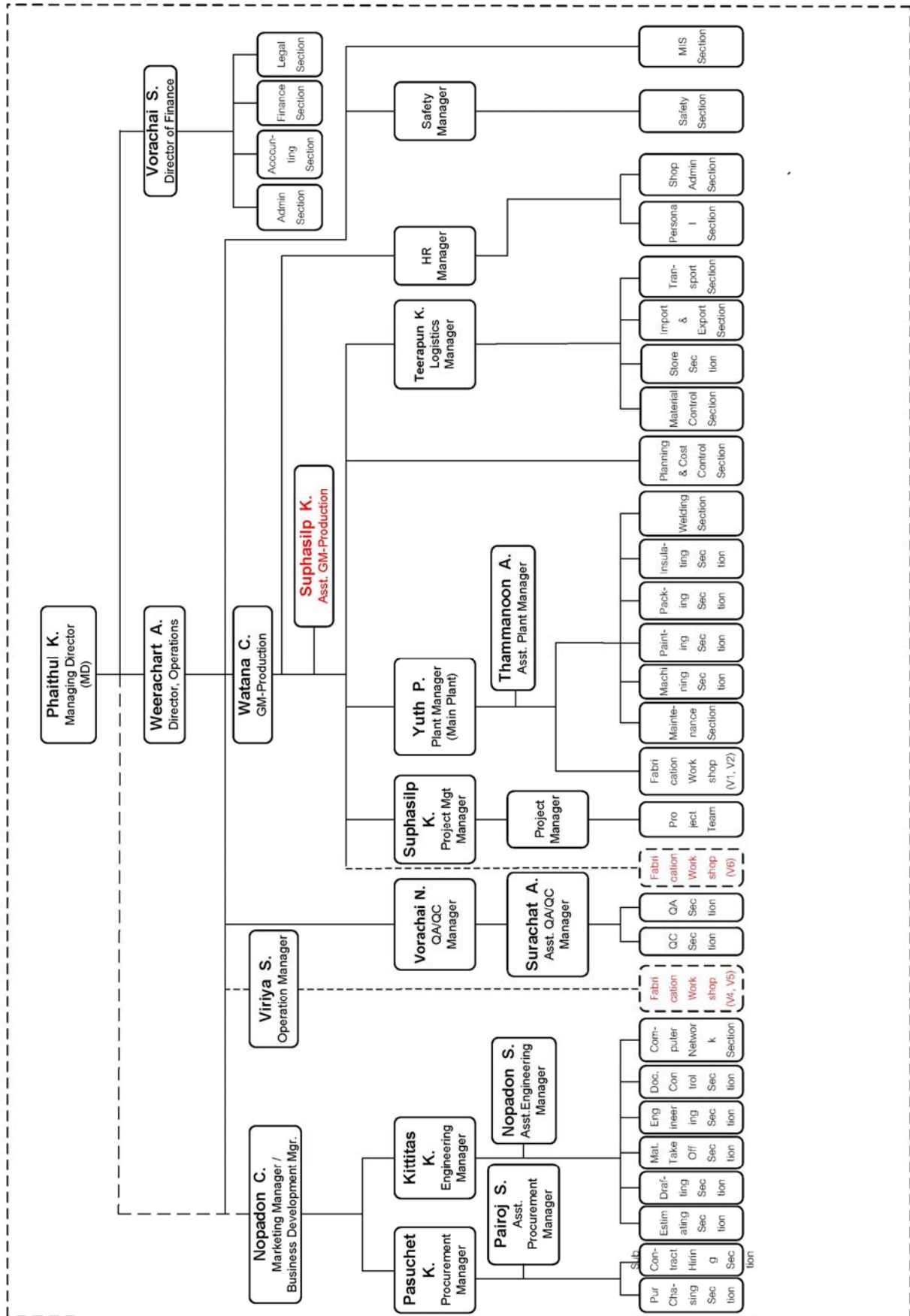
Branch Mgr., Tel : 66-2-585-7357 to 8, Fax : 66-2-587-4923  
20 Yukul 2, Suanmali, Bangkok 10100

### Export-Import Bank of Thailand

1192 Phaholyothin Rd., Payathai, Bangkok 10400  
Branch Mgr., Tel: 66-2-271-3700, Fax: 66-2-271-3240



# COMPANY ORGANIZATION





## FACILITIES AND PERSONNEL



### **Main Factory (VIPCO 2) Pathumthani**

Heavy fabrication workshop , located in not less than 120,000 m<sup>2</sup> total land area close to 4 lanes main road. Facilities include >48,000 m<sup>2</sup> covered workshop and 5,055 m<sup>2</sup> blasting/painting & loading areas. Rated fabrication capacity is target at 1,300 tons per month.

### **VIPCO 1 Workshop Pathumthani**

The original VIPCO 1 workshop become general purpose workshop and to serve light fabrication steel work for VIPCO with 12,000 m<sup>2</sup> total land area include 8,000 m<sup>2</sup> covered workshop and 600 m<sup>2</sup> office area. Rated fabrication capacity approx. 100 tons per month.

### **Laemchabang Finning Workshop (VIPCO 4 )**

Special purpose workshop located in Free Trade Zone of Laemchabang Industrial Estate. Right next to Laemchabang Port, the biggest port of Thailand in Chonburi. LCB workshop comprises two buildings in total 11,455 m<sup>2</sup>. The first building is equipped with four units of high frequency welding finning machine. Max size of tube finning is 10.625"OD. The second building is for another three finning machines. Expected capacity from this work shop in to produce not less than 10,000 tubes per month.

### **Nong Kham Workshop (New VIPCO 5)**

Newly established fabrication work shop located 20.4 km away from LCB port. With total 83,600 m<sup>2</sup> total area and 19,200 m<sup>2</sup> covered work shop , this work shop is to focus in coil work /harps fabrication and module box modularization of HRSG and convection box modularization for fire heater / WHRU. Peak capacity of this shop is expected to run at 3000 tons per month or to produce not less than 16 HRSG boxes per month.

### **Laemchabang Port Area (VIPCO 6)**

With 32,000 m<sup>2</sup> rental area at Laemchabang Port, equipped with gantry crane and covered building for assembly work make this shop very ideal for assembly complete units or modules of boilers , WHRUs , fire heaters or equipment which have extra sizes and too big to transport through normal road but be a choice of the client / project owner in order to minimize site installation man hours.

## PERSONNEL

	32	Mechanical
Registered engineers	15	Industrial
	1	Civil
	3	Electrical
Other engineers, and supervisors	18	
Quality assurance	6	
Quality control	34	
Foremen, all types and Technicians	59	
Fabricators, Fitters	512	
Welders	50	TIG
	47	SMAW / FCAW / SAW
Others	18	
<b>Total Staff</b>	<b>795</b>	
<b>Sub-Contractor</b>	<b>200-400</b>	



# FINNED TUBES SHOP FACILITIES



## A. Products & Service in V4 – Laem Chabang Shop

1. Main products – High frequency welded spiral finned tubes :
  - Solid type.
  - Serrated type.

## B. Production Facilities of Finned Tubes Shop

1. Facility :
  - High frequency welding M/C – 7 lines .
  - Tube bending & Cutting line.
  - Coating line.

2. Capacity of finning machine :

Machine No.	Tube O.D. ( Inch )	Fin Thick ( mm )	Fin Height ( mm )	Fin Pitch ( Fins / inch )	Length ( m. )	Material
1	1.5" - 6.625"	0.8 – 2.7	9 - 32	1.5 - 7.6	23.2 m.	<b>Fin Material :</b> CS 409SS ( 11-13 Cr ) 410SS 304SS 309SS / 310SS  <b>Tube Material :</b> CS T11, T22 & Tr91 P11,P22,P5,P9 & P91 304SS , 316SS , 321SS 347SS , 347H Duplex SS 2205 Incoloy 800H
2	2" - 10.75"	0.8 – 2.7	9 - 32	1.5 - 7.6	21.3 m.	
3	1" - 4.5"	0.8 – 2.7	9 - 32	1.5 - 7.6	26 m.	
4	1" - 2.875"	0.8 – 2.7	9 - 32	1.5 - 7.6	23.2 m.	
5	1" - 2.875"	0.8 – 2.7	9 - 32	1.5 - 7.6	26 m.	
6	1" - 4.5"	0.8 – 2.7	9 - 32	1.5 - 7.6	26 m.	
7	1" - 6.625"	0.8 – 2.7	9 - 32	1.5 - 7.6	30 m.	



## COMPANY OWNED EQUIPMENT



### 1. CRANES & HOISTS

Gantry travelling cranes	-	10 Ton	5
Gantry travelling cranes	-	5 Ton	8
Gantry travelling cranes	-	2.8 Ton	1
Overhead cranes	-	20 Ton	13
Overhead cranes	-	15 Ton	2
Overhead cranes	-	10 Ton	5
Overhead cranes	-	5 Ton	21
Tower Crane	-	5 Ton	1
Winches	-	2 Ton	5
Chain hoists	-	20 Ton	2
Chain hoists	-	10 Ton	4
Chain hoists	-	5 Ton	17
Chain hoists	-	3 Ton	17
Chain hoists	-	2 & 1.5 Ton	18
Wire rope pulling hoists	-	1.5 & 3 Ton	22
Lever blocks	-	1.5 & 3 Ton	20
Railroad jacks	-	20 Ton	4
Mobile Crane	-	25 Ton	1

### 2. HYDRAULIC PRESSURES & JACKS

Hydraulic press brake	-	2000 Ton	1
Hydraulic press brake	-	450 Ton	2
Hydraulic press brake	-	400 Ton	2
Hydraulic press brake	-	200 Ton	2
Vertical hydraulic press	-	400 Ton	2
Hydraulic jacks	-	100 Ton	1
Hydraulic jacks	-	60 Ton	4
Hydraulic jacks	-	50 Ton	8
Hydraulic jacks	-	30 Ton	5
Hydraulic jacks	-	20 Ton	12
Hydraulic jacks	-	10 Ton	10
Reform Press	-	400 Ton	1

### 3. CUTTING & PUNCHING EQUIPMENT

Hydraulic guillotine shearing machine	-	3100 x 13 mm.	2
Iron Worker (punching cutting forming)	-	50 Ton	5
Power punching machines	-	45 Ton	2





## COMPANY OWNED EQUIPMENT



Portable hydraulic punchers	-	45 Ton	4
Plasma cutting machines	-	12 mm.	4
Heavy duty beveling machine	-	5 - 40 mm.	5
CNC flame cutting TG-4000S	-	100 mm. x 9 m.	2
Hyperformance Plasma HPR260 Auto gas	-	4 m. x 12 m. 50 mm. (stainless) 64 mm. (mild steel)	1
11 torches flame cutting	-	100 mm. x 6 m. x 9 m.	1
Auto-Flame cutting machine (auto-graph)	-	5 - 60 mm. thk. x 6 torches	1
Automatic gas cutting machines	-	100 mm., 150 mm. thk.	24
Automatic gas H-shape steel cutting machines	-	600 x 1000 mm.	3
Gas cutting torches	-		188
Band saw	-	H 700 x 400 , Ø 500	1
** see additional machinery under item 9			

#### 4. BENDING & ROLLING MACHINES

Fujicar Bending Roller machine	-	80t x 4000 mm.	1
1200 Te vertical hydraulic plate bending machine	-	75t x 3750 mm.	1
Pyramid type, Hydraulic plate bending machine	-	32t x 3048 mm.	1
Hydraulic plate bending machine	-	19t x 3048 mm.	1
3-roller plate bending machine	-	28t x 3048 mm.	1
3-roller plate bending machine	-	22t x 3048 mm.	1
3-roller plate bending machine	-	16t x 2438 mm.	1
3-roller plate bending machine	-	3t x 1524 mm.	1
3-roller plate bending machine	-	Ø 40 - 125 mm.	1
Hydraulic pipe bending machines	-	Ø 10 - 80 mm.	2
Angle bendor	-	L130 x 12 mm.	1

#### 5. AIR COMPRESSORS

150 cfm x 155 psi compressors	-		4
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#### 6. GENERATORS & WELDING MACHINES

Diesel generator (120 KW)	-	150 KVA	1
Diesel generator (60 KW)	-	75 KVA	1
Welding generators	-	250A AC/DC	6
Automatic submerged arc welding machines	-	1000A AC/DC	7
Automatic submerged arc welding machines	-	650A AC/DC	4
MIG welding machines	-	650A AC/DC	5
FCAW welding machines	-	500A AC/DC	23
MIG welding machines	-	350A AC/DC	2
TIG welding sets	-	300A AC/DC	36
TIG welding sets	-	200A AC/DC	2



## COMPANY OWNED EQUIPMENT



Welding transformers	-	500A AC	49
Welding transformers	-	400A AC	22
Welding transformers	-	300A AC	62
Welding transformers	-	150A AC	5
Robot Welding Machine	-	GMAW / FCAW	1

### 7. MACHINE SHOP

Plane Milling Machine	-	5 m length	1
Horizontal Boring Machine	-	6000 h x 3000 w	1
Horizontal boring Machine	-	1000h x 1300w x 1500l	1
Shaper	-	18" stroke	1
DM Lathe	-	Ø 500 x 4000 long	1
Lathes	-	Ø 60" x 15' long	2
Lathes	-	Ø 24" x 6' long	3
Pipe Threading Machine	-	Ø 6 - 100 mm.	2
Pipe Threading Machine	-	Ø 6 - 80 mm.	2

\*\*see additional drilling machines in item 9

### 8. DRILLING & GRINDING MACHINES

Auto-drilling machine	-	Ø 16 – 28 mm.	1
Radial drills	-	Ø 50 mm.	4
Scm-B1 NC drill	-	Ø 50 mm. – 2 m. x 4 m.	1
Radial drill RE3-1600	-	Ø 50 mm.	1
Radial drill 2000	-	Ø 50 mm.	1
Radial drill RH25	-	Ø 50 mm.	1
Girder drill daido 1500	-	Ø 50 mm.	2
H-Shape NC drill 3BH900	-		1
Electro-pneumatic hammer drills	-	Ø 6 – 40 mm.	4
Magnetic press drills	-	Ø 6 – 32 mm.	13
Electric press drilling machines	-	Ø 3 – 6 mm.	6
Electric handy drills	-	Ø 6 – 12 mm.	24
Electric bench grinders	-	Ø 8" and Ø 10" mm.	3
Grinding machines	-	Ø 4" and Ø 7"	268

### 9. STRUCTURAL STEEL FABRICATION LINE

for structural beams up to H900, consisting of :-

Band saw	-	H1000 x 500, Ø 700	1
Band saw	-	H700 x 400, Ø 500	2
NC Drilling machine	-	H900 x 300	1
NC Drilling machine	-	H700 x 300	1
Beveling machine	-	H900 x 600	2



## COMPANY OWNED EQUIPMENT



Beveling machine	- Pl. 1200	1
Shot blasting machine	- H900 x 300	1
NC Line equipment	-	2
Line transverse	-	1

### 10. PUMPS & TESTING EQUIPMENT

Hydrostatic test pump	- 200 Kg / cm <sup>2</sup>	1
Hydrostatic test pump	- 140 Kg / cm <sup>2</sup>	1
Hydrostatic test pump	- 88 Kg / cm <sup>2</sup>	1
Hydrostatic test pump	- 75 Kg / cm <sup>2</sup>	1
End suction pumps	- Ø 4"	2
Submersible pumps	- Ø 2"	8
Magnetic particle testing	-	1
Ultrasonic testing	-	1
Digital temperature gage (surface probe)-32 to + 999° C		1
Thickness testers	-	4
High Pressure Water Jet Pump	200 bar, 7.9 GPM	1

### 11. SURVEYING EQUIPMENT

Automatic levels, accuracy 1:500,000	-	3
Digital theodolites, accuracy 20 seconds	-	3
Automatic universal theodolites, Wild T2	-	2



## **QUALITY SYSTEM**

Over the years, projects to have been undertaken by VIPCO to a variety of standards including American, Japanese, German, British and Thai. VIPCO adopted the TIS/ISO 9002 standard for quality systems in order to provide all customers with a quality assurance programme conforming to an internationally recognized standard. All system documentation has been developed in-house in both Thai and English, yet the system retains the flexibility for meeting specific customer requirements through the production of project-specific quality plans.

## **ISO 9001:2008 & OHSAS 18001:2007**

VIPCO had been certified to be conforming to the requirement of TIS/JIS 9002:1994 since November 7, 2000, then conforming to TIS/JIS 9001:2000 on April 25, 2003 and re-valid until now. Recently VIPCO also got OHSAS 18001 for Occupational Health and Safety Management System.

## **ASME STAMPED**

VIPCO's main workshop and LCB workshop are all certified to perform pressure parts with ASME's "S", "U", "R" National Board year 2004 and 2005 respectively and VIPCO has policy to keep these certificate valid in order to be active for pressure parts works.

## **NONDESTRUCTIVE TESTING**

Beside radio graphic test which shall be performed by third party's certified inspector. VIPCO carries out ultrasonic, magnetic particle, penetrant testing by own in house certified level I&II inspector, per ASNT-TC-1A guidelines.

## **WELDING INSPECTION**

Welding inspections are performed by well trained inspector under certified welding inspector according to AWS standard and certified by CWI and / or CSWIP inspectors.

## **PRESSURE TESTING**

In order to meet requirement of client's pressure of HRSG in the range of 2500 PSIG, Maximum pressure of testing pumps and related accessories is not less than 3000 PSIG.



# QUALITY CONTROL AND ASSURANCE




**Certificate of Approval**  
 ASME B31.3  
 Manufacture of mechanical products  
 for the design of  
 Process Piping  
 by Management System Certification (MSC) (Class 1)  
 Date of issue: 1 April 2010  
 Valid until: 1 April 2011





**CERTIFICATE OF AUTHORIZATION**

The certificate holder is authorized to use the authorized symbol of the American Society of Mechanical Engineers (ASME) for the design of process piping in accordance with the applicable Code of the ASME Boiler and Pressure Vessel Code. The use of the Code symbol and the authority granted by the Board of Authorization are subject to the provisions of the agreement and Code of the American Society of Mechanical Engineers.

**COMPANY:** YONGKAI PIPING SYSTEM CO., LTD.  
 221 No. 1 Pongpan Road  
 Chonburi 23000  
 Thailand

**ISSUED:** November 19, 2009  
**EXPIRES:** November 19, 2010

**APPROVED:** November 19, 2009  
**REVIEWED:** November 19, 2009  
**ASME BOARD MEMBER:** [Signature]

**Chairman of the Board**  
 The American Society of Mechanical Engineers



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**THE NATIONAL BOARD OF CERTIFICATION**  
**Certificate of Authorization**

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**Chairman of the Board**  
 The National Board of Certification



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**Chairman of the Board**  
 The American Society of Mechanical Engineers



# MANUFACTURING PRODUCTS



## MATRIX OF PRODUCTS MANUFACTURED IN VIPCO'S WORKSHOP

Product Type	VIPCO WORKSHOP				
	VIPCO 1 28/2 Moo 4 Soi chai Ua Pathumthani	VIPCO 2 52 Moo7 Ladlumkaew Pathumthani	VIPCO 4 220-220/1 M00 3 Tungsukhla Chonburi	VIPCO 5 599/9 Moo 1 Nong Kham Chonburi	VIPCO 6 Lamchang Port Chonburi
<b>1) Heat Recovery Steam Generator</b>					
1.1 Finned Tube			✓	□	
1.2 Harp Fabrication		✓	□	✓	
1.3 Header Pipe & Pipe Spools		✓	□	✓	
1.4 HRSG Casing, Duct, Stack	✓	✓			
1.5 HRSG Structure & Platform	✓	✓			✓
1.6 HRSG Steam Drums		✓			
1.7 Module Box Assembly			□	✓	✓
<b>2) Fire Heater</b>					
2.1 Finned Tube			✓	□	
2.2 Convection Coil Fabrication			□	✓	✓
2.3 Radiant Coil Fabrication		✓	□	✓	✓
2.4 Radiant & Convection casing	✓	✓			
2.5 Stack & Duct Work	✓	✓			
2.6 Structure & Platform	✓	✓			
2.7 Refractory		✓	□	✓	✓
2.8 Modularization Work			□	✓	✓
<b>3) Conventional Boiler &amp; AQCS</b>					
3.1 Casing & Duct Work	✓	✓			✓
3.2 Buckstay, Wind Box	✓	✓			
3.3 Structure & Platform	✓	✓			✓
3.4 Dry or Wet Absorber	✓	✓			✓
3.5 SCR & Bag Filter	✓	✓			✓
3.6 Modularization Work					✓
<b>4) Economizer / Heater / Cooler / Waste Heat Recovery Unit</b>					□
4.1 Finned Tube			✓	□	□
4.2 Bundle Fabrication		✓	□	✓	□
4.3 Header Pipe & Pipe Spools		✓	□	✓	□
4.4 Casing, Duct	✓	✓			□
4.5 Module Box Assembly			□	✓	✓
<b>5) Pulverizer / Mill</b>					
5.1 Fabricated Parts		✓			
5.2 Full Assembly		✓			✓
<b>6) Pressure vessels, Drums, Reactor</b>					□
6.1 Fabricated Parts		✓			
6.2 Assembly & Modularization					✓
<b>7) Material Handlin System</b>					
7.1 Structure for Conveyor	✓	✓			
7.2 Stacker & Reclaimer	✓	✓			
7.3 Crusher	✓	✓			
7.4 Chute & Duct Work	✓	✓			✓
<b>8) Tank &amp; Silo</b>	✓	✓			✓
<b>9) Pipe Spool Fabrication</b>	✓	✓		✓	✓

**Note :**

- 1) AQCS = Air Quality control system such as FGD, SCR, Bag Filter, ESP.
- 2) VIPCO 1 Workshop capacity is now allocated for pipe spool fabrication and some plate work, platform work.
- 3) VIPCO 4 Workshop is dedicated for finned tube products but still have area for fabrication coil work
- 4) VIPCO 6 which is right next to port of Export is dedicated for over sizing modularization work.



## GENERAL

Since its establishment in 1979, VIPCO has undertaken a wide variety of mechanical works for industrial plants and projects throughout Thailand. These projects have been in the cement industry, petroleum and fine chemicals, power generation, food and agricultural products, and general manufacturing plants. Project references by industry group are attached.

VIPCO activities on these projects include CAD drafting and plotting, project planning and cost control, material sourcing and control, quality control, fabrication, rigging and erection, and all other activities associated with these types of projects. Some specific capabilities are listed below.

## CAPABILITIES BY ACTIVITY CLASSIFICATION

### Heat Recovery Steam Generator (HRSG) & Convectional Boilers

- HRSG loose harps, pipe spools and assembled module boxes, manufactured per ASME Section I.
- All HRSG related non pressure parts such as Casing, Structure, Inlet Duct, Stack, Platform and Walkway.
- Non pressure parts for convectional oil fired or coal fired boilers such as Casing, Duct, Wind box, Buckstay. This including plate work for the following back end Air Quality control system such as bag filter, EPS, SCR, FGD both wet scrubber or dry scrubber.

### Fire Heaters & Waste Heater Recovery Units

- Convection Module and Radiant Coils or Modularized Units including pipe spools.
- Non pressure parts of fire heater / WHRU such as radiant walls, structure, stack, platform, convection wall and related refractory and insulation works.

### Material Handling for Mining & Coal Fired Boilers

- Stackers, reclaimers, conveyors, crushers, material handling systems.
- Coal or Limestone silos & bins.

### Pulverizer and Gypsum Mills

- Coal Mill or Pulverizer.
- Gypsum Mills and related equipments such as stucco cooler.
- Clinker Mill & Raw Mill.



### Tankage, Vessels, Silos

- Petroleum product and utility Tankage to API 650 and similar standards.
- Pressure vessels to ASME VIII and BS 5500 standards.
- Tankage and silos of stainless steel for chemical plants, breweries, etc.

### Piping Work

- Power, process and utility piping to B31.1, B31.3 for the used material grade such as CS, P11, P22, P91, Duplex, Incoloy, 304, 316, 347H Stainless Steel , Incoloy
- Field installation of Piping works.

### Structural Steel Works

- Main Structure for cement pre-heater tower, boiler, reactor tower and general steel building and pipe rack.

### Equipment Installation / Erection

- All Power Plant equipment including generators, Steam turbines & Gas turbines, boilers, and Balance of Plant equipment.
- Air quality control system equipment such as FGD Absorber, Electrostatic Precipitator, Bag Filter, related duct work and stack.
- Column, Reactor and tray installation.

### Industrial Maintenance

- Minor and Major inspection of power plant equipments.
- Boiler tube-harps repair / replacement.