



LOGISTICS & MOBILIZATION SOLUTIONS

the
**GLOBAL
LEADER**
in pipe coating solutions.



40000
DEDICATED EMPLOYEES

27
GLOBAL PLANTS

40
LEADING TECHNOLOGIES

75
YEARS OF COATING EXPERIENCE



the GLOBAL LEADER in pipe coating solutions.

Bredero Shaw is the world leader in pipe coating solutions, with more than 75 years of experience, over 27 pipe coating facilities on 6 continents and the largest team of technical and service specialists in the business.

One of Bredero Shaw's most important advantages is its worldwide pool of personnel, whose adaptability and experience are matched by no other contractor in the industry. The availability of such personnel in conjunction with considerable resources at Bredero Shaw allows the provision of superior mobilization and logistic services to clients around the world.

Worldwide, Bredero Shaw has successfully mobilized equipment and people to complete numerous pipeline coating contracts covering tens of thousands of kilometres of pipe. This brochure highlights some of the more notable projects Bredero Shaw has secured which involved the mobilization of coating facilities and people to undertake the specific requirements of each project.

Bredero Shaw has been involved in successfully transporting pipes to and from coating plants for many years around the world. The company is able to reliably achieve the necessary project schedule with the highest level of safety.

LEADING SOLUTIONS FOR LOGISTICS & MOBILIZATION



LEADING TECHNOLOGY

BARGE, "TRANSHIP 1"

Tranship 1 is a floating pipe handling service vessel complete with the necessary equipment for efficiently handling pipes. The barge is 100 meters long by 27 meters wide complete with 2 gantry cranes.

Each crane has a lifting capacity of 30 metric tonnes capable of 30 cycles per hour. Experience has shown that each crane is capable of lifting up to 5 pipes per lift depending on the pipe's weight and diameter. The barge is also equipped with wind gauge instrumentation to assist crane operators during extreme weather conditions.

To ensure safe operations at all times, the barge has been equipped with a computerized stability program. The barge has also been equipped with an automatic designed spreaderbar which eliminates the use of "slings."

Transshipment is beneficial to clients as it reduces the use of expensive pipe carriers, creates rapid turnaround of pipe carriers and cost effectively handles pipes at strategic locations. As well, there is no need for large capital investment in specialized handling equipment.



AUTOMATIC LABEL PRINTER APPLICATOR'S (ALPA'S)

The ALPA's interfaces directly into Bredero Shaw's global host system "Pipetrak" which enables the tally operator to scan the barcodes internally (supplied by the pipe manufacturer) which in turn generates external barcodes at one or both ends. These external barcodes are tapped into place by ALPA's without any human intervention.

The information contained on the barcode is quite extensive and can be retrieved in an instant from the "Pipetrak" database. For example by entering the pipe number, information such as the individual coil number and pipe length can be recovered. Bredero Shaw is also able to customize the content of the barcode label to meet client requirements.

All of this traceability is put to good use during the installation of the pipe, as each pipe is scanned for the pipe number and then surveyed in-situ using GPS coordinates. Through the record of the pipe number, all the pipe history and quality information can be obtained, from the manufacture of the steel through pipe and coating, transport, logistics and welding. This information is combined in the Construction Management System (CMS) in conjunction with the precise location of the pipe in service, which allows the pipeline operators to understand their pipeline much more accurately than was once possible.

CUSTOMIZED SERVICE FOR YOUR PROJECT

Bredero Shaw understands that each of its customers is unique. It is for this reason that we provide excellent customized customer service.

- Bredero Shaw adjusts all capabilities of its production line according to its customer's pipe size and length.
- Through the use of local resources, Bredero Shaw can optimize its product handling and transportation.
- Local residents are recruited and trained to assist with the mobilization of the pipeline.
- Local suppliers are used for materials and duty reductions.
- Existing customer facilities can be incorporated.



Bredero Shaw's dedicated personnel are available to assist with project support and execution to ensure your satisfaction.

The company provides thorough support in the following areas:

- Coating specifications and standards development.
- Raw material procurement and quality assurance.
- Delivery and stockpiling of bare and coated pipe.
- Engineering design for flow assurance.
- Pipe coating to the applicable industry standards and client specification.
- Logistical analysis for optimum supply of coated pipe.
- Transport of coated pipe as per the client's requirements.
- Packaged single source solutions including engineering, procurement, pipe coating and delivery.
- End-to-end solutions including field joints and custom coatings.
- Bredero Shaw's team of dedicated professionals will ensure that your project is completed successfully.





QUALITY ASSURANCE

Bredero Shaw maintains a Quality Management System that conforms to ISO 9001:2000. The company is dedicated to the continuous improvement of the Quality Management System ensuring that all employees understand, implement and sustain the system. All plants have integrated quality control systems to ensure compliance with client specifications and industry standards.

The major activities carried out within the quality group are:

- Incoming raw material inspection and testing.
- Incoming inspection of bare pipe.
- Constant quality inspection of coating application and auditing of production systems to ensure conformance with client specifications.
- Testing of finished product.
- Pipe tracking from receipt to delivery.
- Maintenance, continuous development and improvement of all coating processes and systems.



HEALTH, SAFETY & ENVIRONMENT (HSE)

COMMITMENT TO INCIDENT AND INJURY FREE (IIF)

Bredero Shaw's vision is an Incident and Injury Free workplace, with no harm to people and no damage to the environment.

The company is committed to providing a safe and healthy workplace and ensuring that all business activities are conducted in a manner that protects employees, clients and the environment. The aims of this policy shall be achieved at all company locations by adhering to the following principles:

- Identification and evaluation of all HSE hazards or aspects and the management of their risks or impacts to acceptable levels.
- Compliance with all applicable HSE legislation.
- Prevention of accidents, injuries, and pollution.
- Intolerance of the conditions and behaviours that contribute to incidents and injuries.
- Reduction of waste and conservation of resources.
- Recording and communicating HSE performance throughout the organization.
- Continual improvement of HSE performance.

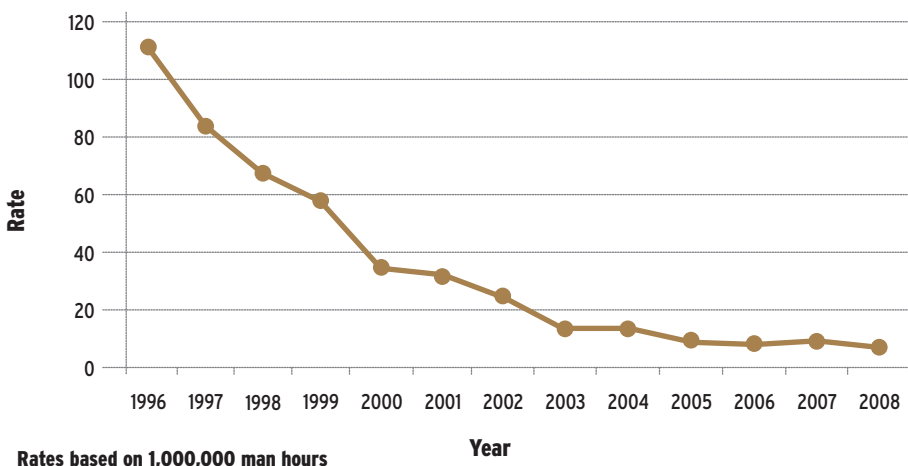


FULLY INTEGRATED MANAGEMENT SYSTEM

Bredero Shaw maintains a robust HSE Management System that is globally consistent and meets or exceeds all international standards. It is considered best in class. The HSE Management System fully integrates the three aspects of HSE: engineering controls, documentation and behaviour. We believe that all three are necessary for an effective Management System.

Through these efforts Bredero Shaw has seen a significant improvement in its HSE performance. The company is committed to continuing this improvement and achieving an Incident and Injury Free workplace.

TOTAL RECORDABLE CASE FREQUENCY (TRCF) 1996 - 2008



LOGISTICS EXPERIENCE

Bredero Shaw has many years of experience managing the transportation of pipes to and from its coating plants. Some of the benefits of this experience in logistics are highlighted below:

- Bredero Shaw can collect pipe, coat pipe, and deliver coated pipe anywhere in the world.
- Reliable, international expertise which provides a single-source, integrated service resulting in a more efficient completion of the client's project.
- Single source capability reduces complex interfaces, improving time spent in project management and cash flow.
- ISO 9001 certification ensures adherence to industry production and safety standards and the efficient handling of the coating and shipping processes.
- Experienced personnel with extensive contacts in the shipping industry to provide a cost-effective solution and optimum logistics strategies.
- Availability of a tranship barge with essential pipe-handling equipment and high loadout rate ability. The barge can be mobilized to further service your project.



LOGISTICS EXPERIENCE

Below is a partial list of successful projects.

The Americas				
Project Name	Date	Scope	From	To
Sable Offshore Energy (1,700 MT*)	1998	Compression Coat/FBE 8", 12", 18", 26" x 380 km	Harvey, Louisiana	Sheet Harbour, Canada
BP Cusiana - Corenas (18,000 MT)	1998	FBE 30", 36" x 458 km	Harvey, Louisiana	Santa Maria, Colombia

Europe, Africa and FSU				
Project Name	Date	Scope	From	To
Langed (Bare Weight: 870,000 MT) (Coated Weight: 175,000 MT)	2004	HeviCote® 42", 44" x 1,170 km	Farsund, Norway	Easington, England
Blue Stream (26,000 MT)	2001	24" x 35 mm wt x 100 km 3LPP and 6 km HeviCote®	Port of Leith, Scotland	Samsun, Turkey
Midgard (45,000 MT)	1999	AE/HeviCote® 20" x 100 km	Farsund, Norway	Andalsnes, Norway
South Arne (151,000 MT)	1998	AE/HeviCote® 24" x 190 km	Port of Leith, Scotland	Esbjerg, Denmark
Elgin Franklin (168,000 MT)	1998	AE/HeviCote® 34" x 470 km	Port of Leith, Scotland	Great Yarmouth & Teeside
Nordgas Transport (142,000 MT)	1998	AE/HeviCote® 36" x 142 km	Farsund, Norway	Amsterdam, Netherlands

Far East and Australia				
Project Name	Date	Scope	From	To
PM3 - Ca Mau Gas Pipeline (159,813 MT)	2006	Enamel & Concrete Weight 18" x 327 km	Kuantan, Malaysia	Can Tho Port, Vietnam
Tasmania Natural Gas Pipeline (45,600 MT)	2001	Internal, FBE, & Compression Coat 14" x 305 km	Kuantan, Malaysia Kembla Grange, Australia	Georgetown, Tasmania
CPC LNG Receiving Terminal Ph. III (260,000 MT)	1998	CTE/Cage Concrete 24" x 240 km	Kuantan, Malaysia	Taiwan
CPC LNG Receiving Terminal Ph. III (85,000 MT)	1998	Bare Linepipe 24" x 240 km	Kuantan, Malaysia	Taiwan
Pilbara (BHP) (10,000 MT)	1994	PE/Cage Concrete 18" x 216 km	Kuantan, Malaysia	Geraldton, Western Australia
Cabinda Field (Chevron) (60,000 MT)	1993	AE/FBE/Cage Concrete 10", 12"& 24" x 73 km	Kuantan, Malaysia	Cabinda, Angola

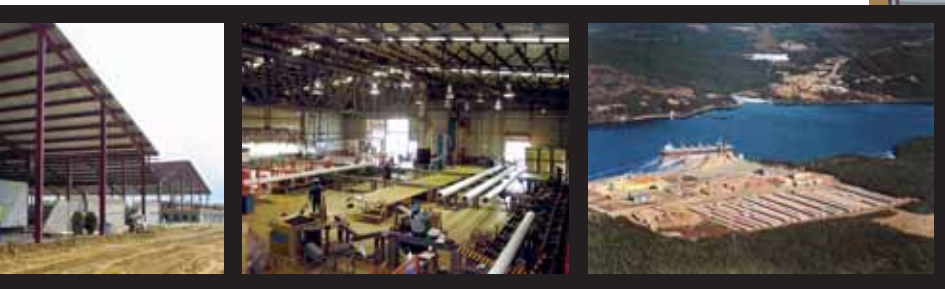
* Metric Tonnes

MOBILIZATION EXPERIENCE

PLANT MOBILITY

Bredero Shaw can mobilize coating plants to allow for coating in-country and near the pipe spread. Recent projects include the mobilization of Compression Coat concrete plants in Trinidad, Mexico, Ghana and South Africa. Mobilization can improve the economics of a sufficiently large project, qualify for in-country content requirements and improve logistics.

- Bredero Shaw can supply pipe coating plants on a turnkey basis designing, fabricating, mobilizing, and commissioning plants anywhere in the world. This will save the customer time and money by selecting a site close to the project location. With decreased transportation times the risk of product damage is greatly reduced.
- Bredero Shaw has years of experience for setting up mobilization facilities. The company recognizes the importance of always researching the different environment and operational permits that are required before setting up a facility in a new location.
- The company has professional engineers to provide the design and fabrication for each new mobile facility.
- The equipment used to construct Bredero Shaw pipe coating plants is the best available and often purchased locally to allow it to be built in the most cost-effective manner.
- Local residents are hired and trained to build and work in each mobile facility. This is to reduce labour costs and reinforce Bredero Shaw's belief in helping the economy in which it operates in.



MOBILIZATION EXPERIENCE

Below is a partial list of successful projects.

Recent Project	Earliest Project	Longest Project
South Coast Gas Development	Gas Trunkline to Shore	Statpipe
Project Background	Project Background	Project Background
Client: Petro SA Plant Location: Port Elizabeth, South Africa Scope of Work: 8.625" x 28 km @ 140 pcf 12.75" x 25 km @ 190 pcf 14" x 54 km @ 140 pcf All 40mm	Client: D.O.N.G. Plant Location: Esbjerg, Denmark Scope of Work: Enamel & CWC 284 km x 33" 220 kms x 20"	Client: Statoil Plant Location: Andalsnes, Norway Scope of Work: Enamel & CWC Andalsnes: 550kms of 28" & 30" Esbjerg: 350 kms of 36"
Key Dates	Key Dates	Key Dates
Contract Awarded: Mar. 2006 Mobilization Started: Feb. 2006 Mobilization Complete: Jun. 2006 Coating Trials: Jun. 2006 Bredero Shaw Starts Coating: Jul. 2006 Required Completion: Sep. 2006 Bredero Shaw Completion: Sep. 2006	Contract Awarded: Dec. 1979 Mobilization Started: Dec. 1979 Mobilization Complete: Jun. 1980 Coating Trials: Jun. 1980 Bredero Shaw Starts Coating: Jun. 1980 Required Completion: Sep. 1982 Bredero Shaw Completion: May 1982	Contract Awarded: Mar. 1982 Mobilization Started: Mar. 1982 Mobilization Complete: Jul. 1982 Coating Trials: Jun. 1982 Bredero Shaw Starts Coating: Aug. 1982 Required Completion: Mar. 1984 Bredero Shaw Completion: Nov. 1983
Scope of Mobilization	Scope of Mobilization	Scope of Mobilization
Plant Erected: Compression Coat Plant Total Yard Area: 35,000 m ²	Area: 49 acres Plant Erected: Enamel, Concrete, Twin Cage Fabrication, Anode Fit, SteamCure Buildings Erected: 6,000 m ²	Area: 64 acres plant, 25 acres storage Plant Erected: Enamel, Twin Cage Fabrication, Concrete, Anode Fitting, SteamCure A

Other Mobilization Projects				
Project Name	Customer	Location	Scope	Mobilization Complete
PDEG	Petrobras	Belo Horizonte, Brazil	4LPP Insulation, 101 km x 12"	May 2006
WAGP	WAPCo	Tema, Ghana	Compression Coat 590 km x 20", 15.3 km x 18"	Jun. 2005
Angostura & BUD	BHP Billiton & Natural Gas Company of Trinidad	La Brea, Trinidad	Compression Coat 88 km x 18" with 2", 190 pcf 66 km x 36" with 3.25", 190 pcf	Jan. 2004
Alba Marathon	Corinth Pipe Works	Thisvi, Greece	Compression Coat 30.4 km of 24" with 38.1 mm 1.2 km with 63.5 mm	Aug. 2002
Tasmanian Natural Gas	Duke Energy International	Kuantan, Malaysia	Compression Coat 305 km x 14"	Jul. 2001
Caspian Pipeline System	CPC	Volzhsky, Russia	3LPE, 424 km x 40"	Apr. 1999
Yacheng 13-1	Arco China Inc.	Zhanjiang, Guandong Province, People's Republic of China	Enamel, Cage Concrete & Internal Cleaning 28" x 713.5 km, 28" x 71.2 km, 14" x 93.2 km	Jul. 1993

MOBILE FACILITIES AROUND THE WORLD

Bredero Shaw operates 27 plants across 6 continents providing client solutions in onshore and offshore markets. The company also mobilizes portable or temporary facilities to address the specific needs of remote projects. This capability combined with Bredero Shaw's execution expertise provides clients with an unparalleled source of global service.



PAST MOBILE FACILITIES

NORTH AMERICA

1. Beaumont, Texas

LATIN AMERICA

2. Coatzacoalcos, Mexico

EUROPE, AFRICA, MIDDLE EAST & RUSSIA

3. Onne, Nigeria
4. Port Elizabeth, South Africa

1 **ANGOSTURA & BUD
BHP BILLITON & NATURAL GAS COMPANY OF
TRINIDAD**
Location: La Brea, Trinidad
Product: Compression Coat
Details: 88 km x 18", 66 km x 36"
Completion Date: January 2004

2 **PDEG
PETROBRAS**
Location: Belo Horizonte, Brazil
Product: 4LPP Insulation
Details: 101 km x 12"
Completion Date: May 2006

3 **STATPIPE
STATOIL**
Location: Andalsnes, Norway
Product: Enamel and HeviCote®
Details: 500 km x 28" & 30", 350 km x 36"
Completion Date: November 1983

4

**GAS TRUNKLINE TO SHORE
D.O.N.G.**

Location: Esbjerg, Denmark

Product: Enamel and CWC

Details: 284 km x 33", 220 km x 20"

Completion Date: May 1982

5

**ALBA MARATHON
CORINTH PIPE WORKS**

Location: Thisvi, Greece

Product: Compression Coat

Details: 30.4 km x 24"

Completion Date: August 2002

6

**WEST AFRICA GAS PIPELINE
WAPCo(CHEVRON TEXACO, SHELL, OTHERS)**

Location: Tema, Ghana

Product: Compression Coat

Details: 579 km x 20", 15.3 km x 18"

Completion Date: January 2006

7

**SOUTH COAST GAS DEVELOPMENT
PETRO SA**

Location: Port Elizabeth, South Africa

Product: Compression Coat

Details: 8.625" x 28 km, 12.75" x 25 km, 14" x 54 km, All 40mm

Completion Date: September 2006

8

**CASPIAN PIPELINE SYSTEM
CPC**

Location: Volzhsky, Russia

Product: 3LPE

Details: 424 km x 40"

Completion Date: April 1999

9

**YACHENG 13-1
ARCO CHINA INC.**

Location: Zhanjiang, Guandong Province, People's Republic of China

Products: Enamel, Cage Coating & Internal Cleaning

Details: 28" x 713.5 km, 28" x 71.2 km, & 14" x 93.2 km

Completion Date: July 1993

10

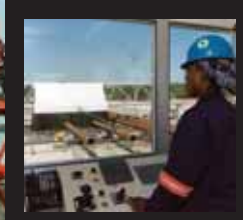
**TASMANIAN NATURAL GAS
DUKE ENERGY INTERNATIONAL**

Location: Kuantan, Malaysia

Products: SureFlo® FBE & Compression Coat

Details: 305 km x 14"

Completion Date: July 2001



● PLANTS

NORTH AMERICA

1. 34th Street, Edmonton, Alberta
2. 21st Street, Edmonton, Alberta
3. Camrose I, Camrose, Alberta
4. Camrose II, Camrose, Alberta
5. Regina, Saskatchewan
6. Portland, Oregon
7. Adelanto, California
8. Fontana, California
9. Vineyard, Utah
10. Beaumont, Texas
11. Pearland, Texas

LATIN AMERICA

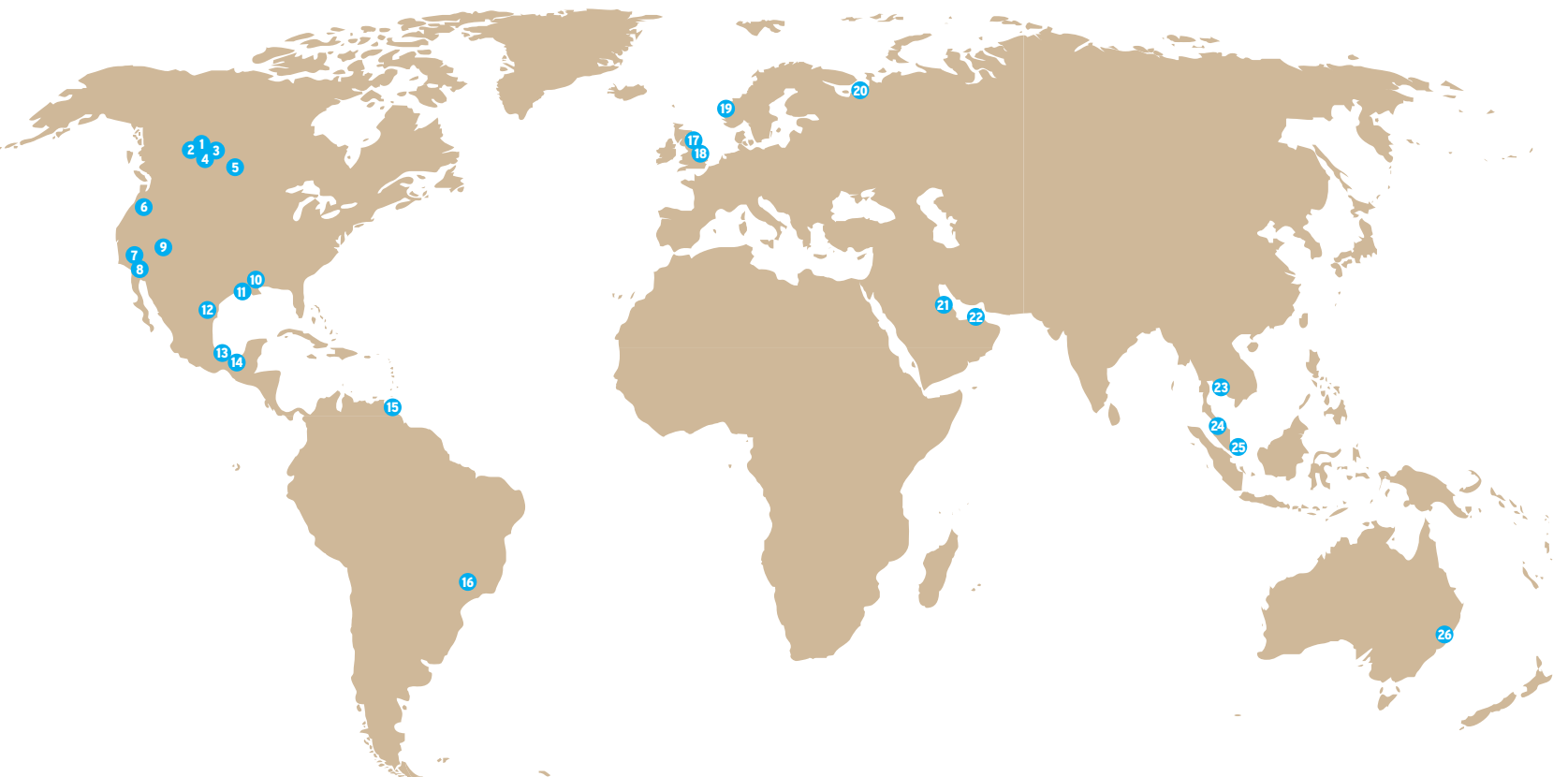
12. Monterrey, Mexico
13. Veracruz, Mexico
14. Coatzacoalcos, Mexico
15. La Brea, Trinidad
16. Belo Horizonte, Brazil

EUROPE, MIDDLE EAST, AFRICA & RUSSIA

17. Ellon, Scotland
18. Leith, Scotland
19. Orkanger, Norway
20. Arkhangelsk, Russia
21. Jubail, Saudi Arabia
22. Ras Al Khaimah, UAE

ASIA PACIFIC

23. Rayong, Thailand
24. Kuantan, Malaysia
25. Kabil, Batam Island, Indonesia
26. Kembla Grange, Australia



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