

60MW Barge Mounted Power Plant BOO Project in Sri Lanka



Colombo Power (Private) Limited

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60MW BARGE MOUNTED POWER PLANT

For the first time in the history of power generation in Sri Lanka, a 60MW Barge Mounted Power Plant (BMPP) has been installed in the Port of Colombo. The BMPP, connected to the national grid of Ceylon Electricity Board (CEB), will supply 420GWh of electricity per year, accounting for approximately 5% of the total capacity of Sri Lanka. The barge will also allow CEB to achieve more stability in electricity supply, as existing hydro power generation fluctuates depending on rainfall.

COLOMBO POWER (PRIVATE) LIMITED

Colombo Power (Private) Limited (CPPL), an Independent Power Producer (IPP), was established in 1998 as a BOI (Board of Investment) company by two Japanese entities, Mitsui Engineering & Shipbuilding Co., Ltd. (MES) and Kawasho

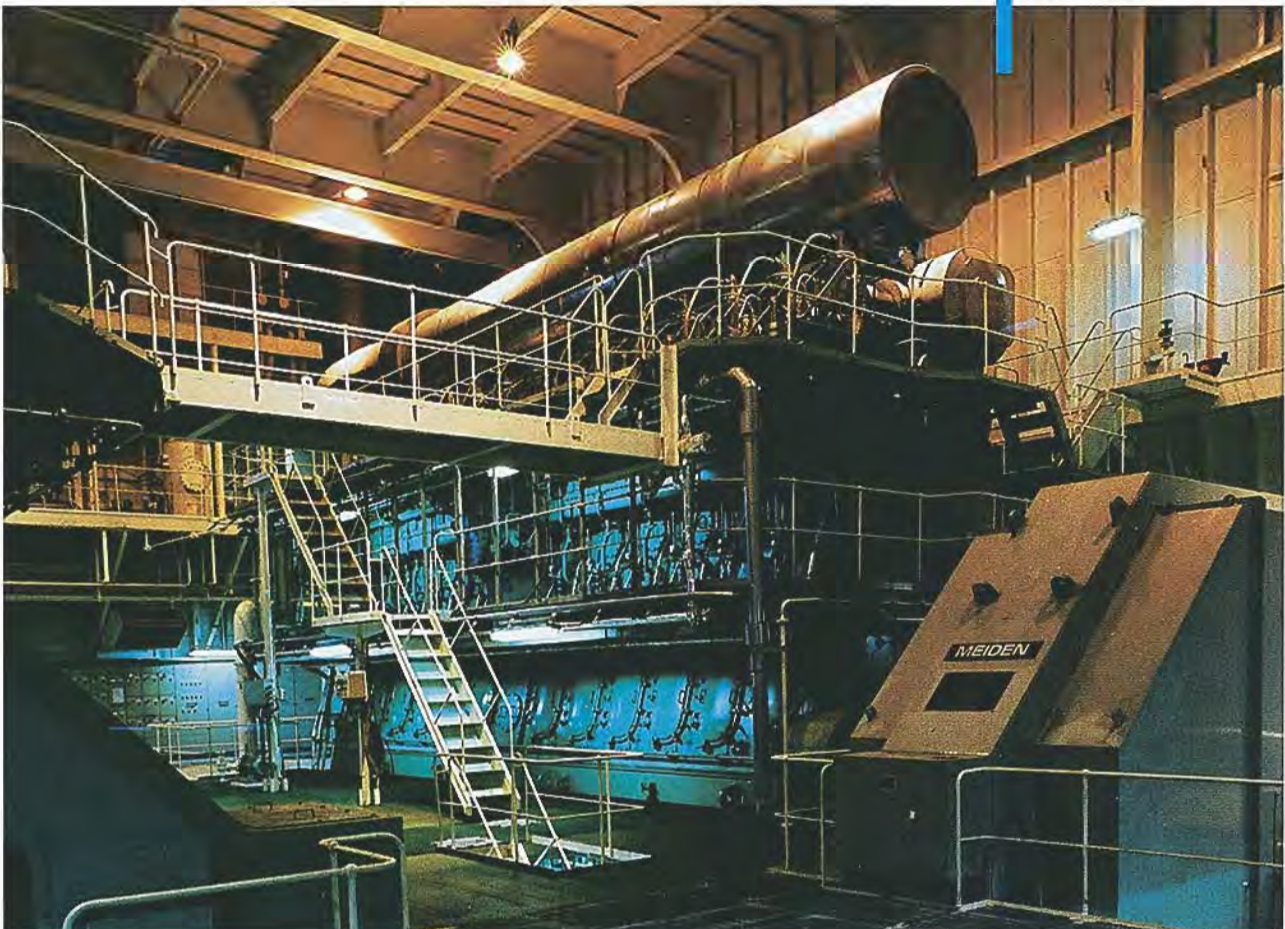
Corporation on a 50/50 basis. MES is one of Japan's biggest and most successful heavy industry companies, and Kawasho is one of the major trading firms in Japan. CPPL is the first IPP company overseas established solely by Japanese companies.

CONSTRUCTION

The construction was organized by MES on an agreement with Kawasho, which arranged financing with Japan Bank of International Cooperation (JBIC) and some other commercial banks as the EPC main contractor. MES supplied 4 Mitsui - MAN B&W 2-stroke Low Speed Diesel Engines as the prime mover of the BMPP. These engines have earned a reputation for their reliability and cost-effectiveness, and are operating successfully in many power plants around the world. The barge itself was constructed by Sasebo

Heavy Industries Co., Ltd. well known as one of the biggest shipbuilders in Japan. Meidensha Corporation, a leader in the heavy electrical equipment field, manufactured the alternators. Burmeister & Wain Scandinavian Contractor A/S (BWSC) in Denmark, which is a 100% owned subsidiary of MES, handled engineering and site work for electrical equipment including transmission lines. This construction team worked together for another barge project in Mindanao, Philippines in 1994. Their advanced technology and excellent cooperation achieved the delivery of the BMPP 9 months before the contracted completion date. This accomplishment has greatly contributed to solving recent power shortage problems in Colombo, and is an important step towards expanding the economy of Sri Lanka.

Mitsui-MAN B&W
12K50MC-S





Control Room

OPERATION and MAINTENANCE

The heavy fuel oil for the BMPP is supplied by Ceylon Petroleum Corporation (CPC) through an underground pipeline. Operation and Maintenance (O&M) is taken care of by BWSC Lanka (Private) Limited owned by BWSC. BWSC's Generation Services Division has a reputation worldwide for reliability, with capabilities

including O&M, Training, Technical Service, Technical Assistance and Rehabilitation. BWSC is in charge of O&M for Sapugaskanda BOO Power Station, as a part of Asia Power (Private) Limited in Sri Lanka. In addition, BWSC has gained O&M experience for a BMPP with the Mindanao Power Barge in Philippines.

Barge Transportation



TECHNICAL DATA

Diesel Engines

Manufacturer	Mitsui Engineering & Shipbuilding Co., Ltd.
Type	4X12K50MC-S
Speed	166.7rpm
Designed Output	16,100kW at the flywheel

Alternators

Manufacturer	Meidensha Corporation
Type	TICB-AF
Rating	4X19,602kVA
Voltage / frequency	11kV/50Hz
Output at 100% load at 0.8 lagging	4X15,681kW

Exhaust Gas Boiler

Manufacturer	Sasebo Heavy Industries Co., Ltd.
Type	EHA-418-S
Steam Capacity	2X1,600kg/h(No.2 & 3 DE only)
Steam Pressure	7 barG

Fuel Treatment

Manufacturer	Mitsubishi Kakoki Kaisha, Ltd.
Type	SJ80F
Capacity	3X11.3m ³ /h@180cSt/50dec.C

Step-up Transformers

Manufacturer	ABB Elta Ltd. - Poland
Type	TNARE80000/242.5PT, ONAF
Ratio	11kV/220kV with OLTC
Ratio Power	80MVA

Barge

Manufacturer	Sasebo Heavy Industries Co., Ltd.
Length	62.40m
Breadth	36.00m
Depth	5.5m
Weight	Gross 11,400t Net 6,200t

SHARE HOLDERS



Tubaron Steel Mill (Brazil)



Guam Piti Power Station



Reclaimer



Libaran Power Station (Malaysia)

KAWASHO

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Since its establishment in 1954, Kawasho has expanded its operations from the trading of steel products into energy sources, foodstuffs, raw materials, lumber, general products, machinery, ships, electronics and even the aerospace industry.

Along with increased diversification Kawasho has developed a network of offices around the world in order to assure an economic contribution both at home and abroad.

As a comprehensive specialist company, Kawasho creates functions and values that are suitable for the times, and as a consolidated business group, press forward and grow stronger with the century.

MES

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Ever since its inauguration in 1917, Mitsui Engineering & Shipbuilding Co., Ltd. has been committed to the pursuit of advanced technology and the supply of high performance, high quality products. It has served both domestic and international clients as a comprehensive engineering company supplying a diversity of products and technologies, which encompass not only shipbuilding but also extensive non-marine sectors such as large bridge, power plants, industrial plants, container cranes, environmental facilities, factory automation and so on.

Drawing on our huge reserves of technology and know-how, we are taking up the challenge of developing new technology in numerous areas and so opening up vast new possibilities for the future.