

Leading facilities for the Indonesian coal market

Captain Giordano Scotto d'Aniello, head of commercial department, Coeclerici logistics division, Milan, Italy

Indonesia continues to be a significant player in the global mining industry with a considerable production level of coal, copper and other minerals. Coal production has increased in recent years and Indonesia is currently the world's third largest exporter of steam coal. In 2012 the coal production was recorded at 330 million tonnes with export levels at 250 million tonnes (predominantly from Kalimantan) accounting for 12 percent of the GDP in the largest economy in southeast Asia.

The coal production forecasts for 2013 stand at 337 million tonnes and exports at 252 million tonnes. In 2014 the production is expected to be 342 million tonnes and exports at 254 million tonnes. These figures are based on the companies' work programming budgets according to a spokesman of the Indonesian Ministry of Energy and Minerals.

Indonesia's infrastructure

Despite the country's rapid economic growth over the past few years, Indonesia still needs to improve its infrastructure to assure a long term and sustainable growth. The development of transport infrastructures (port, railway and roads) in Indonesia often faces long delays due to weak preparation and poor facilities, and is becoming a bottleneck for Indonesia's economy.

As far as the coal mining chain is concerned, the lack of railway and deep water ports has resulted in an influx of towed barges and off shore facilities such as floating cranes and floating transfer stations (FTS). FTS, allow for the smooth and continuous loading of vessels, thus reducing the coal cost and freight price. They are the most practical solution in overcoming logistical bottlenecks, accelerating production, whilst minimising costs and increasing profitability. Therefore, it is the perfect solution for Indonesia's requirements.

The transhipment concept as developed by Coeclerici, was created to achieve unparalleled loading performance offering at the same time both safety and reliability. FTS, besides having the flexibility of a floating crane, have the great advantage of a floating terminal as well.

Offshore facilities

The offshore loading facilities in Indonesia include a number of floating cranes (about 60) with coal handling capacities ranging from 10,000 to 25,000 tonnes per day, together with a number of FTS (about 20) handling capacities can exceed 50,000 tonnes per day. These offshore facilities tend to be used by the larger coal producers while the smaller producers rely mostly on geared vessels and self-loading from barges. Given the large quantity of coal exported from Indonesia each year, the offshore loading devices have become the preferred solution to help increase coal trading, handling about 150 million tonnes a year.



Coeclerici Floating Transfer Station's Bulk Java (top), Bulk Borneo (middle) and Bulk Celebes (bottom) for the Indonesian coal market



Coeclerici Floating Transfer Station Bulk Pioneer operating for Kaltim Prima Coal in Indonesia



An example of a Coeclerici unit operating worldwide - The Bulk Limpopo during operations in Beira Mozambique

A positive coal market outlook

Each project often requires a tailor-made solution to fit the client's needs. This was the case with the current project running in Indonesia between Coeclerici and PT Berau Coal, the fifth largest producer and exporter of coal in Indonesia. In light of the positive long term outlook for the coal market in the Kalimantan region, PT Berau Coal asked Coeclerici to develop a number of floating transfer stations to be deployed at Muara Pantai Anchorage in Indonesia. The FTS Bulk Java and its sister vessel Bulk Borneo have been in operation since 2011 and 2012 respectively. In January 2013, the FTS Bulk Celebes joined the two units boosting PT Berau Coal's export capability. A fourth Coeclerici device is expected to be delivered later this year.

Adding flexibility: The delivery of Bulk Celebes

The 11,471 deadweight tonnes (DWT) vessel is equipped with two heavy duty cranes and a material handling system. The cranes have a lifting capacity of 30 tonnes, a 38-metre outreach and 18-metre air draft. The single telescopic ship loader boom has an action range from 25 to 40 metres and is equipped with a terminal 'banana chute' capable of rotating 360 degrees to allow the delivery of the cargo in each area of the receiving holds. A lift to transfer payloads into the ocean going vessel's hold for cargo

trimming is also installed.

The FTS is equipped with a 12-metre barge loader too and a buffer storage of 10,000 metric tonnes (mt). The FTS has the unique feature of being suitable for both loading and unloading, unlike the previous generation of transhippers that were designed to carry out one operation only. The FTS has a potential discharging rate of about 22,000 tonnes per day and a loading rate in excess of 40,000 tonnes per day. Bulk Celebes is environmentally friendly thanks to the specially designed hoppers, spillage free grabs, closed conveyor belts, high efficiency diesel generators and sewage system. It complies with the requirements of international classification societies such as IMO, MARPOL (SOPEP), IOPP, ISPP and IAPP as well as local regulations. Bulk Celebes has been specifically designed to give further flexibility to Berau's existing transhipper fleet and can load the vessel in conjunction with another FTS, achieving an extraordinary daily loading rate. Moreover, coal blending can also be performed thanks to the cranes 38-metre outreach and the possibility of storing cargo inside the existing hold temporarily. Bulk Celebes is also equipped with an online weighing system, an automatic sampling device and a metal detection system

Achieving results

The sister vessels Bulk Java and Bulk Borneo have been specifically designed and built by Coeclerici to solve the logistical problems linked to coal production expected to increase in the coming years. The total quantity transhipped by Bulk Java since the start of operations was 5.8 million tonnes at the end of 2012. Bulk Java's best loading rate is 49,798 mt per day.

The sister vessel, FTS Bulk Borneo arrived at Muara Pantai Anchorage in June 2012 and commenced operations on the same month. The unit has showed an excellent performance since being commissioned, achieving a loading peak rate of 41,000 mt per day during the very first loading operation. The total quantity transhipped by the FTS Bulk Borneo since the start of operations was two million tonnes at the end of 2012. Bulk Borneo's best loading rate is 50,154 mt per day.

The efficiency of the transshipment operation has been achieved thanks to the powerful and reliable equipment installed on board, together with the direct management of the Coeclerici team.

Coeclerici's key presence in Indonesia

Coeclerici has been present in Indonesia since 2005 with the FTS Bulk Pioneer currently operating for Kaltim Prima Coal (KPC), one of the largest coal exporters in the country. The Bulk Pioneer's performance is an extremely important link in the production and export chain of the client. It conforms to the client's stringent safety standards and has an impeccable safety record. The FTS has blended into the working environment of KPC in such a way that it has become an inseparable part of the client's equipment. The total volume transhipped by Bulk Pioneer since the start of operations in September 2005 up to end of 2012, is in the range of 37 million tonnes, greatly reducing bottlenecks and demurrages at KPC's loading point.

The Bulk Pioneer's cranes and material handling equipment facilitate the direct transfer of coal from the barges to the ocean going bulk carriers while the onboard buffer storage is utilised during times of barge unavailability and changeovers, thus ensuring a continuous loading of ocean going vessels. The Bulk Pioneer is equipped with two cranes with a material handling system comprising of hoppers and conveyors and thanks to the two ship-loaders it can cover almost six holds of a panamax vessel thus avoiding the need for frequent shifting.



Floating Storage Bulk Wayuu' in Venezuela

In conclusion

The total quantity of coal handled in Indonesia in 2012 via Coeclerici floating transfer stations was about 12.5million tonnes, accounting for nine percent of the total coal exported in the country via offshore devices. As we move forward, with the delivery of the new unit in mid 2013, these figures are expected to double over the next year and it will account for a good 18 percent of the total coal exported from Indonesia (according to the country's forecast for 2014).

Notwithstanding the impressive Indonesian figures and the substantial volume handled in Kalimantan, Coeclerici's logistics division operates worldwide through its units employed in various countries, including Italy, Mozambique, Venezuela, and Russia. In 2012, Coeclerici handled about 18 mt of dry bulk commodities, and the figures are projected to double thanks to long standing relationships with the primary mining operators, steel mills and power plants. This achievement is a result of Coeclerici's long track record of closely studying the needs of the client, to develop the most viable, commercial and technical solution, through the direct monitoring of the off shore operations.

ABOUT THE AUTHOR



Giordano Scotto d'Aniello is a Master Mariner and has worked on dry bulk vessels for well over a decade. Giordano joined the Coeclerici Group in 1999 as part of its shipping department before joining the Group's logistics division in 2004. He is currently the head of the commercial logistics division and he is involved in the conceptualisation of offshore transshipment solutions for clients worldwide.

ABOUT THE COMPANY

The Coeclerici Group has more than a century of experience in sourcing, marketing and transporting raw materials from producer to end-user. The Group is a leading provider of integrated services for the supply of raw materials for the world steel industry and energy and offers commercial and project management experience, high-level technical expertise and unique sector know-how services to its customers.

ENQUIRIES

Coeclerici S.p.A.-
Logistics division
Piazza A. Diaz 7- 20123, Milan, Italy
Tel: +39 02 624 69 451
Fax: +39 02 624 69 444
Email: newprojects@coeclerici.com
Web: www.coeclerici.com