



Product News

Eco-friendly Coal Storage System by reducing Emissions and Power Consumption

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JSW Jaigarh Port is a deep water, greenfield all weather private port that was developed by the JSW Group at a strategic location near Ratnagiri between the ports of Mumbai and Goa on the west coast of India (situated some 300 km south of Mumbai).

The new port has now taken a major step with regard to handle the coal for JSWs 1200 MW power plant located next to the port.

Covered Storage



The new storage shed at Jaigath port supplies coal for an adjacent 1200 MW power plant. (Pictures: © JSW Group)

The port of Jaigarh has recently installed a covered storage facility with a fully mechanized handling system for coal. The shed has a size of 440 m length x 104 m width (clear span) x 49 m apex height and features 6 m high concrete retaining walls on either sides. It houses two coal stockpiles of 16 m height, a stacker cum reclaimer with a capacity of 4000 / 2000 tph, respectively, and a yard conveyor. The shed construction involved 9000 m³ of concrete, 3500 t of space frame structure as well as 60 000 m² of sheeting.

While the shed structure was designed and supplied by a Chinese company, JSW's own profiled colour coated sheets have been used for roofing. The shed is equipped with dust suppression and fire fighting systems.

With the commissioning of this facility in December 2013, JSW Jaigarh Port has created a landmark in Indian Port sector for handling coal in eco-friendly manner.

Eco-friendly Drives



The storage system features a stacker/reclaimer and a belt conveyor with innovative CST-drives.

The port has not restrained itself in going green by installing this facility only, but has also taken the initiative in power saving. It has become the first port in India to install a CST- (Controlled Start Transmission-) drive in the conveyors. The port has installed a 2 x 350 KW drive in the yard conveyor located in this shed.

The CST drives are in existence globally for years, but not yet popular in India as this is only the second successfully commissioned drive.

The system is able to stack 4000 tph of coal while unloading from ship and reclaim 2000 tph of coal while feeding to the power plant. There are two drives at the head end as the conveyor has a unidirectional feed. For stacking, both the drives will run and cater to the 4000 tph requirement. When reclaiming, both the drives will be used to start the conveyor. After five minutes, one of the CST drives will get disengaged and the motor switched off, thereby saving huge power.

The successful installations of such systems for handling dusty cargo like coal, will set example and motivate other port operators to go the same way.