

# COMPARISON DOME / SILO STORAGE FOR COAL

13 July 2011

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	DOMESTORAGE	EUROSILO STORAGE
<b>Footprint</b>	Large footprint compared to stored volume of coal. 150000 tons of coal -> diameter of 110 m = 9500 m <sup>2</sup>	The most compact way of enclosed storage. 2 x 75000 tons of coal -> diameter 55 m = 2 x 2375 m <sup>2</sup> = 4751 m <sup>2</sup> = 50%
<b>Filling</b>	The coal is dropped down by a belt conveyor and will segregate, fines inside and coarse particles outside. This may give problems for the mills afterwards.	The coal is layer by layer and evenly spread by an auger system. By this movement the coal is even additionally homogenized.
<b>Discharging</b>	The coal is discharged by a scraper system. This system runs partially automated.	The coal is discharged layer by layer by the auger system. This process is fully automated.
<b>Oxygen access</b>	The coal is segregated and has a large open surface for oxygen access. Self heating of coal can occur frequently.	The coal is evenly spread in the silo system. Oxygen access is only possible through the top surface. The tendency for self heating is reduced due to the low oxygen concentration inside the coal volume. The coal in the lower layers is even self-inerting.
<b>Nitrogen purging</b>	Nitrogen purging is not possible.	Nitrogen purging through the silo bottom and upward is a well proven fire protection matter.
<b>Structure</b>	Large concrete wall structure due to uneven loads on the retaining walls.	The coal is always levelled, so the loads are circular symmetric which is the optimal load situation. Resulting in a simple straight-on cylindrical (slip) form wall.
<b>Coal types</b>	Different coal types can only be stored in separate piles. Resulting in a loss of space due to the conical pile heads.	Different coal types can be monitored by the coal silo software system. They can be reclaimed in a reverse sequence without loss of space.
<b>Coal monitoring</b>	Monitoring of the coal self-heating can only be done by infra-red cameras and a non selective gas detection..	The coal is continuous monitored by CO, NH <sub>4</sub> and O <sub>2</sub> sensors located on the auger frame and slewing bridge. The CO- concentration is the best indication for a developing hot-spot. The control system can indicate where the hot spot is located to enable the operators to treat this spot with the firesorb gel.
<b>Blending</b>	Realisation of blending is hardly possible.	With two or more silo systems it is easy to blend by discharging

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		and proportioning simultaneously from the silo systems.
<b>Fuel management</b>	Due to the undefined geometry of the pile configuration a detailed monitoring is complicated.	With the fuel management program the coal storage is monitored and the coal handling can be controlled in an optimal way.
<b>Redundancy</b>	Large capacity in one system no redundancy	With two or more silo systems there is a redundancy .