

Transportation processes



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There are many transportation processes and modes involved in the supply chain of both coal and manufactured electronic goods although many of these processes differ when comparing the two. The multimode transportation of coal from the mining site in Australia to the end users in China is a large and relatively simple process when compared to transporting manufactured electronic goods from China to the end users in Australia which is a multimode process.

In both cases there will be main factors that will affect the costs and efficiency of the supply chain such as; ingestion, technology, infrastructure management and geographical considerations in the case of transporting coal. In the case of the electronic goods factors such as; the standardization of containers, economies of scale, imbalance of containers, protection, security Australia is one of the world's largest coal exporters, exporting 25. Million tones of coal to China in the year of 2008-09 and a total of 100 million tones worldwide in the same year (AC 2008-09). This would not be possible without the assistance of an extensive transport system and infrastructure used to transport coal from the coal mine to the shipping port. In this essay I will also discuss how coal is moved within a port, how the coal is loaded and shipped, how it is offloaded and moved around the port of offloading and how the coal is transported from the port of unloading to the consumers in China.

The intermediate transportation processes manufactured electronic goods from China to Australia is also examined and the differences between the processes of transporting coal as a multimode process when compared to

intermediate process that containers provide when transporting the electronic goods.

The factors that affect the cost and efficiency of the of the intermediate transport of containers There are differing processes used at different stages of the cargo's transportation, which I shall discuss in the following sections:

Mine to Gladstone To demonstrate the process of transporting coal from Australia to China and the transportation processes required to do this, Port Gladstone coal port located in central Queensland will be looked at.

Port Gladstone is the third largest coal port in Australia exporting coal to over 20 countries (CPA 2011) including China. The main remonstration process that is used in Australia for the transportation of coal is rail transport. Once coal is mined it requires transportation to the coal port, in this case Port Gladstone. Port Gladstone is supplied coal by more than ten central Queensland mines (CPA 2011) and each of these mines uses Queensland rail network to transport the coal to the port. Trains transporting coal are among the longest in the world, with as many as 6 locomotives and 148 wagons amounting to a length of more than 2 kilometers. A train of that size can carry about 8, 500 tones of coal'. (CPA 011) The sheer size and quantities that are able to be transported by these trains meaner that a greater efficiency and lower cost over long distance can be achieved giving it a competitive advantage over trucks. Road transport can be used but is only Detective IT It Is over a snort Olsten.

Within Port of Loading Systems such as the automatic unloading systems and conveyor belts are put in place to ensure that once the coal reaches the

port it is able to be efficiently unloaded and moved around the port. At Port Gladstone two trains can offload coal simultaneously at 6000 tones per hour using automatic wagon door opening yester and bottom dump wagons that drop the coal onto to underground feeders. The coal is then feed into an overhead conveyer system that stockpiles the coal.

The coal can be blended if need be and loaded onto the ship using stockpile discharger (CPA 2011). This process will vary from port to port dependent on the scale of operations but the principle will remain the same. Shipping Coal will be transported by a dry bulk carrier, the size of the carrier will be dependent on the amount of coal that is required to be transported and to what port it is being transported to. The route of the voyage will be carefully planned to accommodate the ships characteristics and factors affecting the voyage.

Within port of Unloading Once the coal reaches the port of unloading, the coal will be unloaded from the ship by the use of grabs or continuous unloaded which will lift the coal onto conveyers, the coal will then either be put into stockpiles and then loaded onto a train/truck or directly loaded onto a train or truck. Port to users 'Coal is by far the biggest commodity transported within China, accounting for over 40% of all Chinese rail freight, 20% of road freight and nearly 25% of waterborne right' (Chinas Coal Industry N.