Giant Coal Derived Gas Fields And Their Gas Sources In China

China, the world's largest coal consumer, has been exploring various sources of energy to meet its ever-growing demand. One such source is the extraction of natural gas from coal, through a process known as coal-derived gasification. This article delves into the fascinating world of China's giant coal-derived gas fields and explores their gas sources.

Understanding Coal-Derived Gasification

Coal-derived gasification is a process where coal is converted into natural gas through a thermochemical reaction. This reaction occurs under high temperatures and pressure, resulting in the release of methane and other valuable gases. China has a rich abundance of coal resources and has been utilizing this technology to exploit its coal reserves efficiently.

The coal-derived gas industry in China has witnessed rapid expansion in recent years. The country is now home to some of the world's largest coal-derived gas fields, which have become a crucial part of China's energy mix.

Giant Coal-Derived Gas Fields and Their Gas Sources in China by Met Office(1st Edition)

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The Fuquan Gas Field

One notable giant coal-derived gas field in China is the Fuquan Gas Field located in the Guizhou province. With estimated reserves of over 600 billion cubic meters of natural gas, this gas field is a significant contributor to China's domestic energy production.

The gas sources in the Fuquan Gas Field primarily come from deep coal seams. Drilling and extraction techniques are employed to access the gas trapped within these seams. The extracted gas is then processed to remove impurities and make it suitable for various applications.

The Ordos Basin

Another prominent coal-derived gas field in China is the Ordos Basin, situated in Inner Mongolia. Spanning an area of over 90,000 square kilometers, this gas field is known for its vast reserves of coalbed methane and tight gas.

The gas sources in the Ordos Basin primarily come from coal deposits and surrounding formations. The coal in this region has a high gas content, making it an ideal candidate for coal-derived gasification. The gas extracted from this field is essential for meeting the energy needs of cities and industries in the surrounding regions.

The Junggar Basin

Located in northwest China's Xinjiang Uygur Autonomous Region, the Junggar Basin is another significant coal-derived gas field. This basin has abundant unconventional gas resources, including coalbed methane and shale gas.

The gas sources in the Junggar Basin are predominantly coal deposits and shale formations. The basin has extensive coal seams that hold vast amounts of methane. Through advanced drilling and extraction technologies, the gas is harnessed from these reserves and contributes to China's growing natural gas production.

Benefits and Challenges

Giant coal-derived gas fields in China offer several benefits, including a diversified energy portfolio, reduced coal consumption, and lower carbon emissions. By utilizing coal as a gas source, China can transition away from traditional coal-fired power plants, resulting in cleaner energy production.

However, coal-derived gasification also poses challenges. The process requires significant investments in infrastructure and technology, making it economically and technically complex. Additionally, the environmental impact of gas extraction and potential groundwater contamination is a concern that needs to be addressed.

China's giant coal-derived gas fields play a crucial role in meeting the country's energy demands. These fields utilize advanced technologies to extract and process gas from coal reserves, reducing reliance on traditional energy sources. While there are challenges to overcome, the development of coal-derived gas fields offers a promising pathway towards a cleaner and sustainable energy future in China.

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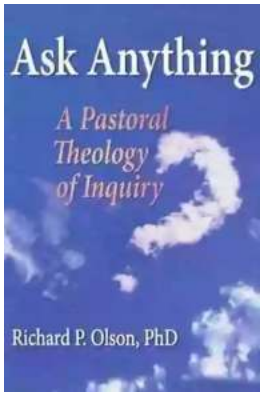
Giant Coal-Derived Gas Fields and Their Gas Sources in China presents a thorough look at 32 coal-derived gas fields in China. This reference book includes two main parts, the first discussing the geologic characteristics of the tectonic, stratigraphy, source and cap rock assemblage for the accumulation periods.

The second part features multiple differential indexes, charts, phase states (gas, liquid, solid),and the methods used to determine the sources of the coal-derived giant gas fields. As the first comprehensive coverage of the methods of gas to source correlation in China, this book will be a classic reference for researchers working in natural gas geology and geochemistry, and teachers working in universities around the world.



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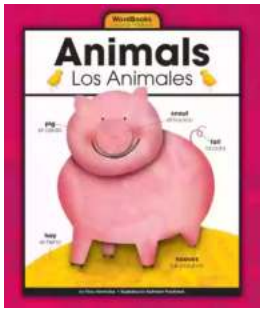

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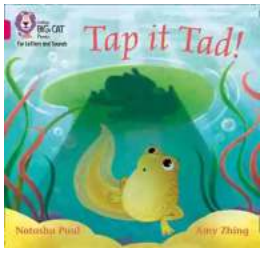

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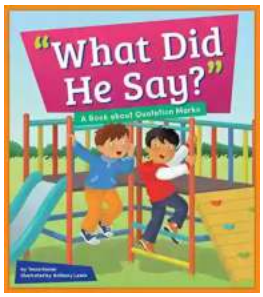

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