

Status quo and future development of comprehensive utilization of industrial waste gas in the dual-carbon context

By SHAO Jianbo

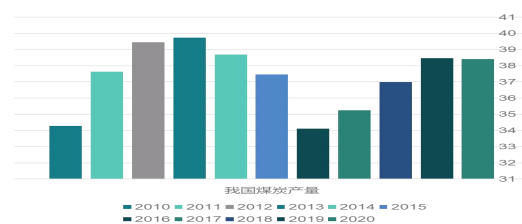
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Abstract: From the global climate change conference to the low-carbon development of countries around the world, carbon emission reduction has become a common global aspiration and urgent requirement. China has always been a powerful promoter and important practitioner in addressing climate change, and implemented greenhouse gas emission reduction responsibilities through such measures as top-level design, industrial upgrading, structural adjustment, and energy conservation and emission reduction. As a major coal producer, China's state-owned coal mine methane and high-methane mines account for 46% of the total number of mines. Coal mining produces a large amount of gas every year, of which ventilation air methane emissions account for about 90%. The CH₄ concentration of ventilation air methane is generally lower than 1%, and is difficult to directly being utilized, and its volume is large and wide-ranging. Therefore, it will be the focus of future methane utilization technology development. Although demonstration projects for industrial utilization of ventilation air methane have been constructed in recent years, most companies still empty it directly, which not only wastes precious resources but also causes serious pollution to the atmospheric environment.

Key words: Coal mine methane, comprehensive utilization, carbon emission reduction, energy

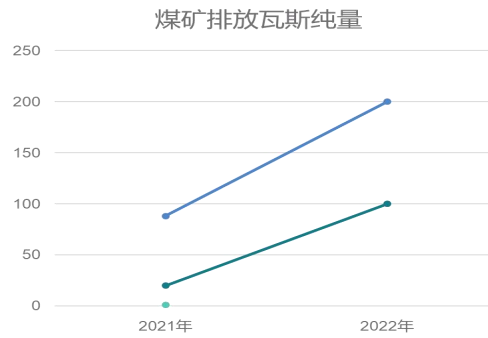
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Statistical table of Coal production in China from 2010 to 2020 Unit: 100 million tons



China's coal production over the years. Source: National Bureau of Statistics data

Statistical table of pure amount of coal mine methane emissions from 2021 to 2022 Unit: 100 million cubic meters



Source: National Bureau of Statistics data



