

Institute of Engineering Thermophysics, Chinese Academy of Sciences

Orienting at the major demand of national energy security and sustainable development, taking circulating fluidized bed (CFB for short) as key common technology platform, the research group pioneered a new route of directional conversion nitrogen in coal combustion and CFB gasification of coal, breakthrough a series of key technologies, including ultralow NO combustion of coal, mild gasification reaction and coupling decomposition of macromolecular organics, flow and combustion uniformity in scale furnace, etc., which provide systematic solutions to clean and efficient utilization of coal in many industries of national economy such as coal-fired industrial boiler with ultralow NO combustion, large-scale CFB gasifier and coal-fired boilers with ultra-high steam parameter, and were demonstrated and industrialized in the fields of coal-fired industrial boiler, industrial gas and synthetic ammonia made of coal, and coal-fired power generation, creating remarkable economic and social benefits, leading the development of coal combustion and gasification technology, making outstanding contribution innovatively and systematically in promoting scientific and technological progress, industrial technology innovation, economic construction and environmental protection, etc.

NO

NO

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