

1. Incorrect. The answer is false not true. Bituminous thermal coal has the highest consumption, which is about 6 times the global consumption of coking coal. Coking coals are high quality coals for making coke. They are ground and heated in coke ovens for 18-20 hours at 1200 degrees C in the absence of oxygen. Then the hard porous lumps of coke about 30mm in diameter are mixed with pulverized ore, and limestone or other flux to produce sinter. Sinter along with more ore, coke, and sometimes extra flux is fed into the top of blast furnaces to purify iron ore by removing oxygen. The coke must be porous to allow hot air to travel up and the metal to travel down the furnace and strong enough not to collapse during the process. Hot air is injected from the bottom to fuel the process. Carbon monoxide from the ignited coke travels up through the furnace combining with the oxygen in the ore. Melted ore is removed from the bottom of the furnace. The flux and impurities form into slag which are periodically removed and disposed of. A typical blast furnace runs continuously for a decade or more until it needs to be stopped for maintenance. The iron from the blast furnace contains 4 to 4.5% carbon impurities and is sent to the steel furnace to make it more pure and less brittle. The gases emitted in the process can be used in the steel mill or sold to power plants or other uses. The iron ore is sent to an oxygen steel furnace when it is heated again in the presence of oxygen to remove carbon. This process also produces gas but much less than from coke ovens and blast furnaces. (Australian Steel Association, U.K. Steel Association)