

**33. Correct. The answer is true.** Coking coal is more valuable because it must have special properties. Coking coal is more valuable because it must have special properties. It must have high carbon content, low impurities and must become a solid when heated in the absence of oxygen and cooled in a coke oven. This solid called coke must be porous enough to react with oxygen but not so porous and weak that it cannot support the weight of heavy materials above it. When coke is burned in the presence of iron ore, oxygen and a flux, such as limestone, heat and a chemical reaction occur that produces pig iron. The impurities from the ore combine with the flux to produce a waste product – slag. Pig iron can be further processed into steel in a basic oxygen furnace. High temperatures and oxygen reduce the carbon content of the iron and other chemical elements are added to produce a variety of steels with different properties.

(<http://www.worldcoal.org/coal/uses-of-coal/coal-steel/>) About 70% of the world's steel is produced using the basic oxygen furnace using iron often with small amounts of steel scrap.

Another method of steel making that is less coke dependent is pulverized coal injection furnaces that can use a wider range of coal in the blast furnace. Electric arc furnaces, also called mini-mills, can make steel from scrap and large amounts of electricity. They do not require coke unless some of the feed is in the form of iron. (<http://www.worldcoal.org/coal/uses-of-coal/coal-steel/>)