The estimation of GHGs emission reduction potential in Iron & Steel industry: optimizing energy process

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Since the Kyoto Protocol, all countries are trying to devise the solution for GHGs reduction. In General GHG emitted during energy consumption in generation, industry, transport etc. Among these, industry is one of the main sources of GHGs' emission. In Korean case, energy glutton industries are approximately 30% parts of the total GHGs emissions. To reduce GHG emissions methodologies can be divided into pre and post-treatments for producing goods. Pre-treatment methods are greatly consisting of changing fuels and applying new technologies. We focused on GHGs emissions reduction potential by introducing new technologies for the iron & steel making process. To construct optimizing process modules, we established the RES (Reference energy source) about technologies. According to consideration of the energy and material balance, iron & steel manufacture modules composed of the existing and new technologies. This study aims to estimate GHGs emissions reduction potential by selecting energy consumption of new technologies'. Furthermore, we suppose that it can suggest an actively effective plan in iron & steel making industries.