

## IEA Report States that Japan Has the World's Most Energy Efficient Steel Industry

The Japan Iron and Steel Federation submitted a fiscal 2007 report on the voluntary action plan at the October 27 meeting of the Steel Working Group of the Global Environmental Subcommittee, Environmental Committee, Industrial Structure Council. In this report, the federation explained that its statement that the Japanese steel industry has the highest energy efficiency in the global steel industry has been supported by data in “Energy Technology Perspectives 2008”<sup>\*1</sup>, which is published by the International Energy Agency (IEA).

The IEA released its “Energy Technology Perspectives 2008” on June 6. The publication compares the energy conservation potential and CO<sub>2</sub> reduction potential of steel industries of different countries. These figures show that, Japan's steel industry is effectively the most efficient in the world.

First, the IEA prepared data showing the potential for steel industry energy savings (volume of energy conservation possible) as of 2005 by making greater use of the latest advances in energy conservation technology and equipment. In Japan, which ranks first in efficiency, the potential energy saving is only 0.83GJ (one gigajoule is one billion joules<sup>\*2</sup>). But potential savings are 1.98GJ in the United States, 2.12GJ in Europe (OECD member nations) and 5.57GJ in China (Figure 1).

Japan ranks first again in terms of having the smallest potential CO<sub>2</sub> emission reduction. The potential for lowering CO<sub>2</sub> emissions in the Japanese steel industry is only 0.07 tons per ton of steel produced, the smallest of any country. But potential reductions are 0.14 tons in the United States, 0.15 tons in Europe (OECD member nations), 0.48 tons in China and 0.70 tons in Ukraine (Figure 2).

In addition, the IEA released data showing that the worldwide use of current state-of-the-art technologies and equipment would lower annual CO<sub>2</sub> emissions by a total of 340 million tons. China alone accounts for half of this potential reduction.

The Japan Iron and Steel Federation has until now used the January 2008 report of the Research Institute of Innovative Technology for the Earth (RITE) as the latest information concerning steel industry energy efficiency (Figure 3).

The above data also confirms that Japan's steel industry has achieved the highest level of energy efficiency in the world.

The Japan Iron and Steel Federation has long held the position that many international organizations recognize the fact that Japan has the most efficient steel industry in the world. These organizations include the Asia-Pacific Partnership on Clean Development & Climate (APP), International Iron and Steel Institute (IISI) and others. We believe that this recent IEA data once again confirms the global leadership of the efficiency of Japan's steel industry.

Notes:

1. A technological strategy report prepared by the IEA as reference material for the G8 energy ministers meeting in June 2008 and the G8 summit in July 2008
2. One joule (= 0.24cal) is the amount of work done by a force of one newton acting on an object to move it a distance of one meter.  
One newton is the amount of force required to give a mass of one kilogram an acceleration of one meter per second squared.

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Figure 1 Steel Energy Efficiency Potentials in 2005, based on best available technology

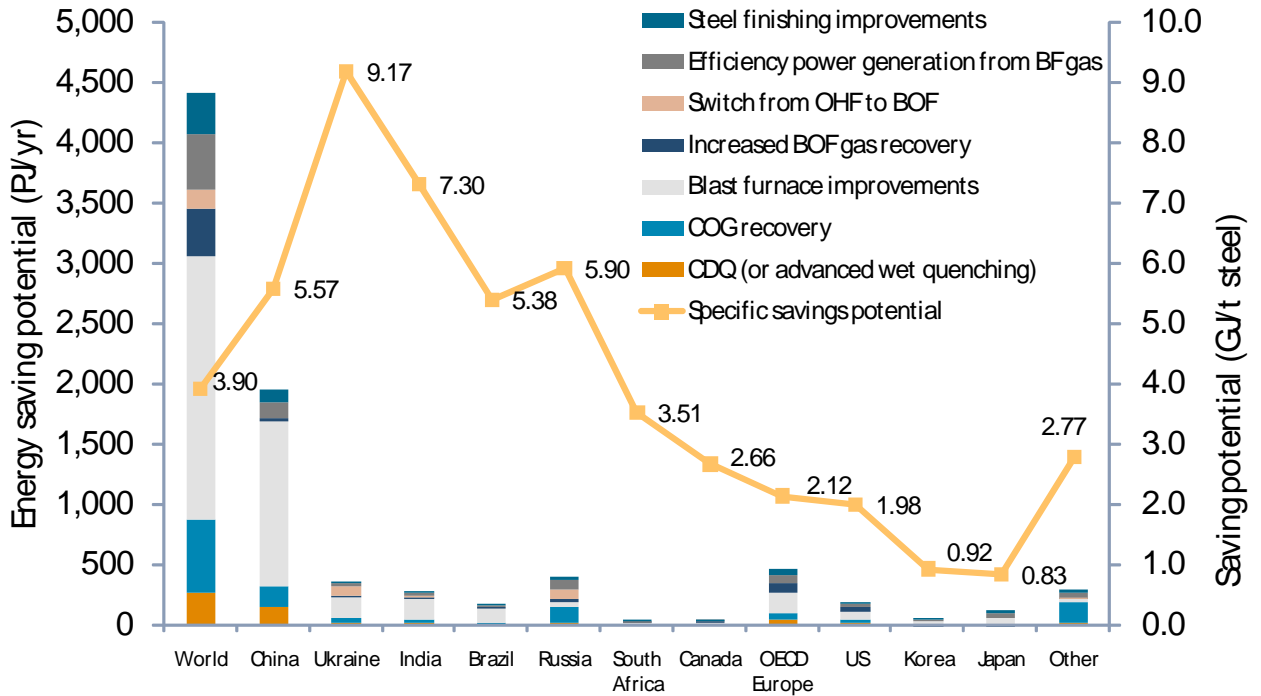
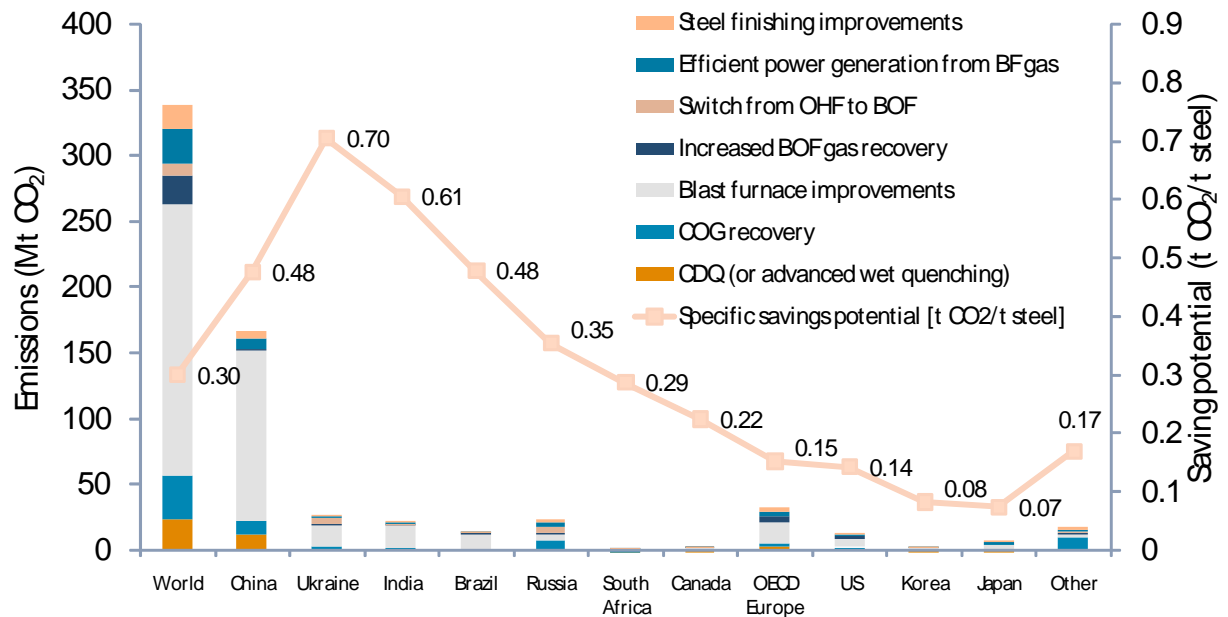
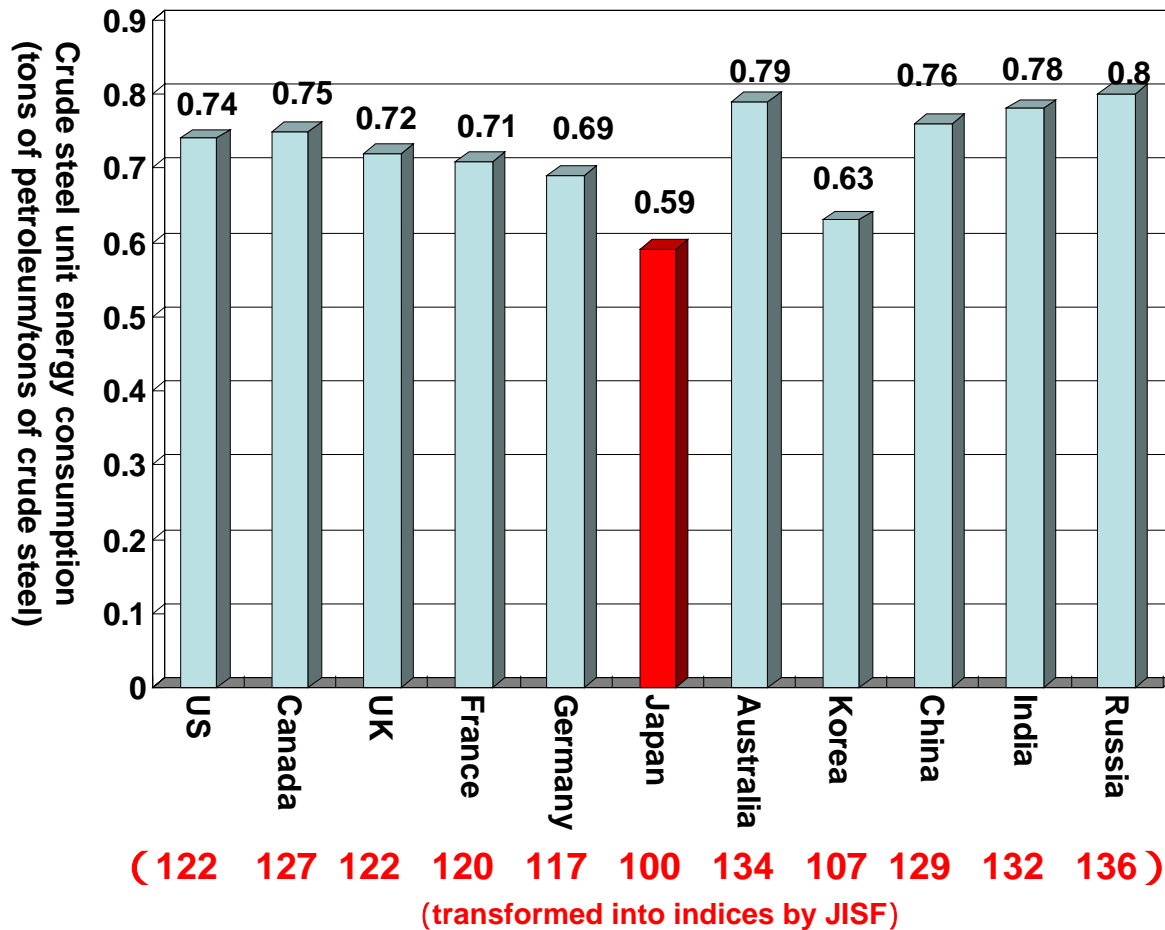


Figure 2 Steel CO<sub>2</sub> Reduction Potentials in 2005, based on best available technology



Source (Figure 1 & 2): "Energy Technology Perspectives 2008" The International Energy Agency (IEA)

Figure 3 Comparison of Unit Energy Consumption in Steel Industry



**Japan's integrated steel mill has the highest energy efficiency in the global steel industry.(Japan's high efficiency is due in large part to the extensive use of exhaust heat recovery equipment and the high utilization rate of byproduct gases.)**

Source: International Comparison of Energy Efficiency (Electric Power, Steel and Cement),  
 Research Institute of Innovative Technology for the Earth(RITE), 2008  
 (Numerical data prepared by JISF based on RITE report)

**About The Japan Iron and Steel Federation (JISF)**

<http://www.jisf.or.jp/en/index.html>

The Japan Iron and Steel Federation (JISF) was established in November 1948. In November 2001, it was completely reorganized through consolidation with the Kozai Club and the Japan Iron & Steel Exporters' Association. The JISF is a nationwide representative body of the Japanese steel industry and its members consist of the country's major iron and steel producers and trading companies engaged in steel distribution. Steel is a basic material indispensable for industrial development and the improvement of people's lives. It is also one of Japan's most important exports. The JISF contributes to the sound growth of the national economy and promotes international cooperation by taking on challenges from the overall standpoint of the Japanese steel industry. To these ends, the JISF carries out extensive activities that include compiling statistics and conducting research and studies on steel production, demand and distribution; promoting the development and diffusion of new technologies for steel production and products; addressing environmental issues; improving and streamlining work and management conditions; enhancing standardization and promoting fair steel trade.