East Asia ferrous scrap share for steelmaking among lowest in the world: BIR

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Singapore — Ferrous scrap use relative to crude steel production in East Asia, home to half of the world's six largest steel-producing countries, continues to lag behind the rest of the world.

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In 2018, the ratio of steel scrap use to crude steel production was 20.2% in China, 35% in Japan and 41.4% in South Korea, according to global recycling figures released this week by the Bureau of International Recycling at its World Recycling Convention & Exhibition in Singapore.

China produced 51.3% of the world's steel last year while Japan and South Korea rank third and sixth, respectively, among global steel producers. Their ratio of steel scrap use to crude steel is outpaced by the EU-28 (55.9%), USA (69.4%), Russia (42.5%) and Turkey (80.7%).

China has consistently increased its scrap usage, growing from 83.3 million mt in 2015, or 10.4% of crude steel production, to 187.8 million mt in 2018, or 20.2% of crude steel production.

Japan's relatively low usage of steel scrap in steelmaking is not for a lack of material. Japan exported 7.4 million mt of ferrous scrap last year, ranking behind only the EU-28 (21.4 million mt) and USA (17.3 million mt). Hisatoshi Kojo of Japan-based Metz Corp. and a BIR board member said the cost of running an electric-arc furnace was one hurdle to scrap usage.

"The electricity cost is much higher [in East Asia], especially in Japan," Kojo said. "Some EAFs in Japan have to run at night time."

Meanwhile, South Korea's relatively low usage of steel scrap is not for a lack of trying. Of Japan's scrap exports, over half went to South Korea (4 million mt) in 2018. South Korea imported a total of 6.4 million mt of scrap last year, ranking behind only Turkey (20.7 million mt) as the top scrap importer. Even if South Korea's domestic scrap reservoir increases, Kojo does not believe they will consume more scrap.

"Their scrap in the country is increasing," Kojo said. "South Korea sooner or later will be an exporting country. Not now, but some day."

The blast furnace dominance is a not a trend throughout the continent. Steven Vercammen of McKinsey & Company presented data at the BIR Ferrous Division on Tuesday showing Southeast Asia as the largest scrap consuming region as a share of steel production in the world. Their 2017 EAF production share of 79% and scrap consumption share of 84% were the highest in the world, ahead of North America (65% EAF, 69% scrap) and far ahead of the developed Asian economies (29% EAF, 39% scrap share).

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