China leads global steel scrap consumption growth

Argus Media

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Higher pollutant emission standards for China's steel industry continued to drive the country's steel scrap usage for steel production higher in the first six months of this year.

Chinese steel scrap consumption rose significantly, by 20.7pc on the year to 103.28mn t in January-June from 85.57mn t in the same period in 2018, statistics from global recycling association BIR show.

China remained the largest steel scrap consumer in the world — using more than double the volume consumed by the EU and almost five times higher than the US in the same period.

Stricter emission standards drove Chinese basic oxygen furnace (BOF)-based mills to increase their average scrap charge rate to 20.2pc.

A further increase in steel production and Beijing's encouragement to boost electric arc furnace (EAF)-based steel production capacity also helped China to increase scrap usage. China's crude steel production totalled 492.169mn t in January-June, up by 9.9pc on the year.

But China's scrap:crude steel output ratio is still significantly lower than other key steelmaking geographies. China's scrap:crude steel output ratio was 20.98pc in January-June while ratios in other key regions were all above 30pc.

"China's scrap consumption is big but they are probably still another 10-20 years away from achieving a scrap:steel output ratio of a minimum of 50pc like the US and Europe," one European scrap supplier told Argus at the BIR World Recycling Convention in Budapest on 14-15 October.

"The problem with China is that it still needs massive development on various sections in its scrap supply chain," one US scrap supplier said.

For example, the number of automotive shredders in China soared to 317 at the end of 2018, up by 247 from 70 a year earlier, BIR said in its world shredder list released in May. But many of the shredders are said to be operating at a rate that is far from nameplate capacity.

"It is deemed normal and viable for a shredder to operate at 20-30pc of its capacity in China, which is a mystery to many US and European suppliers that have a much higher processing efficiency and capacity," the US scrap supplier said.

China also lacks a workable end-of-life vehicle recycling system and infrastructure that allows recyclers to establish an effective collection network that generates sufficient inflow, other market participants said.

A lack of stable supply of scrap suitable for steelmaking, high inland transportation costs that curb efficient interprovincial movements of scrap and an import quota that means purchases from overseas are virtually zero has made the Chinese domestic scrap price one of the highest in the world. This may dent Chinese mills' appetite to consume more scrap, particularly while iron ore is still a more cost-effective raw material for BOF-based mills.

The Chinese government issued a scrap metal import quota in September that allowed for 1,770t of ferrous scrap imports in October-December.

The Argus daily delivered east China Shagang mill assessment for #3 heavy melt scrap was 2,760 yuan/t (\$390.05/t) today, including value-added tax (VAT), compared with the daily HMS 1/2 80:20 cfr Turkey assessment at \$236.30/t yesterday and the October Germany national average delivered to mill assessment for E1 at €164.97/t (\$183.30/t).

The Argus daily China blast furnace ferrous feed unit cost estimates today were \$219.62/t for a BOF using only iron ore and coking coal and \$256/t for a BOF with a 15pc scrap charge rate.

Scrap consumption in other regions

Scrap usage for steelmaking in other key countries and regions in the first half of 2019 was mostly down on the year on lower steel output.

Consumption in the EU fell by 1.3pc on the year to 46.783mn t in January-June as the region's steel output fell by 2.5pc to 84.744mn t in the same period.

Turkey cut steel production sharply at the beginning of the year. Its crude steel production dropped by more than 10pc on the year to 16.994mn t in January-June, which drove down scrap usage by 12.2pc to 13.959mn t in the same period.

The US was the only key steelmaking region outside China that registered an increase in scrap usage. Scrap consumption rose by 5.1pc on the year to 24.9mn t in the first half of this year, supported by a 5.4pc year-on-year rise in crude steel production that was boosted by the country's section 232 steel import tariffs.

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