₾ This week:

Will coal demand for steelmaking remain firm in the coming years?

Despite the green steelmaking rhetoric in Europe, the region's steelmakers will remain dependent on coal for some time to come, while producers in developing economies will continue investments into new coal-based capacity, according to speakers at last week's Eurocoke Summit in Amsterdam.

The green hydrogen-based direct reduction-electric arc furnace route can reduce carbon emissions by 97% versus the conventional blast furnace-oxygen converter route; however, there is a huge obstacle to this. Green energy is needed on a scale hitherto unseen, Stahlinstitut VDEh executive board member Dr Hans Lungen pointed out at the event attended. Another challenge is the limited availability of DR-grade iron ore pellet, which is highly-beneficiated versus BF feed. A shorter-term alternative to direct carbon avoidance is to follow the smart carbon usage pathway, an example of which is the Hisarna ironmaking process installed at Tata Steel IJmuiden. This produces carbon-rich process gas that can be used effectively for carbon capture, utilisation and storage (CCUS) at an EU coastal plant, Lungen observed.

Tata Steel IJmuiden Hisarna Pilot Plant technology manager Johan Van Boggelen said the International Energy Agency has pointed out that a majority of global steelmaking will still be somehow dependent on carbon by 2050. This does not mean the conventional integrated process will remain dominant, but CCUS will increase.

"These firms who say they will use hydrogen won't do so immediately," he observed. The transition phase will involve the use of natural gas which will require some form of carbon capture. Green steelmaking will require the development of hydrogen storage infrastructure, which will take 10 years to build.

Direct smelting through Hisarna is a good alternative, Van Boggelen said, having demonstrated carbon emissions can be cut by 50% without carbon capture, by using 50% scrap feedstock charge and biomass instead of coal. The next step will be to introduce natural gas into the process. Coupled with CCUS, this can result in negative emissions.

The touted use of biomass on a large scale, meanwhile, will require processes to upgrade it to high levels of decarbonisation, while the issue of what to do with increased DRI slag also needs to be considered, Van Boggelen commented. Much of the BF slag currently produced is reused in the cement industry, but this is not possible with DRI slag.

H&W Worldwide Consulting principal consultant Dr. Neil Bristow meanwhile said the challenges of meeting hydrogen production and transport "have been underplayed."

Europe will be at the forefront of the decarbonisation push. India, South America and Southeast Asia will however see BOF-based steelmaking grow to 2035, requiring increased coking coal. These regions have insufficient scrap supply, while there is not enough BF pellet or hydrogen supply globally to ensure their decarbonisation. Growing steel demand can only be met through more integrated steelmaking investments.

"That's going to mean that demand for coking coal, even if Europe declines, is still going to develop strongly outside of Europe," Bristow concluded.

SCRAP

While coal demand can remain elevated, scrap demand is set to continue increasing in the near future, as the ongoing green transition is pushing steelmakers in developed parts of the world to transition toward EAFs.

Some European steelmakers are particularly concerned by the increasing scrap demand going forward and are lobbying the European Commission to impose new regulations to effectively limit scrap exports (Europe is the largest scrap exporter in the world). "Whatever happens, it is clear that one of the main elements of decarbonisation will be scrap and this could create strong tensions on the market," Alessandro Banzato, president of Italian steelmakers association Federacciaio said. "Scrap is generated on the national territory for a quantity of about 15 million tonnes and the rest of the requirement, on average equal to 4-5 million tonnes, is imported from both EU and third countries. The European Union as a whole is instead a net exporter, with a growing trend in recent years. EU-27 scrap exports amount to around 18 million tonnes."

In this weeks Issue:

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- PAGE 6 Will EU longs production cuts support further Turkish prices?
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 Is green steel here to stay?

KORE INDEX

Index	58%	62%	65%
W-o-w % Change	1.22%	2.14%	1.1%
8 Oct	90.47	121.73	144.59
7 Oct	89.56	117.43	140.31
6 Oct	89.33	117.10	140.02
5 Oct	89.22	116.95	139.88
4 Oct	89.00	117.23	140.20
Average	89.52	118.11	140.00
Average	89.52	118.11	140.00
Average 1 Oct	89.52	118.11 115.30	140.00 138.08
1 Oct	88.03	115.30	138.08
1 Oct 30 Sep	88.03 89.14	115.30 116.62	138.08 139.47
1 Oct 30 Sep 29 Sep	88.03 89.14 88.71	115.30 116.62 115.68	138.08 139.47 138.60

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Global Overview

North America

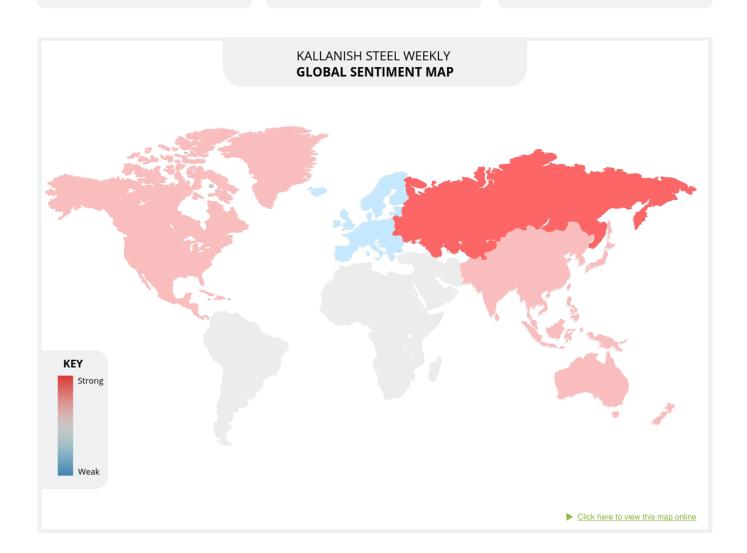
- US flats momentum halts Still-historic skelp props up US pipe prices Biden administration seeks new
- China angle

Europe:

- ArcelorMittal announces longs energy surcharge Benelux scrap recovers slightly Several EU safeguard quotas
- exhausted

Asia:

- Chinese steel prices recover Iron ore jumps Chinese buyers look at wire rod imports



CIS:

- Ukraine considers scrap ban to Turkey and Russia CIS pig iron and billet look up

Middle East:

- Turkish scrap up again Longs prices look up Turkish HRC prices remain under pressure





Asia

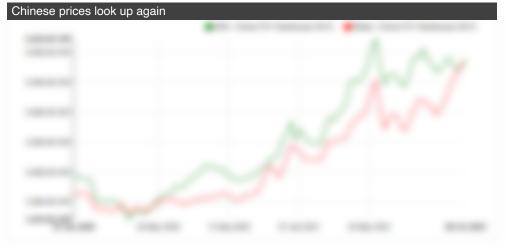
Strong Chinese steel sends iron ore soaring

Prices to watch: HRC / China Rebar / China Billet / Manila FOB FOT CFR Warehouse











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European long mills to increase offers on challenging energy costs

Prices to watch: -1% 0% -4% HRC / N Europe ExWorks EUR/t FOB USD/t Rebar / Italy Ex-Works EUR/t EUR/t FOB USD/t





By: Emanuele Norsa, Europe Editor





Americas The Great 2021 Bull Run may have run its course

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Prices to watch: 0% 0% 0% US HRC US CRC USD/ USD/s.ton US OCTG P110 USD/s.ton USD/s.ton



By: Dan Hilliard, North America Editor

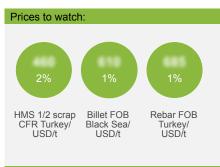




Middle East & CIS

Turkish scrap rebounds strongly, CIS billet eyes China

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By: Burcak Alpman, Journalist

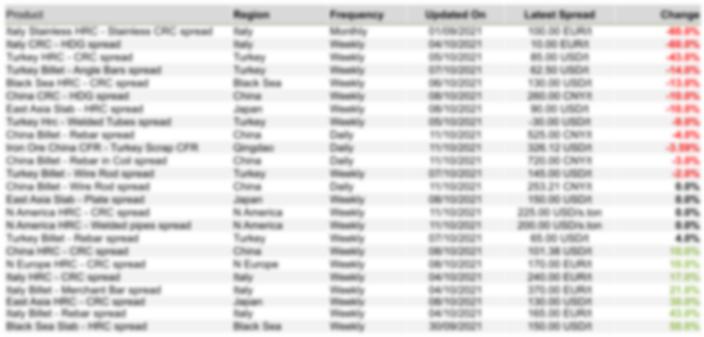




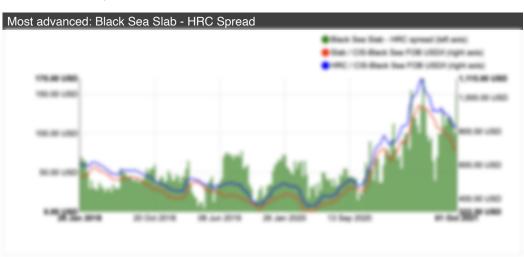
Price Movement



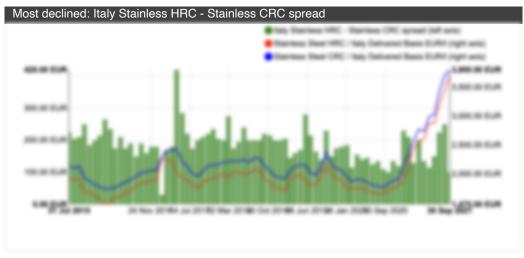
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QSpecial Feature

Green steel is here – and here to stay

By: Dan Hilliard, North America Editor



Word of the week

Green Hydrogen



Green hydrogen is made by using a process called electrolysis to split water into hydrogen and oxygen. If that process is powered by a renewable energy source, such as wind or solar power, then the hydrogen is referred to as being green. Green hydrogen is produced from the electrolysis of water, using renewable energy. It can be used as a fuel and energy source in hard-to-decarbonise industries.

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