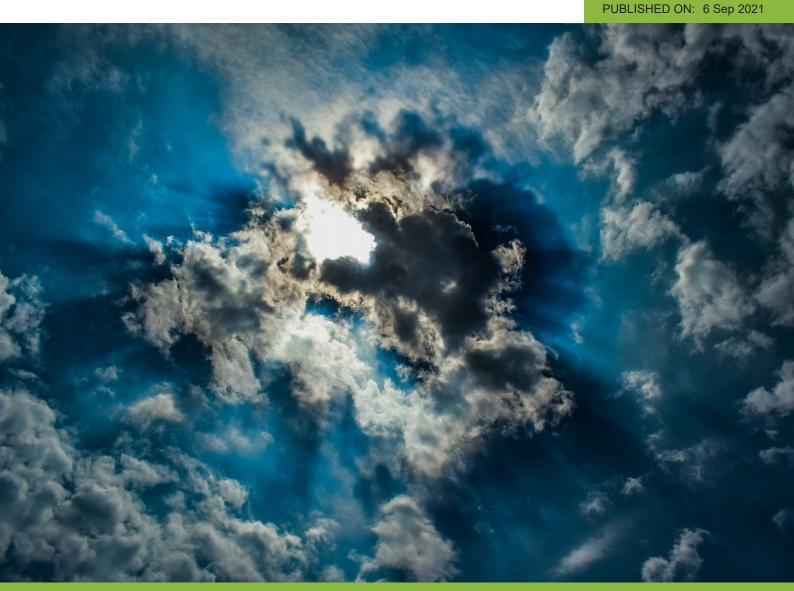




ISSUE NUMBER: 9-21



CHINA STEEL INTELLIGENCE REPORT

China's climate ambition is commercial



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CHINA'S CLIMATE AMBITION IS ☐ COMMERCIAL

BY TOMAS GUTIERREZ

China's climate goals have been given increasing prominence, and measures to improve local air quality levels have already had a significant impact on the steel industry. WE China's new climate goals impact steel in the same way as local emissions controls? And will the impact be as deep? In the long term the global steel industry. China included, will need to invest huge sums of money in replacing equipment with low carbon technologies. In the short term however, the picture is less clear.

In this issue we by to break down some of the impacts of China's targets.

TABLE 1. SUPPLY AND DESIGNAD

	2828	Jan-Jul 19021		JH21 Outlook	
Official Crude Steel Output	1,115	549	8.00%	1061.4	0.80%
	1,035	589	5.87%	973.3	-1.20%
End user demand	1,031		7.12%	975.2	

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PROJECT, STEEL PRODUCTION AND DESIGNED STYLESS.



China alms to reach peak carbon emissions in 2030 and net zero emissions by 2080. The steel sector however has been given its own targets of peak emissions by 2025 and net zero emissions by 2065. White the peak carbon target is accord than the national target, it should be easy to achieve. The much harder carbon neutral target can be achieved over the coming 45 years. A peak in carbon emissions from the steel industry by 2025 comes in line with peak production. In terms of emissions from alsotrusting it is difficult to





-

see how emissions could not already be peaking. China aims to keep 2021 crude steel output level from 2020, while at the same time increasing scrap rates and the proportion of EAF steelmaking.

Exact estimates of China's steelmaking carbon emissions using international standards is difficult due to differing material mixes and differing carbon internations for imported energy. According to the International Energy Association however, BF-BoF steelmaking generates around 1.2t of CODs per tonne of steel in direct emissions, and 11 of emissions through electricity and heat generation. As China's energy mix remains coal-intensive, the indirect emissions are likely to be higher. Scrap-based EAFs meanwhile generate only 0.04: CODs per torms of steel in-direct emissions, and 0.3t in-indirect emissions. Again, the higher carbon intensity of electricity is likely to boost indirect emissions, but scrap-EAF steelmaking has a clear advantage over BF-BoF steelmaking. The problem with these figures for China however is that EAFs are generally only around two thirds full of scrap. The remainder is DRIHBII or pig iron, For DRI-EAF absolinating the IEA gives figures of 11 CODs in direct emissions and 0.40 of indirect emissions. This is based on a 70% reflance on natural gas rather than coal in reduction. Some Chinese DRI plants however are using derivatives of coal seam gas, which implies an even higher carbon footprint. The EA notes that coal-fined DRI releases almost three times as much CODs into the atmosphere in direct emissions as a gasbased DRI-EAF plant. The use of pig iron in EAFs meanwhile implies the running of blast furnaces. alongside the EAF, increasing emissions further. Blast furnaces remain the most carbon-intensive part of steelinating. A true emissions figure for Chinese EAF's based on how they are currently operated is therefore likely to be only slightly below a 100% gas fired DRI-EAF process.

TABLE 2. DEMAND FORECASTS BY SEGMENT

Process			Total emissions
China BF-BoF 2021 e	1.20	1.20	2.40
Global BF-BoF	1.20	1.00	2.20
Global DRI-EAF	1.00	0.40	1.40
China EAF 2021 e	0.60	0.60	1.20
Global scrap EAF	0.04	0.30	0.34

Stores Kallanat Miller Torons

This means that, even with the unusual materials mix, more carbon-intensive energy supply and other factors taken into account, Chinese EAF production emits only around half of the emissions as Chinese BF-BoF steelmaking. Even with China's total steel production unchanged therefore, a greater proportion of EAF steelmaking should lower emissions. According to China's own targets, emissions should in fact have already peaked, even as it set to peak emissions target at 2025. Even according to Kallanish's forecast that China will not quite be able to cap crude steel output this year at last year's official level, emissions from crude steel output are likely to have declined slightly. Following our expectations through to 2025, emissions from crude steel output in China could decrease as much as 17% by 2025 just through reducing output and toosting EAF production and scrap use. By 2025, EAF's could produce almost 20% of China's crude steel, but would account for only around 10% of its steelmaking carbon emissions.

China's abort term carbon emission goals for the steel industry are not particularly ambitious, and mark an easy lead in for the sector to adjust. This will be a relief for the Chinese steel industry, which is already grappling with other forms of government intervention. Policies to control carbon emissions are only partially in place and the sector faces certain structural challenges in reducing emissions faster than this base case in the near term. In terms of policy, the steel sector will eventually have to take part in the national emissions trading system. The China Iron and Steel Association (CISA) has already been asked to create a methodology for the allocation of emissions allowances.



The same of

PIGURE 1. CHRAFT STEEL MAKING EMISSIONS TO JUST



Source Mallacook Sonney CCOs

According to the five-year plan, steel should be included by 2025, but it is expected to join before that, perhaps as early as next year. Initially allocations are likely to be free, and there is a danger that these could be over-allocated. In the European system allocations were based on pre-financial crisis output levels, giving steelmakers a large surplus of credits for several years into the trading system. In China, even without a crisis, historical allocations could lead to over-allocation as steel output should be declining. Fire emissions reduction targets and a mechanism to adjust allocations on an ongoing basis will be needed.

China's steel sector also faces two structural barriers to cutting emissions quickly in the short term: scrap supply and coal-fined electricity. Chinese domestic ferrous scrap demand from steelmaking is expected to grow to around 300mt in 2025, from around 240mt in 2020. Domestic scrap supply meanwhile is expected to grow at around the same pace. Unless global scrap prices become much more competitive than

FIGURE 1. CHRAITS SCRAP SUPPLY GROWTH STEADY BUT MODEST



Source Hallanial China Scope Markets Report



correlating costs. Chinace scrap reprints are flexly to remain tight in the contrap pages. Chinacis flex page plan responsible suggests that cost-freet power generation self-continue to increase. It alone to find the growth in cost correspondence up to 2005, before beginning to reduce consumption over 2006-2006. This suggests that Chinacis installed cost-freet power capacity self-continue to increase from the 1,100-000 expected by the end of this page by the China-Deutschip Council. This is up from 1,000-000 in 2005 and the council has self-capacity about increase to 1,300-000 in 2006. Any improvement in the carbon intensity of Chinacis aboutcoby supply anoth for modest as long as cost capacity is expending, and this broke the advantage of aboutcoby intensive EMFs relation to 60-066° aboutcaptors.

Changin about term positionings for modest, but the languagest position for the stated reducting are in time with the alreadon of arrassors from the sector is the space of a generation. This self-process anomalia treatment code, which sell require applicant powerment transform - both carrols and abits - to push Brough insectments as technologies emerge. Clinics assettrating capacity by 2005 is that; to be considerably emailer from 8 is currently in factors of the of crucks about cuspoil. Almost none of Chinack operating capacity at that point about its capacity operating currently, if China was to build Tillion by all repeatly using only \$F Bull, using a simple rule of Brunds of propert \$1.1.5 billion per million by of opposity. I would require between \$750 billion and \$1.00 billion of investment purely in dealingstrap, not including rolling and processing. However, replacing this capacity with equipment that allows China is meet its net resulted begath could be for more expensive. The EX-assimutes capes costs for a 107% hydrogen DR-EAF plant in the amount double that of a BF-BoF plant. This implies that the market for new destinating plants in China coar flan coming 40 years accutified in the loss billions of distant. This is a very large earn of mores, but now an extended period it is not unachtered its. The continuation of forced environmental approach and soluting professibly has already resolled in a phase increase in investment in ferrous amading and rolling. (Most Spores from NES suggest investment could be in the tops (NY TSI lattice straps in 2021). This Spore includes rolling as east as alsofreating, as east as other periphenal investments and origining equipment replacement. Nevertheless, the investment resolut to reach not pero to fleely to be a noticeable increase IN SUPPLY THROUGH SHARE

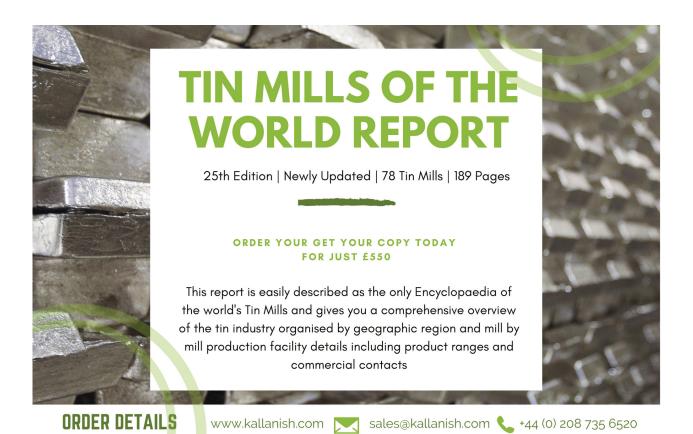
The non-intensiting perspective as for as China is concerned, is that this investment will be spent on new technologies rather than or existing ones.



FOLIES A CHINA'S FORMACIO MARCHINENE AMPRICAL DA POLICE

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Danning that new technology will be key. For a relatively employ investment, China could empure that it owns

could serve domestic engineering companies. Dening the technology also means that China could have access to a much larger market. China is currently home to more than 50% of alsolinating capacity, but in boty years' line its share self be much amalier. The plotted market for this equipment self be larger than the

China has begun to move in this direction, and unsurprisingly it has turned to its key policy steelmater. Banes Group, to lead the way. The largest carbon resulted fund in China is being established by Banes in

Financial Asset Investment Co. This will initially not a CNY 10 tallion fund, and alms to raise this to CNY 50

destinations, but the engineering firms which are positioning thermations to benefit from coming surge in

to invest large sums of money to existen its industry, into one in which it dominates a m

larger from any previously seen in the steel sector.



TT SUPPLY & DEMAND OVERVIEW

Chinasa albail demand fell further in July as the summer storag extended to new town. China's albail mention, side increased to the highest level since Fallman, and the accord highest since March 2005. This was despite crude about production falling to the treased about April 2005. Crude about output in July was down 7 8% month-on-month and 8.4% year-on-year at 86.79 million torons, according to the National Bureau of Statistics (MES), Char seven months this was up EN at 649 333mt, Data from the China Iron and Steel Association (CSA) shows that output likely declined a ISSe further in August, although output was bollowing suf in mid-August.

Date derived from substitle images with the assistance of fath pall with confirms that output was fower again. It August Across do lay diselectfu, average activity readings from their blad furnaces were down in August compared to July at all of them. Drampany, Bacolleel in Dramphal and Huhan Iron and Disel use mining declines one for most. Sensi is the notheast and both Nandan ton and Steel and Strongery. Anglang in Habel saw apprilicant declines in output however. There was no apprilicant netuction in output in the last week of the month however, suggesting that output outs have now bollomed out. Considering the high output in summer 2005, output is centerly expected to remain down approximity you a and the yet you y growth rate about? Mr steadily as more data is refeased.

Adjusting for hade and year loss, China's apparent steel demand in July came in at 76 MSH, down 7 Ph. more and 13.6% year Over seven morehis, apparent shed demand is now up only 5.6% year at SSE 258nt. Concerningly for the regular frozense, inventory levels continued to increase over the month, as

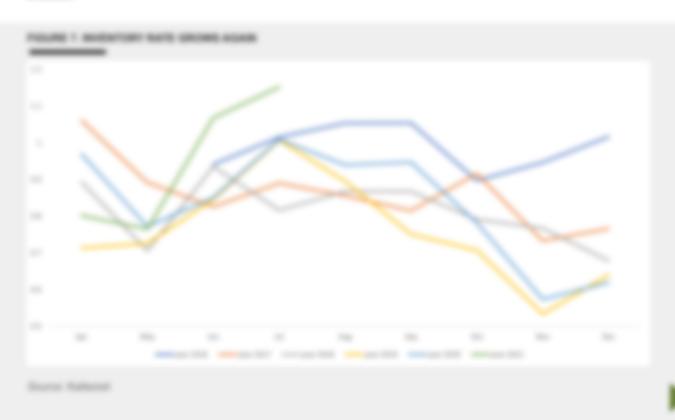
PROJECT I COMPRESSOR



Annual Contract of the Contrac



and user demand declined a 18th further from June. End user demand dropped 3.8% in-o-in and 10.9% proj to 15.54bet in July, bringing the jitl total to 506.40nd, up 1.1% proj. The inventory rate in July also bronssed, explaining the growing pressure on the market which crashed prices in August. The inventory rate to 116.2% in July, compared to 106.7% the previous month and 100.9% a jear certic. Inventories brosener have bottomed out in August Stanton to lower production levels. Shaeher steel markets have furned a corner as a result will depend on the strength of demand during the associatly stronger September-Crisises.













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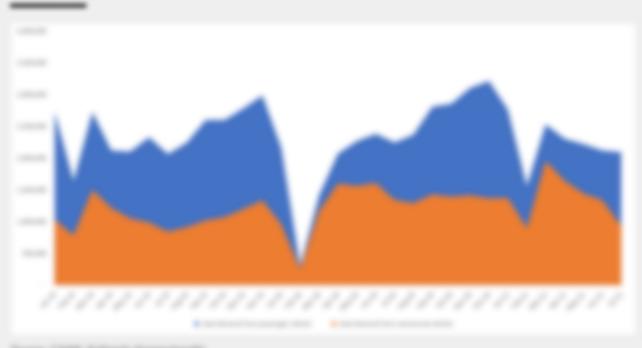


AUTOMOTIVE

Cross admidd odor bottor forby storage of place passage or to 1.86 million units in July, representing a productors, but the regarder tripled in decrease of 4.7% or both month-or-month bagginning. In sees, Commercial softicits and pear or year, according to date from the production. Mr. reports date to the Once Association of Automobile implementation of the sinth sollion of the Mendedone CAME, You productor it rational arriance standards in carbon for decision has partial and pushed to regions starting in July, which require our THE AND A COURT OF THE AREA OF New prompt selectes set a new monthly produce regularization. most high at 200,000 unto, from the complete production about at own 1 for until, which is already higher than 2007's Second tolar production.

Monthly regiled fromted about decreased calculated by Radaman horn the CAVID data Angust to 175 men to 110 miles toron, bookly participe despit Brough Ady to 25 July up 17 MFA years which is the based has registered in any most to per the poisson of cha-

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WHITE GOODS

It is deep surrow depression. All, data. National reports demand from the sector in atoms a drop in production of all regar law-p. The November amount Nobel. products hat expecsably all conditioners and asserting machines. It part the your decline it subset is that is offended and calcifring of I surrow 200. Next benefit both single higher than it surrouse 2019.

is any femore may decrease from with goods production was down 1.75, year of 1 JKSHI, for toward reading allow February Doer January Ads, Implied Bernand's efficie 18.7% year homour at 5.760m due to only made alone in Cr. 2000. The amount is especial is continue to underperform in the





SHIPBUILDING

Description of the second seco to a table of our a ratio and only and to the action of the contract of the co CONTRACTOR TO A SECURIT AND A SECURIT AND ASSESSMENT ASSESSMENT AND ASSESSMENT ASSE appropriate transportation come of 100 percent of a bosone According to China Association of Increase of SR 75, but the and of SSS. he belong frequency source (1995). data. Croscin angulating companions from the sporting particle for patter market marker (4.1) where descriptions is store of Chronic algorithm industria for the seven months of 2011, as by 20.7%. Increased and the radion internet to place as per crue france, constitui i da laper republic franchis constitui. declined in 1,00m dat, does by 10.7%, or, one orders and orders in that accounted to -

The implies had about 8 library of shad was consumed by the eligibating sector during to be seen node of \$50, nodes 1. Their companies in July 14th, New Yorks in the proposition below to for family do: tomorry other it had From Amount to Asia file year, orders for

MC TO, DTS, and MTS, respectively, of the months tops in dead amount tomage.

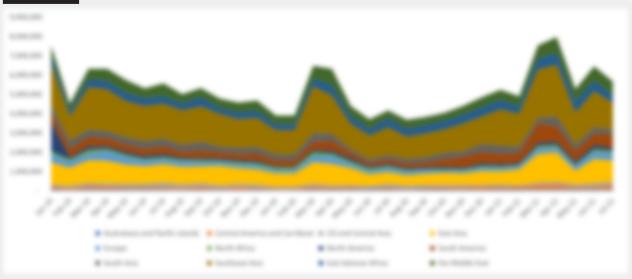








FIGURE 12. CHINESE EXPORTS BY REGION

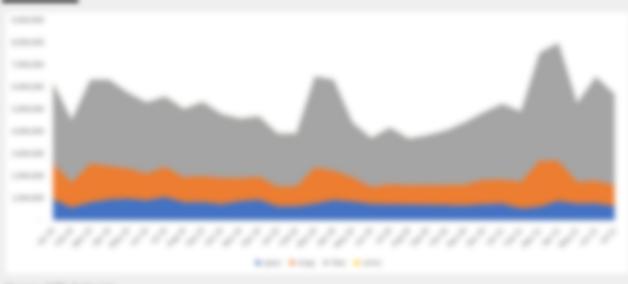


Source: GTT. Kallanish

In July 2021, the largest importer of China's steel was Southeast Asia, where it exported 1.374mt of steel, a dip of 26.1% from the previous month and 3.9% from July 2020. However, through January-July this year exports to this region expanded 25.8% y-o-y to 13.650mt. The second biggest export destination was East Asia, whose proportion of China's steel shipments decreased 14% from June this year but was up 77.7% from last year July, to 1.090mt. Over seven months East Asia's volumes expanded 33.5% on-year to 7.58mt. Another 701,105t went to South America in July, up 15.2% m-o-m and 186.1% y-o-y. During the first seven months, this increased 105.9% y-o-y to 4.734mt. The Middle East saw its share of China's steel output go up by 71.3% y-o-y but fall 6.2% m-o-m to 696,377t. Over the opening seven months of the year China's exports of steel to the Middle East were up 22.3% y-o-y, at 4.6mt.

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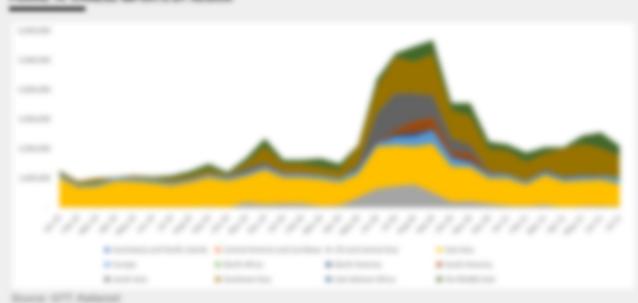
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The product group most exported by China remains flats. China case flats exports of 4.088mi in July, down 12.5% m-s-m and 60.3% y-o-y. Over seven months combined flats product exports expulsed 26.01ml, up 64.2% compared to last year. Of the total volume of flats exports, 175.07% was carbon and alloy steel inffic to Vietnam in July, a 40.6% m-s-m decrease, but a 140% increase y-o-y. Over seven months exports to Vietnam of these products were up 104% y-o-y to 2.786ml. Meanwhile, carbon and alloy steel inffic; exports to Korea were 202,568t in July, a m-s-m fall of 3%, but a y-o-y surge of 660%. Over January-July China managed carbon and alloy steel inffic; exports to Korea of 2.786ml, up 104% y-o-y. Global exports of galorical steel cols in July were 1.305ml, a decrease of 27.86ml, up 104% y-o-y. Global exports of galorical steel cols in July were 1.305ml, a decrease of 67% in relation to last month, but an increase of 50% compared to fine month last year. Intriging the total to 6.361ml over seven months, up 36% y-o-y. Global carbon and altoy CRC exports in July resembled to 6.261ml over seven months, up 36% y-o-y. Global carbon and altoy CRC exports in July resembled to 6.261ml seven 10%, p-o-y, at 3.865 ml. The amount of longs exported by China was down 6.5% m-o-m but up 4.5% p-o-y, at 50%, 60%. Over the opening seven months longs product exports in 5.048ml, up 21.7% p-o-y. China also had pipe exports of 601,668, an m-o-m dip of 10.4% and a p-o-y decime of 11.5%. Between January-July total pipe exports serve down 5.7% on-year, at 4.666ml.



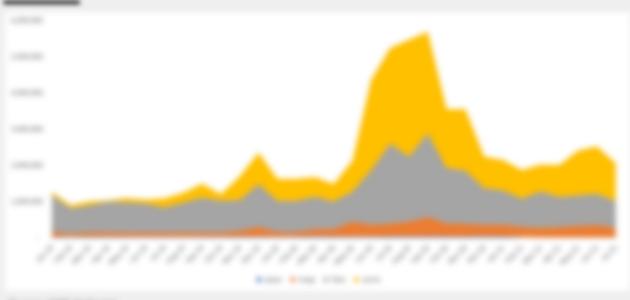


THE RESERVE OF THE PARTY OF THE

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Magnitude, China's imports in July worse 2 (Milen), down 19%, from the previous month and 60%, on year, magning through the opening seven-roombs imports worse down 19% to 15,210ml. China imported 198,60% of obserfrom East Apia in July, down 10.6%, mount and 40.6% youry. It imported a total of 6.00ml of obserfrom East Apia over January-July, down 10.7% youry. Imports from Southward Apia were down 20.3% from June and 40.7% from Southward Apia were down 20.3% from June and 40.7% from the point in 2000 at 600,748. However, over seven-roombs overall imports were up 40.7% youry to 5.010ml. China also imported 307,67% of Milester Southward in July, falling 37.7% from the roomb price, and 101.6% youry. Over seven-roombs 3 imported 1.50tots from the Milester East, directoring by 40.7% page-on-year.





Service STT Reports

Semis were again the most imported product by China in July. However, these were down 19.7% m-o-m and 60.2% y-o-y at 1.046mt, During January-July combined semis imports were down 16.8% at 6.816mt, In July, China imported 113,560t of semis from Vletnam, down 45% m-o-m and 74% y-o-y. Over seven months semis imports from Vletnam hit 1.513mt, up 22% y-o-y. Its July imports of semis from indonesia meanwhile were 236,053t, down 28% m-o-m but up 9% y-o-y. Over January-July, it sourced 1.695mt of semis from Indonesia, a climb of 110% from last year.

The Michille East supplied 333,020t of semis in July. This was a decrease of 38% from the previous month, but an increase of 150% from last year, whilst imports gained 69% y-o-y across seven months, to 1.867mt. The country also saw flats imports of 735,458t, a 14.7% m-o-m dip and a 66.8% y-o-y dip. Plats product imports reached 6.013mt over January-July, down 24.4% compared to the same point in the previous year. China's longs imports were 277,795t in July, dipping 21.8% m-o-m and 21.1% y-o-y, while seven-month imports were up 21.7% y-o-y to 2.137mt. Japan remains a key supplier in July, 195,151t of their carbon and alloy steel HRC was imported by China, which represents a m-o-m fall of 4% and 21% y-o-y. Over the year to July. China imported 1.372mt of Japanese carbon and alloy steel HRC, a decrease of 4% from a year sartier. The volume of pipes imported by China in July was 36,133t, a 4.7% m-o-m rise, but a 2.9% y-o-y dip. Combined pipes product imports were up 4.4% during January-July, totaling 247,335t.





Chinese steel prices fell sharply in August. Although end user demand has been weak, the key driver was the collapse in iron ore prices through much of the month as expectations for steel production were not able to sustain previous high prices. Prices had stabilised a little by the end of August, but there remain significant doubts about the strength of demand over the coming two months.



	2020	у-о-у	Jul-21	Aug-21	M-o-m	Ү-о-у
Rebar (CNY/t)	3,597	-4.5%	5026	5,060	0.7%	40.8%
Wire rod fob (\$/t)	481	-2.4%	819	823	0.5%	69.0%



FLATS

5.Su1,500mm Q235 HMC magnatrile was traded at around CNV 5,700-5,725H a five and of August, up CNV 35H from the previous Friday but down CNV 35St from end-July. Chinese flat product demand is waiting for the autumn relocund in demand. So far however, flat consuming sectors such as white goods manufacturing have shown 556 as sign of a relocund. End user demand remains low and traders are unwilling to restock until they are confident that into one has no further to fail.

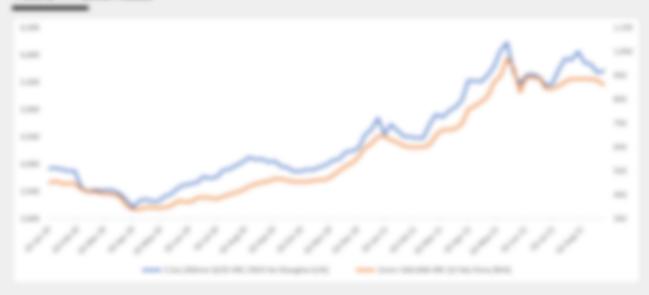
over \$1,0001 tob. Trackers are searching for buying interest with some lower offers but with no material at lower prices to back these up. Kaltaniah assessed 2mm SAE1006 HRC at \$505-0151 tob China at the end of August, a drop of \$251 compared to the previous week and \$251 on-month.

On export markets HRC offers had finally began to come down by late August, but they remain firmly higher than boyers' target prices and higher than offers for other origins. The most competitive 55400 HRC offers, which are due for September! October shipment, were confirmed by sources in Chinese steel rolls at \$5000 his Otine, while some rolls are still offering at

THE R P. LEWIS CO., LANSING

	2020	747	Jul-21	Aug-21	Mom	Yoy
HRC (CNYR)	3,830	1.1%	5,820	5,769	-0.9%	41.2%
HRC feb (\$1)						

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Source: Kallanish



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RAW MATERIALS

Respect, only increasing again in the last seek of the receib, too one prices for an impact of the last seek of the receib, too one prices fell in the seek of the receib. The correction has been accepted as a reduced reaction to the seek of the receib for Chinese accepted as a reduced reaction to the seek or collect for Chinese accepted as a reduced reaction to the seek or collect for Chinese accepted as a reduced reaction to the pass and produced accepted to the seek or collect for the pass and produced produced to the pass and produced produced to the pass of the acceptance to the pass of the acceptance to the acceptance of the acceptance to the pass of the acceptance to th

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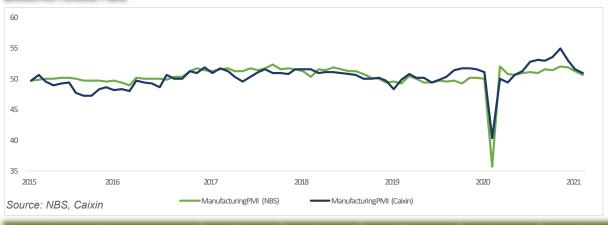
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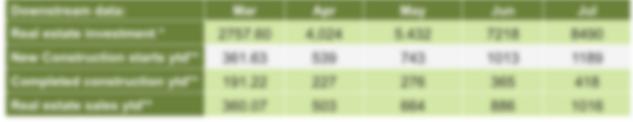


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