

**DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INNOVATION
STEEL COMMITTEE****Latest developments in steelmaking capacity**

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This document has been prepared by the Secretariat for discussion at the 89th Session of the Steel Committee. At this stage, the text does not represent the views of the Committee.

This document will be discussed under agenda Item 8 on steelmaking capacity developments. It provides an update of steelmaking capacity estimates for the world and by economy from the previous interim capacity report (DSTI/SC(2020)10) based on information extending to December 2020.

This report is a contribution to Output Result 1.2.5.1.2 of the Steel Committee's 2021-22 PWB.

Action required: For discussion and comment. Delegates are invited to approve this document for declassification. Following declassification, the underlying annual nominal crude steelmaking capacity data by economy will be made publicly available at OECD.Stat (<http://stats.oecd.org/>).

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1. Introduction and key findings

1. This paper presents an overview of steelmaking capacity developments taking place around the world. In particular, the paper provides an assessment of gross capacity additions that could come on stream during the three-year period 2021-23, based on information available until December 2020. The document also includes a summary by region, examining closures of capacity and new investment projects taking place in key economies, as well as trends observed in cross-border investments relevant for steelmaking capacity.

2. Delegates will be invited to declassify this report at the March 2021 meeting of the Steel Committee. As in the past, the Secretariat welcomes any comments from Steel Committee delegates that would help improve this report. Following its declassification, the report will be made available on the OECD Steelmaking Capacity portal at oe.cd/steelcapacity, and the updated aggregate capacity figures will be made available on OECD.stat.

3. In the context of significant excess capacity in the global steel industry, and continued economic uncertainty related to the Covid-19 pandemic that could dampen steel demand going forward, it is important to continue monitoring investments and steel plant closures in order to understand emerging risks that may impact the industry in the medium to longer term. This report shows that developments continue to indicate growing supply side pressures : capacity continues to expand in some key producing economies but also new plants are being built in economies that previously had little or no steel production. Key findings include the following:

- Global crude steelmaking capacity increased by 38.1 million metric tonnes (mmt) in 2020, or 1.6%, despite extremely weak market conditions. Over the past two years, global capacity has increased by a total of 74.2 mmt. Asia and the Middle East accounted for almost all of that growth.
- Because of falling production and demand for steel, the global capacity increase led to a worsening excess capacity situation for the world steel industry in 2020. The gap between global capacity and production increased to 625.4 mmt in 2020.
- Capacity is expected to continue expanding over the next few years. Many investment projects continue to take place around the world: for example, a total of 45 mmt of capacity is currently underway for completion over the next three years (2021-23) while an additional 68.7 mmt are in the planning stages. Should all these projects be realized, global steelmaking capacity could increase by almost 5% between 2021 and 2023 in the absence of closures, clearly adding to supply side pressures for the steel industry.
- A number of economies that previously had no steel production are now building crude steel production capacities, while several others are emerging to become major producers following rapid capacity growth in recent years. For example, Bolivia, Namibia and Mozambique are expected to see the start-up of their first steel plants during the 2021-23 period. Iran has seen its steelmaking capacity more than double during 2010-20. Further robust expansion is expected over the next three years, bringing Iran's capacity to 68.7 mmt by 2023. This would mean that Iran could become the seventh largest steelmaking country in the world, surpassing both Germany and Turkey.

- Excess capacity pressures have emerged, and are getting worse, in regions that previously had strong steel demand and positive prospects for market growth. For instance, growing concerns in Southeast Asia loom as capacity growth outpaces demand, supported by foreign investment particularly from China. These emerging problems, and the longevity of capacity once installed, highlight the need to address excess capacity issues early on.

4. As previously reported, the Secretariat has over the past few years worked on the construction of a crude steelmaking capacity database at the plant and firm level—in the context of the Steel Committee’s Programme of Work and Budget—which is helping to improve the quality of the aggregate capacity figures for steel-producing economies. The Secretariat has now added disaggregated capacity data for a number of steel-producing economies that were previously missing from the plant-level database and were based on aggregate capacity information and will continue to update the database on a regular basis.¹ As a result of these efforts, the coverage of the plant-level database has further expanded from the previous capacity report [[DSTI/SC\(2020\)10](#)]. Of the economies for which disaggregated capacity data have been added, several have relatively significant capacity levels, for instance Bangladesh, Pakistan, and the Democratic People’s Republic of Korea. The inclusion of plant-level data for the remaining economies, which are used as the basis for aggregate figures, has led to revisions in the aggregate figures for some economies and globally (see Box 1).

¹ The economies that were added are: Cote d’Ivoire, Mauritius, Mozambique, Togo, Bangladesh, Bhutan, Cambodia, Democratic People’s Republic of Korea, Lao People’s Democratic Republic, Mongolia, Myanmar, Nepal, Pakistan, Kyrgyzstan, Albania, Bosnia Herzegovina, Iceland, Macedonia, Montenegro, Norway, Serbia, Bolivia, Costa Rica, Cuba, Dominican Republic, El Salvador, Panama, Puerto Rico, Trinidad Tobago and Afghanistan.

Box 1. Revisions to the capacity aggregates based on the plant-level database

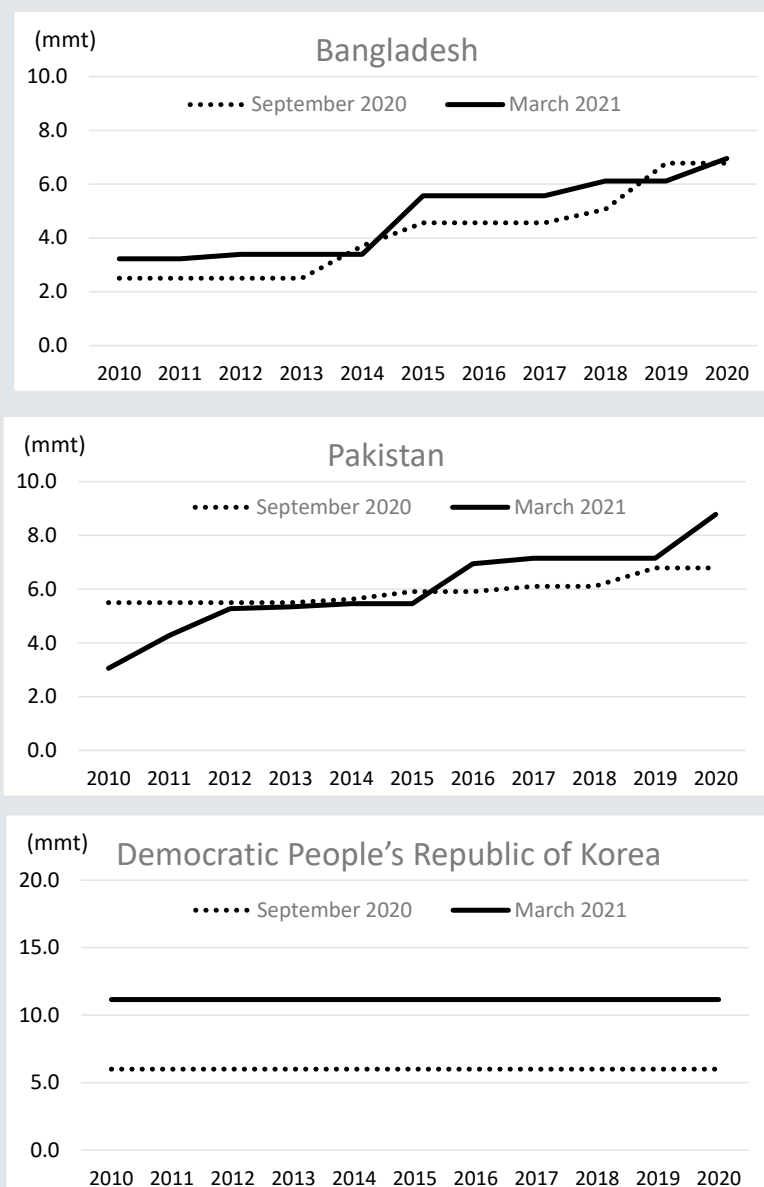
The Secretariat started working on the construction of a crude steelmaking capacity database at the plant and firm level, in the context of Output Result 1.2.5.5.1 of the Steel Committee's 2019-20 PWB that is helping to improve the quality of the capacity aggregates by economy. The database, which uses a wide range of publicly available and commercial data sources, extends back to the year 2000. The database currently includes all steel-producing economies. Since the September 2020 Steel Committee meeting, the Secretariat has added Cote d'Ivoire, Mauritius, Mozambique, Togo, Bangladesh, Bhutan, Cambodia, Democratic People's Republic of Korea, Lao People's Democratic Republic, Mongolia, Myanmar, Nepal, Pakistan, Kyrgyzstan, Albania, Bosnia Herzegovina, Iceland, Macedonia, Montenegro, Norway, Serbia, Bolivia, Costa Rica, Cuba, Dominican Republic, El Salvador, Panama, Puerto Rico, Trinidad Tobago and Afghanistan as scheduled.

The in-depth plant-level analysis conducted by the Secretariat now provides a more comprehensive picture about capacity developments taking place around the world. The plant-level data are updated on a continuous basis, and thus the economy-wide aggregates can also undergo revision from time to time.

The major change in this report compared to the previous one is the inclusion of plant-level data for a number of economies that were previously missing from the plant-level database and were based on aggregate capacity information including which Bangladesh, Pakistan, and the Democratic People's Republic of Korea which have notable levels of capacity. As the plant-level data extend back to 2000, revisions were made to capacity aggregates going back in time, where necessary. Figure 1 shows the revisions from 2009 made to a few of the larger producing economies that were added, indicating the difference between the March 2021 estimates and the estimates presented to the Steel Committee in September 2020.

Figure 1. Revisions of capacity figures for selected economies recently added to the database

Difference in capacity levels between September 2020 and March 2021 reports



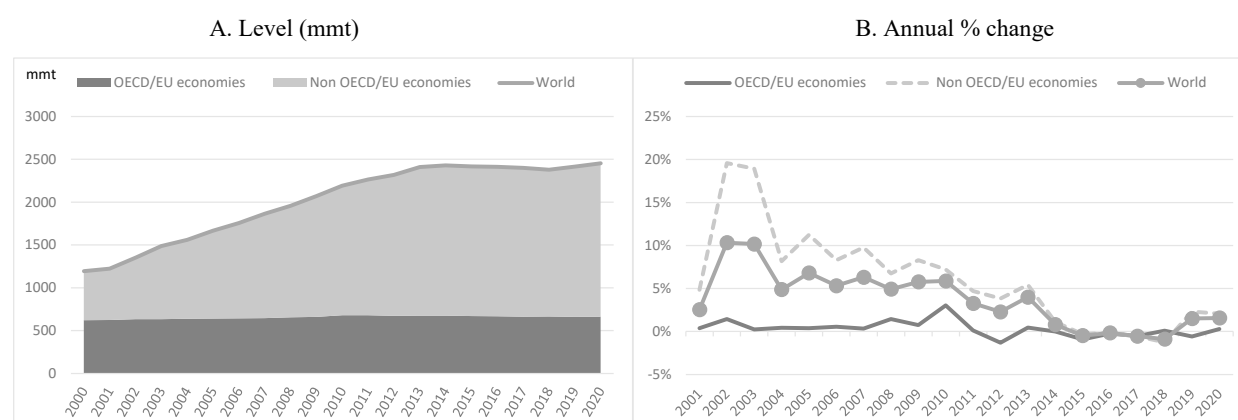
Source: OECD

2. The latest developments in global steelmaking capacity

2.1 Global summary

5. The latest available information (as of December 2020) suggests that global steelmaking capacity increased in 2020 for the second year in a row (Figure 2). The OECD has revised (downwards by 2.6 mmt from the figure presented in [DSTI/SC\(2020\)10](#)) its 2020 figures for global steelmaking capacity to 2 453.2 million metric tonnes (mmt) to incorporate new information on closures that was not previously available as well as updated information on the status of certain investment projects. The net capacity change in 2020, taking into account new capacity additions and closures, brings current global steelmaking capacity up to 2 453.2 mmt, representing a 1.6% increase from the level at the end of 2019. Global steelmaking capacity has increased by a total of 74.2 mmt over the past two years (2019-2020). Asia and the Middle East accounted for almost all of that growth, adding 61.1 mmt and 11.9 mmt, respectively.

Figure 2. Evolution of crude steelmaking capacity in OECD/EU economies and non OECD/EU economies



Note: Capacity data reflect information available to December 2020.

Source: OECD

2.2 Regional capacity developments

2.2.1. Latest developments

6. Table 1 provides recent capacity developments by region and presents potential additions of capacity over the next three years. In 2020, most of the capacity additions took place in Asia, where an additional 28.8 mmt of capacity was deployed. In 2020, steelmaking capacity also increased in the Middle East (by 7.2 mmt, i.e. 9.1% over the previous year), North America (by 3.3 mmt, i.e. 2.1% over the previous year), the CIS (0.25 mmt, i.e. 0.2% over the previous year) and Africa (0.04 mmt, i.e. 0.1% over the previous year). On the other hand, steelmaking capacity decreased in Europe by 1.4 mmt in 2020, i.e. by 0.5% compared to its level in 2019. In the Latin America and Oceania regions, no new investments or permanent closures were registered in 2020, according to the sources used to update the OECD's capacity database.

Table 1. Current nominal capacity and potential gross capacity additions by region

	Nominal capacity (mmt)	Nominal capacity (mmt)	% change	Potential gross capacity additions 2021-23 (mmt)		Capacity in 2023 (mmt)		% change expected (2020 vs 2023)	
	2019	2020 (A)	2020-2019	Underway (B)	Planned (C)	Low (A)+(B)	High (A)+(B)+(C)	Low	High
Africa	44.6	44.7	0.1%	3.2	1.0	47.8	48.8	7.1%	9.3%
Asia	1617.6	1646.3	1.8%	18.6	46.9	1664.9	1711.8	1.1%	4.0%
CIS	143.4	143.6	0.2%	0.0	3.2	143.6	146.8	0.0%	2.2%
Europe	292.4	291.0	-0.5%	2.2	2.8	293.2	296.0	0.8%	1.7%
EU	216.0	213.4	-1.2%	0.2	1.6	213.6	215.2	0.1%	0.8%
Other Europe	76.4	77.6	1.6%	2.0	1.2	79.6	80.8	2.6%	4.1%
Latin America	78.0	78.0	0.0%	0.7	0.0	78.8	78.8	0.9%	0.9%
Middle East	79.5	86.7	9.1%	16.4	10.9	103.0	113.9	18.9%	31.5%
North America	153.3	156.5	2.1%	4.0	3.9	160.5	164.4	2.6%	5.0%
Oceania	6.4	6.4	0.0%	0.0	0.0	6.4	6.4	0.0%	0.0%
OECD/EU economies Total	660.4	662.2	0.3%	6.2	6.7	668.4	675.1	0.9%	1.9%
non-OECD/EU economies Total	1754.7	1791.0	2.1%	38.8	62.0	1829.8	1891.8	2.2%	5.6%
World Total	2415.1	2453.2	1.6%	45.0	68.7	2498.2	2566.9	1.8%	4.6%

Note: The capacity data reflect information up to December 2020. The table "Europe" includes both OECD/EU economies and non OECD/EU economies in Europe, as well as Turkey. Please see Annex C for detailed capacity data by individual economies. Figures for the European Union (EU) include all EU Member States. Estimates regarding steelmaking capacity in 2023 and expected percentage change do not take into account closures that may occur during the period.

Source: OECD

2.2.2. Gross capacity additions expected in 2021-2023

7. When looking at the capacity that will be potentially added in the future, the Secretariat classifies investment projects as either “underway” (and thus more likely to be completed during the projection period) or “planned” (which are less certain but nevertheless could come on stream). Projects that are underway are those that are already under construction or for which equipment contracts have been awarded and a major financial or state commitment has been made. On the other hand, planned projects are more uncertain projects because they are either at the feasibility or early planning stage, have not yet received financial or state backing, or are not scheduled for completion at a specified time.

8. Information on announced investment projects suggests 45.0 mmt of gross capacity additions are currently underway around the world and could come on stream during the three-year period of 2021-23. An additional 68.7 mmt of capacity additions are currently in the planning stages for possible start-up during the same period (see Table 1). However, It should be noted that estimates regarding steelmaking capacity in 2023 and expected percentage change do not take into account closures that may occur during the period.

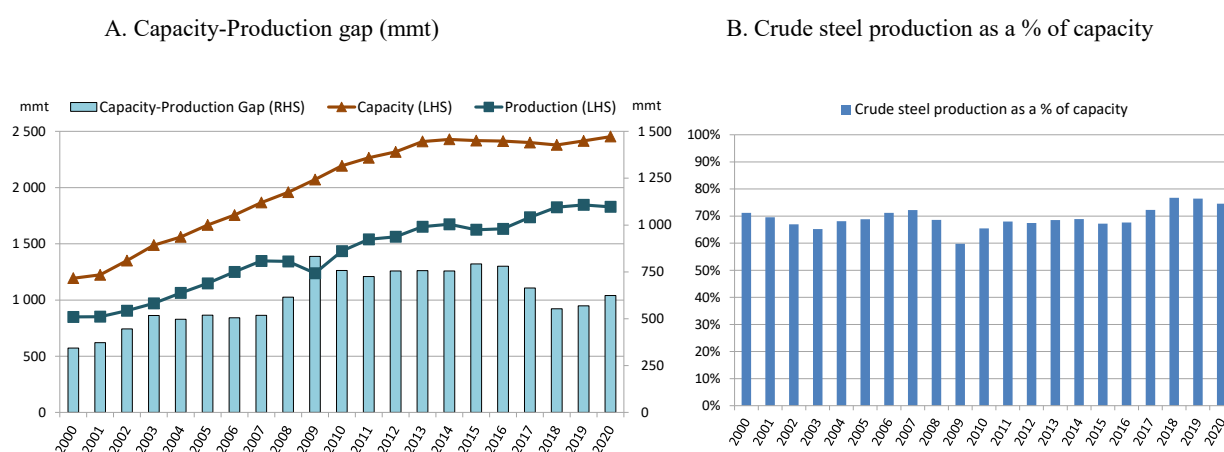
9. In particular, Asia and the Middle East are likely to experience a considerable increase in steelmaking capacity over the next few years if all the projects current under way or planned are ultimately realised. A total of 18.6 mmt and 16.4 mmt of gross capacity additions are currently underway for start-up during 2021-23 in Asia and the Middle East

region, respectively, with an additional 46.9 mmt and 10.9 mmt in the planning stages in these regions, respectively. North America, Africa, Europe, and Latin America could also see increases of capacity, with 4.0 mmt, 3.2 mmt, 2.2 mmt and 0.7 mmt of gross additions currently underway in each region, respectively. Additionally, there are plans in North America, Africa, Europe, and the CIS to potentially add several million more tonnes of capacity during the 2021-23 period. In Oceania, there is only one capacity investment project, but it is not clear when that production facility would become operational. Currently, there are no planned investment projects in Latin America for the 2021-2023 period, according to the information sources used by the Secretariat.

2.3 The gap between global capacity and production

10. A key market development in 2020 was the increase in global steelmaking capacity, while production and demand for steel declined. Indeed, global steelmaking capacity rose to 2 453.2 mmt in 2020, while crude steel production declined to 1 827.8 mmt, with the gap between the two increasing to 625.4 mmt from 568.7 mmt in 2019 (Figure 3.A). Global steel production as a share of capacity, as a rough indicator of the global utilisation rate, declined from 76.5% in 2019 to 74.5% in 2020 (Figure 3.B).

Figure 3. Global crude steelmaking capacity and crude steel production



Note: Capacity data reflect information up to December 2020. Annual production data for 2020 are based on the World Steel Association (released on 6 February 2021). Annual production data from 2000 to 2019 are from “Steel Statistical Yearbook 2020”, published by the World Steel Association (World Steel Association, 2020^[1]). See Annex D for a table with data on global crude steelmaking capacity and production from 2000 to 2020).

Source: OECD for capacity and World Steel Association for production.

3. A review of regional capacity developments

3.1. Africa

11. In Africa, several new investment projects are underway or planned. As a result, steelmaking capacity in this region could grow from 44.7 mmt in 2020 to 47.8 mmt in 2023 (+7.1%), based on projects that are already underway (but omitting projects only in the planning stage). In Namibia, Groot Group is proceeding with the construction of the country's first steelmaking (EAF) plant with a capacity of 1.0 mmt in the Ohangwena region, which is planned to be completed by March 2022 (Metal Expert, 2020^[2]). In Mozambique, Baobab Resources is constructing a new steelmaking facility with 0.5 mmt of capacity. It is expected to start operation in 2021, however the steelmaking technology that will be used is still unknown (Mozambique, 2020^[3]).

12. In northern Africa, however, some new projects are facing delays. Morocco's Riva Industries had almost finished the construction of its new EAF in May 2020, a plant with a capacity of 0.8 mmt. The start-up date of this facility was however postponed to 2021 due to the Covid-19 pandemic (Metal Expert, 2020^[4]) (Metal Expert, 2021^[5]). In Egypt, Ezz Rolling Mills (ERM) is constructing a new EAF plant with nominal capacity of 0.85 mmt. It was originally scheduled to start in 2020, but has been postponed to 2021 (Metal Expert, 2021^[5]). In addition, Arabian Steel has plans to construct a new EAF facility, and its steelmaking capacity would reach 1.0 mmt. Although its completion date was originally scheduled for 2020, it was postponed to 2021 due to the Covid-19 pandemic (Metal Expert, 2020^[6]). Moreover, in Algeria, the new EAF facility that was planned to be built by ETRHB in 2020 was halted in October 2020 due to internal issues (Metal Expert, 2020^[7]).

3.2. Asia and Oceania

13. Steelmaking capacity in Asia increased by 28.8 mmt in 2020, to a level of 1 646.3 mmt, representing growth of 1.8% from 2019. Capacity growth is expected to continue over the next few years, supported by several investment projects that are underway or in the planning stages, with production operations expected to start during the three-year period of 2021-2023. The projects that are now underway could add an additional 18.6 mmt of steelmaking capacity by 2023 (in gross terms), bringing Asia's total capacity to 1 664.9 mmt (+1.1% during the three-year period) in the absence of closures. No new investments are underway or planned in Oceania during the 2020-2023 period, according to information from the publicly available sources used to update the OECD's monitoring databases.

3.2.1. China

14. During recent years, there have been a number of new investments as a result of China's measures to replace outdated and small steel plants, especially in the eastern and southern coastal areas of China. Although some of the previously approved investments still proceeded in 2020, the Chinese government released a draft version of the new capacity swap scheme in December 2020 (see Box 2).

15. With regard to investments in BOF capacity in China, Anyang Zhoukou Steel is constructing a new BOF plant of 1.75 mmt in Henan province, and its completion date has been postponed to 2021 from 2020 (Kallanish, 2020^[8]). In addition, Baosteel Zhanjiang Iron and Steel is constructing a new BOF plant with capacity of 3.6 mmt, which is scheduled to become operational in 2021 (Metal Expert, 2019^[9]).

16. With regard to investments in EAF capacity, in the Sichuan province, Luzhou Xinyang Steel and Sichuan Jinsheng Steel started operations at their new EAF plants in 2020, which have steelmaking capacities of 2.0 mmt and 1.0 mmt, respectively. Also, Fujian Dingsheng Iron and Steel installed an EAF with 2.0 mmt of capacity in Fujian province in 2020 (Metal Expert, 2020^[10]). In Guangxi Zhuang Autonomous Region, Wuzhou Yongda Iron and Steel commissioned a new EAF plant in December 2020 with steelmaking capacity of 1.0 mmt (Metal Expert, 2020^[11]) (Kallanish, 2021^[12]). In the Guangdong province, Heyuan Derun Iron and Steel has plans to replace existing EAFs with new EAFs. Although these facilities are expected to become operational in summer 2021, their capacity levels are still unknown (Metal Expert, 2020^[13]).

Box 2. The Chinese government's new steel capacity swap scheme

In 2015, China introduced a capacity swap scheme allowing steelmakers to replace old capacity with newer or more efficient facilities. This scheme aimed to upgrade the Chinese steel industry without increasing the country's total capacity. Steelmakers could replace their facilities as long as they reduced at least an equal amount of old capacity, with the swap ratio being tighter at 1.25 in some environmentally sensitive regions.² The scheme appears to have helped limit growth of China's total steelmaking capacity in recent years.

However, it would seem that some steelmakers have used loopholes in the scheme to expand capacity (Wood Mackenzie, 2020^[14]). In November 2019, China's National Development and Reform Commission, the Ministry of Industry and Information Transformation, and the National Bureau of Statistics issued a joint notice requiring steel companies via local governments to conduct a study and submit a report on the capacity status and production swaps in their facilities over the last three years to verify the true capacity at China's steel firms (Reuters, 2020^[15]).

As a result of this investigation, the government has found instances where some steel mills have expanded their production capacity under the framework of the capacity swap scheme. Given this situation, the Chinese government temporally stopped approving capacity swaps from 24 January 2020 onwards (NDRC, 2020^[16]) (Reuters, 2020^[17]). At the same time, the National Development and Reform Commission announced that the capacity swap projects approved since 2016 would be inspected and any illegal mills would be shut down. However, some market observers believe this announcement will not lead to new shutdowns because all of the relevant mills are legal, at least on paper (Metal Expert, 2020^[18]).

In December 2020, the Ministry of Industry and Information Technology released a draft version of a new capacity swap scheme for the steel industry. The Ministry opened the draft to public consultations until January 18, 2021, and after its ratification, the new guideline will replace the old one suspended in January 2020 (Mysteel, 2020^[19]).

According to this new draft guideline, the capacity swap ratio for environmentally sensitive regions will be raised to 1.5:1 from the current 1.25:1. The ratio for other regions will also

² Although replacement is basically on a one-for-one basis, new capacity must be 25% lower than the capacity it is replacing in the environmentally sensitive regions of the Beijing-Tianjin-Hebei cluster and the Yangtze River and Pearl River deltas.

be raised to 1.25:1 from the current 1:1 (Mysteel, 2020^[19]). However, there are two exceptions to this new regulation (Platts, 2020^[20]):

1. The swap ratio for new capacity is 1.25:1 in environmentally sensitive regions, and 1.1:1 in other regions when the capacity is acquired through mergers and acquisitions.
2. The swap ratio for new capacity is 1:1 when the new steel-making facility is environmentally friendly, based on, for example, EAF, Corex, Finex or hydrogen-based iron-making plants.

3.2.2. India

17. Steelmaking capacity in India has been expanding rapidly in recent years, and the country is now ranked second after China in terms of the size of its crude steelmaking capacity. Further growth is expected in the medium to long term. For example, the National Mineral Development Corporation (NMDC) is constructing a greenfield steelworks in the state of Chhattisgarh, with BOF capacity of 3 mmt, which is expected to start operations by July 2021 (Metal Expert, 2020^[21]). In addition, Godawari Power and Ispat plan to construct a greenfield steelmaking facility in Chhattisgarh state. The planned capacity of this facility is 1.0 mmt, but the construction schedule as well as the steelmaking technology are still unknown (Metal Expert, 2021^[22]). Furthermore, ArcelorMittal Nippon Steel India (AM/NS India, formerly known as Essar Steel) plans to increase its steelmaking capacity to 23 mmt by 2030 (Metal Expert, 2020^[23]) (ArcelorMittal, 2020^[24]).

18. JSW Steel is proceeding with an expansion project of BOF facilities at its Dolvi works in Maharashtra, which is expected to add 5.0 mmt of capacity in March 2021 after several postponements (Platts, 2020^[25]). The company noted that about 95% of the work related to expansion of the plant had been completed by December 2020 (Metal Expert, 2020^[26]). In addition, JSW Steel plans to establish a new EAF at its Vijayanagar Works. While this EAF is expected to be commissioned at the end of March 2021, its capacity is still unknown (Sarralle, 2020^[27]). JSW Steel recently announced that it will expand its capacity to 25 mmt by the end of March 2021. Moreover, it noted an aim to reach 27.5 mmt of capacity in the next 2-3 years and achieve 45 mmt by 2031 despite a several-month delay due to the Covid-19 pandemic (Metal Expert, 2020^[28]). Other delays involve a project at Tata Steel's Kalinganagar works in Odisha, which was supposed to add 5.0 mmt of BOF capacity, but was postponed indefinitely in 2020 (Metal Expert, 2020^[29]). ArcelorMittal has plans to establish a greenfield steel mill in the state of Karnataka, with a capacity of 6.0 mmt, but the construction schedule as well as the steelmaking technology are still unknown.³

3.2.3. Southeast Asia

19. In the Association of South East Asian Nations (ASEAN) region, Viet Nam's Hoa Phat Group started a new BOF facility in August 2020, with capacity of 2.0 mmt, at the Dung Quat Industrial Park (Metal Expert, 2020^[30]). In tandem with the capacity and

³ ArcelorMittal's 2019-2020 annual report states: "The Company explored investment opportunities in India and in June 2010, entered into a memorandum of understanding with authorities in the state of Karnataka in South India that envisaged the construction of a 6.0 mmt steel plant with a power plant, representing a potential aggregate investment of \$6.5 billion. The company has completed all the necessary formalities for acquiring the land by signing and executing a lease cum sale agreement for 1,070 ha (2643.25 acres) of land on 26 December 2018 and the project is currently under review".

production increases, Hoa Phat group announced plans to increase export sales by around 60% from 265,000 tonnes to 400,000 tonnes in 2020 (Metal Expert, 2020^[31]).

3.2.4. *Chinese investments in Southeast Asia*

20. Steel demand growth is attracting foreign investors to the ASEAN and South Asian regions, with several new investment projects supported by Chinese companies. For instance, in 2020 Dexin Steel Indonesia, a joint venture between China's Delong Holdings Limited (45%), China's Shanghai Decent Investment Group (43%) and Indonesia's PT Indonesia Morowali Industrial Park (12%), started a new 1.75 mmt BOF (No. 1) steel mill in Morowali Industrial Park, located in Central Sulawesi province, and is expected to put into operation BOF No. 2, which has the same capacity as furnace No. 1, in the first quarter of 2021 (Metal Expert, 2020^[32]). Furthermore, Delong Holdings signed a letter of intent to increase the annual capacity of its steel project in Indonesia to 20 mmt. The details of this capacity expansion was unknown as of December 2020 (Reuters, 2020^[33]) (Kallanish, 2020^[34]). Moreover, Shaanxi Iron and Steel Group announced a plan to develop a new steel mill in Indonesia, with steelmaking capacity of 7.5 mmt in 2018. However, details about this project are still undisclosed (SEAISI, 2020^[35]).

21. In the Philippines, China's HBIS Group, Huili Investment Fund Management, the Philippine's SteelAsia Manufacturing Corporation and PHIVIDEC Industrial Authority started the construction of new steel plants in Misamis Oriental province, and steelmaking capacity would eventually reach 8.0 mmt after the two plants are completed. According to the South East Asian Iron and Steel Institute (SEAISI), these plants are expected to be completed in 2023 and 2026, respectively (SEAISI, 2020^[36]). SteelAsia Manufacturing Corporation intends to start operation of a new EAF at Davao Works in the first quarter of 2021. This steelmaking capacity is still unknown (Metal Expert, 2020^[37]). At the same time, some new projects by SteelAsia Manufacturing Corporation have been postponed due to the unfavourable economic situation caused by the Covid-19 pandemic. For instance, SteelAsia postponed its Compostela Works operation to 2021, which originally had been expected to become operational in 2020 (Metal Expert, 2020^[38]).

22. In Malaysia, Hebei Xinwuan Steel Group and Metallurgical Corporation of China (MCC) have plans to construct a new 5.0 mmt steel plant in Sarawak State (Kallanish, 2020^[39]). Also, Malaysian Kinsteel Company (with an ownership ratio of 45%) and China's Tianjin Qiangbang Industrial (ownership ratio of 40%) are constructing a new IF with 0.5 mmt capacity, and this IF is expected to start operations from March 2021 (Metal Expert, 2020^[40]). Furthermore, the Chinese investors Metallurgical Corporation, CCCC International Investment Holding and Wenan Iron and Steel Co. have plans to build a new integrated steel mill with a capacity of 10 mmt in Samalaju Industrial Park in Bintulu. Although there was a call for a freeze on manufacturing licenses due to overcapacity by the Malaysian Iron and Steel Industry Federation and Malaysia Steel Association in February 2020, the Ministry of International Trade and Industry (MITI) of Malaysia gave the green light in September 2020 (Metal Expert, 2020^[41]).

23. In Myanmar, the subsidiary of Kunming Iron and Steel Group Company signed an agreement with the Myanmar Steel Association to build a new 4.0 mmt steelmaking plant. The details of this project have not been specified yet (Metal Expert, 2020^[42]).

24. In addition, there are a few more projects for which the construction schedules and steelmaking technologies have not yet been disclosed. These include Shaanxi (in Indonesia) and Hebei Xinwuan and MCC (in Malaysia).

25. As a result of these developments, concerns are growing about the emergence of significant excess capacity in the region. The South East Asia Iron and Steel Institute

(SEAISI), for instance, published an article recently noting its grave concerns about overcapacity in the region in October 2020, noting that investments from China could add up to 50 mmt, while investments from other countries in the form of joint ventures with local companies could add an estimated 151 mmt of capacity. Because of these investments, total excess capacity will be more than 60 mmt by 2026 and it will take about 20 years for demand to catch up with this capacity level (SEAISI, 2020^[43]).

3.2.5. Japan

26. In Japan, Nippon Steel announced in February 2020 that they will permanently shut the Kure Works, which has two blast furnaces, by the end of September 2023, and also close one of the two blast furnaces at Wakayama Works in 2022 due to falling demand in Japan and competition from China (Reuters, 2020^[44]). In addition, Nippon Steel will shut down upstream facilities at its Kokura Works by March 2021, including a BOF with a capacity of around 2.0 mmt (Metal Expert, 2020^[45]).

3.2.6. Other regions in Asia

27. Elsewhere in Asia, Pakistan's Faizan Steel is constructing a new 0.08 mmt IF, which is expected to become operational in 2021 (Metal Expert, 2020^[46]). Ittehad Steel is also expanding its IF capacity by an additional 0.6 mmt. It was originally scheduled to start production in 2021, but the starting date is now indefinite (Metal Expert, 2020^[47]). In Bangladesh, GPH Ispat began operating a new EAF facility with capacity of 0.84 mmt in September 2020 (Metal Expert, 2020^[48]).

3.3. CIS

28. In the Commonwealth of Independent States (CIS) region, Russian NLMK started operation of a BOF at its Lipetsk mill in 2020, with capacity of 1.5 mmt (NLMK, 2019^[49]). Russia's Don-Metal has a plan to construct a new EAF with capacity of 0.2 mmt in Rostov state. The start-up date for this facility has not yet been determined, but it is expected to be after 2022 (Metal Expert, 2020^[50]) (Metal Expert, 2021^[51]). United Metallurgical Company (OMK) has revealed a plan to build an EAF with a capacity of 1.8 mmt. Construction is scheduled to start in the spring of 2021, with the plant being commissioned in the second half of 2024 (Metal Expert, 2020^[52]). In addition, Novostal-M plans to install a new EAF plant with a capacity of 1.2 mmt in Balakovo and operations would begin in 2024 (Metal Expert, 2020^[53]). Russia's Usolye Metallurgical Plant rescheduled the operational start-up of its new steelmaking facility from October 2020 to late 2021. Information on the capacity level and the steelmaking technology that will be used for this facility is still unknown (Metal Expert, 2020^[54]).

29. Elsewhere in the region, Baku Steel Company is installing a new EAF facility in Ganja, Azerbaijan. The figure for steelmaking capacity is still unknown, but construction is expected to be completed in 2022 (Metal Expert, 2019^[55]). In Georgia, Rustavi Steel started operation of a new EAF with a capacity of 0.25 mmt in 2020 (Metal Expert, 2020^[56]).

30. While there are many planned investments in the CIS region, there are no projects actually underway. As such, the CIS region's steelmaking capacity would remain unchanged at 143.6 mmt in the period until 2023, unless any of the planned projects noted above materialise and are started during the projection period.

3.4. Europe

31. Steelmaking capacity in the regional aggregate defined as Europe, which includes “Other Europe” (and thus includes e.g. Turkey and the United Kingdom) in the tables covered by this document, could increase from 291.0 mmt in 2020 to 293.2 mmt by 2023 (+0.8%), based on information available on investments that are underway but excluding planned projects. In Italy, Arvedi shut down an EAF facility with capacity of 2.0 mmt and they built a new EAF facility in September 2020. However, the capacity level of new one is still unknown (Metal Expert, 2020^[30]). In addition, ArcelorMittal Italia plans to install two EAFs by 2025 in Taranto, although the capacity of these new EAFs is still unknown. (Metal Expert, 2020^[57]). In Austria, Voestalpine is constructing a new EAF plant with capacity of 0.21 mmt, which is scheduled to start operations in 2021 (voestalpine, 2020^[58]). In the United Kingdom, there is a plan to develop an EAF on the South Tees Development Corporation (STDC) site as soon as 2022. However, the capacity level and the steelmaking technology that will be used are still unknown (Metal Expert, 2020^[59]).

32. Regarding the closure of capacity, ArcelorMittal Poland decided to permanently shut down its Krakow works in October 2020, which had a capacity level of 2.6 mmt (ArcelorMittal, 2020^[60]) (Metal Expert, 2020^[61]). They noted several factors that made the Krakow works’ operations economically unviable, such as the lack of emergency trade measures and high energy costs, in addition to the impact of the Covid-19 pandemic (ArcelorMittal, 2020^[60]).

3.5. Latin America

33. In Latin America, projects in Bolivia are facing delays. The construction of a new EAF facility with a capacity of 0.2 mmt by Las Lomas is facing delays in Buena Vista, Santa Cruz province, and its completion date was postponed from 2020 to 2021 (Metal Expert, 2020^[62]). In addition, Empresa Siderurgica del Mutun stopped the construction of a new EAF plant with a capacity of 0.19 mmt in El Mutún, Santa Cruz in the summer of 2020 due to a problem of forged data on the construction process and issues related to over-spending (Metal Expert, 2020^[63]). This project was supported by China’s Sinosteel Equipment, which would help with the construction of the facilities, conduct trial runs and provide operational assistance (Sinosteel Equipment, 2016^[64]).

34. In Brazil, Grupo Simec plans to upgrade its existing EAF capacity from 0.52 mmt to 0.8 mmt. As of December 2020, there was still uncertainty regarding when the upgrade would be started (Kallanish, 2020^[65]) (Metal Expert, 2020^[66]).

35. Elsewhere in the region, Peru’s Aceros Arequipa has started to construct a new 1.2 mmt EAF which will replace its current 0.85 mmt EAF. The start-up of this project was rescheduled from 2020 to spring 2021 (Metal Expert, 2020^[67]) (Kallanish, 2021^[68]).

36. Taking into account the projects that are underway, steelmaking capacity in Latin America would increase by 0.7 mmt (+0.9%) in the period 2021-23, to a level of 78.8 mmt in 2023, if those projects are realised and in the absence of closures.

3.6. Middle East

37. Steelmaking capacity is increasing rapidly in the Middle East. The strong growth is expected to continue over the next few years mainly due to capacity expansions in Iran. Steelmaking capacity could increase by an additional 16.4 mmt (+18.9%) by 2023 compared with the level of 2020 if all the projects that are underway come on stream and

in the absence of closures. However, capacity gains will be higher if any of the projects that are currently in the planning stages actually materialise.

38. Looking at developments in Iran, only two projects have actually started their operations in the second half of 2020 due to problems related to the Covid-19 pandemic. Kish South Kaveh Steel began operations at a new 1.2 mmt EAF in September 2020 (Metal Expert, 2020_[69]). As a result, its capacity doubled, with the intention of strengthening its export potential (Metal Expert, 2020_[30]). In addition, Azar Hadid Steel started to operate a new IF with a capacity of 0.2 mmt in December 2020 (Metal Expert, 2020_[70]).

39. Many projects that were originally scheduled to start operations in 2020 have been postponed to 2021. Sefid Dasht Steel, which is part of Mobarakeh Steel, is proceeding with the construction of a new EAF with the capacity to produce 1.0 mmt of crude steel. This facility is expected to come on stream in March 2021 (Metal Expert, 2020_[71]). Ghaenat Steel's new 0.8 mmt EAF reached 60% completion as of November 2020 and is scheduled to start operations in 2021 (Metal Expert, 2020_[72]). Miyaneh Steel is constructing a new 0.8 mmt EAF which is expected to start in 2021 (Metal Expert, 2020_[73]). Arvand Jahanara Steel rescheduled the starting date of its new 1.2 mmt EAF plant from the fourth quarter of 2020 to the first quarter of 2021 (Metal Expert, 2020_[74]). In addition, the company plans to build another EAF in 2022 with the same amount of capacity (Metal Expert, 2020_[75]).

40. There are numerous other projects taking place in Iran. Butia Steel is constructing a new EAF facility with a capacity of 1.5 mmt in Kerman Province. This facility is scheduled to start operations in the first quarter of 2021 (Metal Expert, 2020_[76]). Zarand Iron & Steel Company (ZISCO) is constructing a new BOF plant with capacity of 1.7 mmt, which is scheduled to start in 2021 (Metal Expert, 2020_[76]). Moreover, B-MISCO is also building a new EAF plant with capacity of 0.8 mmt, with operations that were scheduled to start in 2020 or 2021 (Metal Expert, 2020_[77]).

41. Assuming that all projects that are currently underway are completed as scheduled, Iran's nominal crude steelmaking capacity would reach 68.7 mmt by 2023, i.e. an increase of 30% when compared to the capacity level of 52.8 mmt observed at the end of 2020. This would mean that Iran would become the seventh largest steelmaking country in the world during this period, surpassing both Germany and Turkey.

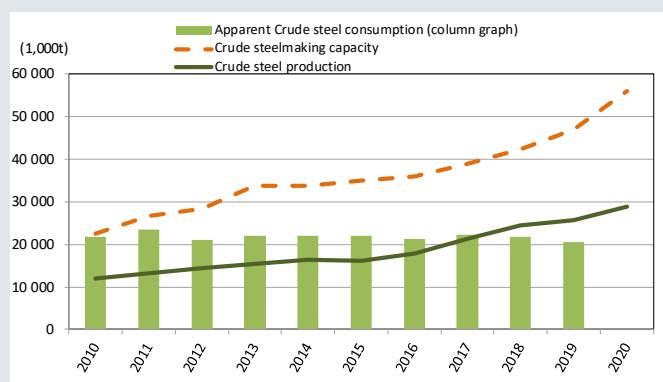
42. Elsewhere in the region, Erbil Steel began operations at a new 0.3 mmt IF facility in Iraq in the autumn of 2020 (Metal Expert, 2020_[78]). In addition, State Company for Iron & Steel (SCIS) in Iraq may restart long-closed EAF equipment in late 2021, with a total capacity of 0.5 mmt (Metal Expert, 2020_[79]).

Box 3. Recent developments in the Iranian steel industry

While steelmaking capacity in Iran did not increase as rapidly as originally expected in 2020 due to the Covid-19 pandemic, it is expected to increase significantly in the 2021-2023 period. After more than doubling between 2010 and 2020, the country's steelmaking capacity is expected to increase by more than 15 mmt over the next three years (2021-2023). Iran's crude steel production increased by over 100% from 2010 to 2019, according to production data compiled by the World Steel Association (World Steel Association, 2020_[11]). However, the level of crude steel consumption has remained relatively steady during this period (see Figure 4). As a result, Iran became a net steel exporting country from

2016 according to the trade data released by World Steel Association (see Figure 5) (World Steel Association, 2020^[1]).

Figure 4. Crude steel capacity, production and consumption in Iran



Source: OECD, Steel Statistical Yearbook 2020 (World Steel Association, 2020^[1])

Figure 5. Trade of semi-finished and finished steel products in Iran



Note: The 2019 steel trade figures do not appear to be complete yet, and are therefore not shown in this figure.

Source: Steel Statistical Yearbook 2020 (World Steel Association, 2020^[1])

In 2014, the Ministry of Industry, Mine and Trade (MIMT) of Iran announced a comprehensive plan for the development of the steel industry. According to this plan, the country intends to increase steelmaking capacity and steel production to 55 mmt (crude steel) by 2025 (financialtribune, 2020^[80]). More specifically, the plan foresees the following levels for Iran by 2025:

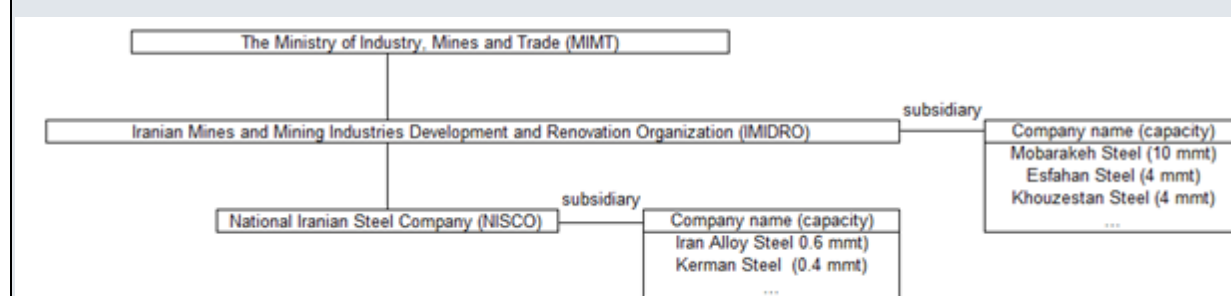
- To produce 55 mmt⁴
- To consume 35 mmt domestically
- To export the remaining 20 mmt abroad

Crude steel production reached 29 mmt in 2020, thus it would have to increase by 26 mmt over the next five years to reach the levels noted in the plan.

Until 2001, the National Iranian Steel Company (NISCO) had been the only company specialised and active in the field of managing and steering the activities of the country's steel mills, as well as in the field of implementing mining and steel making projects (Iraninternationalmagazine, 2020_[81]). In 2000, the Iranian Mines and Mining Industries Development and Renovation Organization (IMIDRO) was established, and NISCO, as one of its major subsidiaries, was assigned to implement, supervise and commission several steel expansion projects. These included Iran Alloy Steel Co. (Yazd), Azerbaijan Steel Co, Khorasan Steel Co, Maybood Steel Co, Zagroos Steel Co, Ahwaz Pipe & Tube Rolling Mill, and Iranian National Steel Industries Group. Since then, all the aforementioned companies have been privatised, but still some steel projects were assigned to NISCO (Iraninternationalmagazine, 2020_[81]).

Currently, MIMT is in charge of industries, mines and trade. IMIDRO is one of the affiliated organisations and NISCO remains its subsidiary. Some other major Iranian companies, i.e. Mobarakeh Steel, Esfahan Steel and Khouzestan Steel, are also subsidiaries of IMIDRO, while NISCO also has some subsidiary companies.

Figure 6. Relationship of steel organisations and companies under MIMT



Source: IMIDRO company website

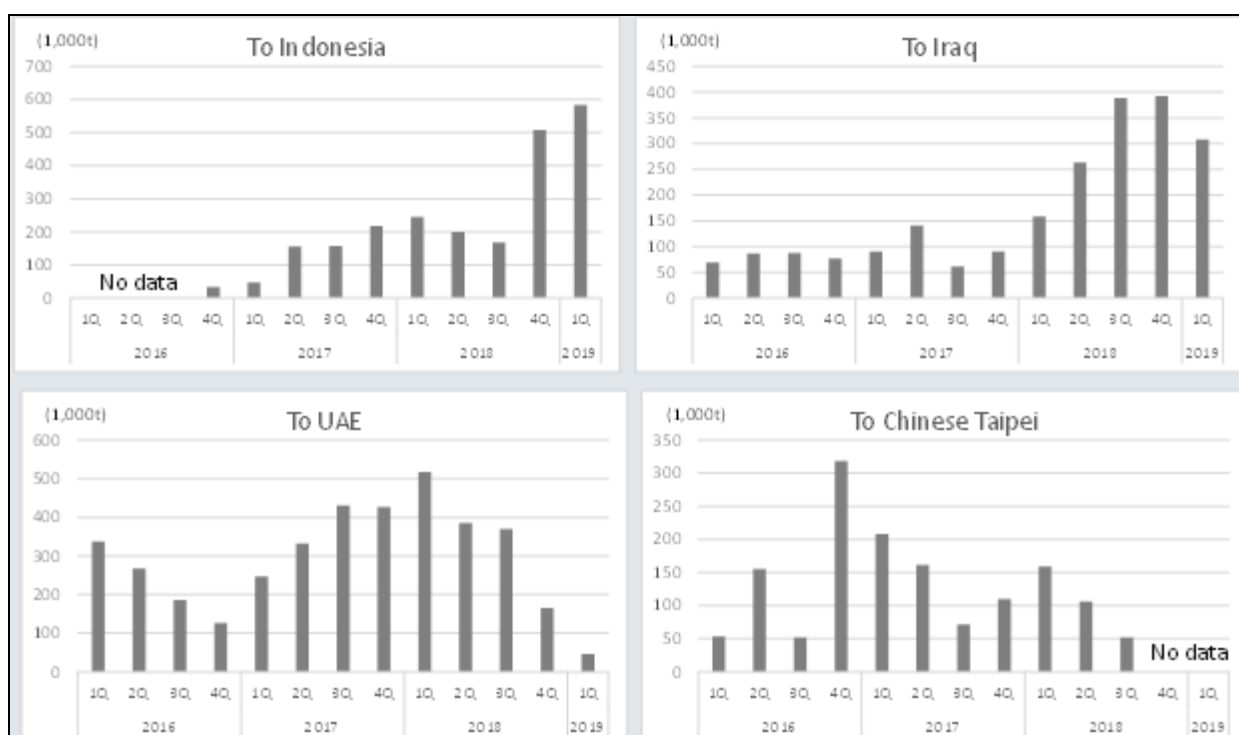
The World Steel Association calculates IMIDRO's production by combining the production of Mobarakeh Steel, Esfahan Steel, Khouzestan Steel and NISCO (worldSteel, 2020_[82])

Changing steel trade trend for Iran by export partner country

In terms of bilateral flows, Iran's steel exports have increased for some years. By destination country, exports to Indonesia and Iraq have increased significantly since the second half of 2018, while at the same time, exports to the United Arab Emirates and Chinese Taipei have decreased significantly in the same period (See Figure 7 below).

Figure 7. Steel exports from Iran

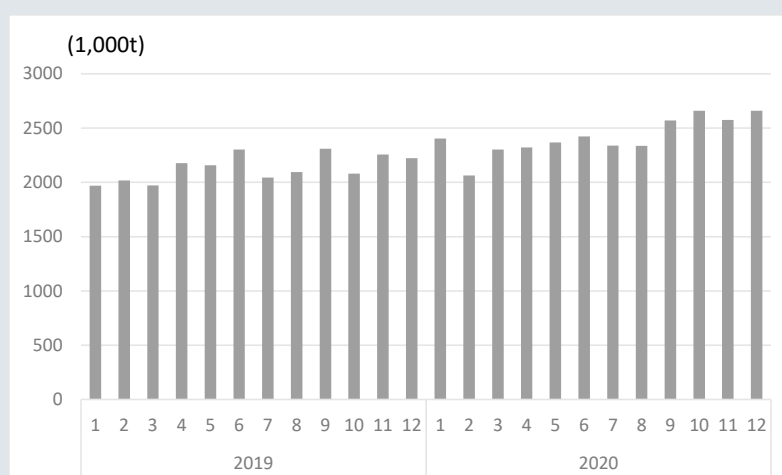
⁴ At the same time, this plan shows 55 million tonnes capacity target. Normally, effective production capacity would be lower than nominal capacity, which raises some questions as to the figures projected.



Source: OECD calculations based on data from ISSB. Data for Indonesia are available only from October 2016 and data for Chinese Taipei are available only until September 2018.

Despite the Covid-19 pandemic, in March 2020 MIMT issued a directive instructing all steel industry companies (steel producers and mining companies) to continue their production as scheduled (Platts, 2020^[83]). Iran's crude steel production in 2020 increased sharply, with monthly production levels exceeding year-ago levels throughout most of the year. For 2020 as a whole, Iran's crude steel production in 2020 increased by 13.4% from the previous year.

Figure 8. Iran's crude steel production in 2019 and 2020



Source: World Steel Association.

3.7. North America

43. In North America, several new investments could lead to growth in steelmaking capacity in the coming years, mainly in the United States. Nucor Corporation commissioned a new EAF facility with a capacity of 0.3 mmt in December 2020 in Frostproof, Florida (Metal Expert, 2020^[84]). Nucor also mentioned that it obtained air permits for its greenfield EAF plant with capacity of 1.09 mmt in Brandenburg, Kentucky, which will start operations in the fourth quarter of 2022 (Metal Expert, 2020^[85]). In addition, Nucor is moving forward with an expansion of its steelmaking capacity in Ghent, Kentucky, as announced in September 2020. Its capacity increase is 0.85 mmt and is expected to be completed in the third quarter of 2021 (Metal Expert, 2020^[86]). Big River Steel started to operate a new EAF in November 2020, which expands steelmaking capacity at its Arkansas mill by around 1.5 mmt (Big River Steel, 2020^[87]). The United States Steel Corporation (U.S. Steel) also expanded capacity, starting a new EAF facility with a capacity of 1.45 mmt at its Fairfield Works in Alabama in October 2020 (United States Steel Corporation, 2020^[88]).

44. Australia's BlueScope Steel started construction of a new EAF at its subsidiary North Star in Delta, Ohio in early 2020. The capacity addition in Delta, Ohio amounted to 0.85 mmt but the target starting time of the plant was delayed to June 2022 from mid-2021 due to the Covid-19 pandemic (Metal Expert, 2020^[89]).

45. Steel Dynamics is constructing a new EAF with a capacity of around 2.7 mmt in Sinton, Texas. As of October 2020, the original completion date of 2021 had not changed despite Covid-19 (Metal Expert, 2020^[90]). In addition, Commercial Metals Company plans to construct a new EAF in the state of Arizona, with a capacity of about 0.5 mmt. It is scheduled to break ground in early 2021 and start operations in 2023 (Metal Expert, 2020^[91]).

46. AM/NS Calvert⁵ will build a new EAF with capacity of 1.5 mmt in Alabama. The construction of this facility is scheduled for early 2021 and is expected to take 24 months (ArcelorMittal, 2020^[92]).

47. As a result of these changes, steelmaking capacity in the North American region could increase by 4.0 mmt (+2.6%) in 2023 compared to the level in 2020, taking into account investment projects that are underway. This would lead to a rise in the level of North America's steelmaking capacity to 160.5 mmt.

Box 4. Selected M&A deals in 2020 and how they change companies' capacity

In 2020, there were some important mergers and acquisitions (M&As) in the global steel industry.

In China, Baowu Iron & Steel Group took a 51% stake in Taiyuan Iron & Steel in August 2020 (Platts, 2020^[93]). Because of this acquisition, the combined crude steelmaking capacity of Baowu reached 111 mmt according to the announcement. According to China Metallurgical Information and Standardization Institute, Baowu Iron & Steel

⁵ AM/NS Calvert is a 50/50 joint venture between ArcelorMittal and Nippon Steel.

Group will continue with its M&A strategy. This could result in an increase in its steelmaking capacity to 200 mmt by 2025 (Metal Expert, 2020^[94]).

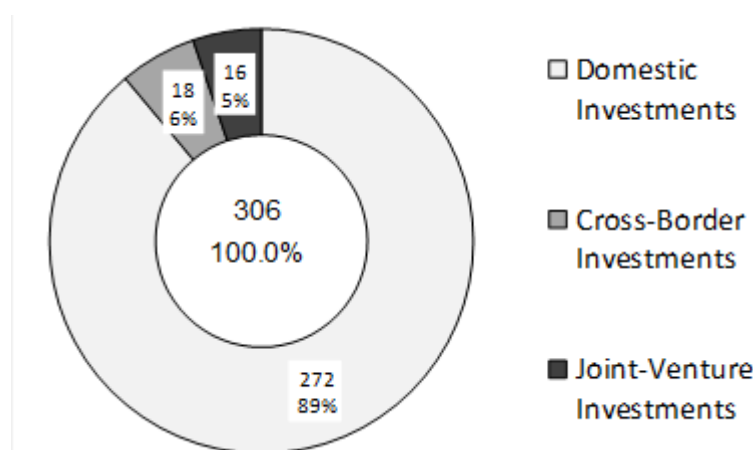
In North America, U.S. Steel announced that it will acquire the remaining 50.1% stake of Big River Steel in December 2020. This deal is expected to be completed in Q1 of 2021. Having purchased a 49.9% interest in Big River Steel in November 2019, U.S. Steel will become the sole owner of the Big River Steel's plant (U.S. Steel, 2020^[95]). In addition, Cleveland-Cliffs, which is an owner of AK Steel, acquired ArcelorMittal USA including a stake in AM/NS Calvert from ArcelorMittal in Q4 2020 (Cleveland-Cliffs, 2020^[96]). This acquisition has no implications for the capacity of the companies involved in the deal.

In Europe, Liberty Steel was performing due diligence on the Thyssenkrupp steel business as of December 2020 (Metal Expert, 2021^[97]). In addition, Tata Steel Europe is in discussion with SSAB regarding a possible sale of its IJmuiden Steel Works in the Netherlands (SSAB, 2020^[98]). Furthermore, Duferco agreed with Nucor to transfer a 50% stake in Duferdofin-Nucor from Nucor to Duferco. Earlier, the partners owned equal stakes (Metal Expert, 2021^[97]).

4. The latest developments in cross-border investments

48. Figure 9 shows the share of domestic and cross-border investments in steelmaking capacity. In total, there are 306 new steelmaking capacity projects around the world, classified as either underway or planned, which are scheduled to become operational in 2020 or later. This includes projects that have started operations in 2020, as well as projects for which the start date is not available. Of these projects, domestic steelmakers are the investors/owners in 272 (89%) of the cases. Of the remaining steelmaking capacity projects, 18 (6%) entail cross-border investments, representing an investment that is based wholly on one or on several foreign investors/owners, and 16 (5%) are structured as joint ventures (JV) between domestic and foreign investors/owners.

Figure 9. The share of domestic and cross-border investments in new steelmaking capacity projects that have started in 2020, and underway or planned for 2021 or later



Note: This figure includes all new investment projects that are underway or planned, and which are scheduled to become operational in 2020 or later — including projects that have started operation in 2020, as well as projects for which the start date is not available. It does not include cancelled projects. A cross-border investment represents an investment that is based wholly on one or several foreign investors/owners. A joint venture, on the other hand, involves both foreign investors/owners and domestic counterparts. Please see Annex A for details on the plant-level investments and their respective investors/owners.

Source: OECD

49. Table 2 lists the cross-border investments by region. Asia is the largest investment destination, accounting for thirteen cross-border and fourteen joint venture (JV) investments between domestic and foreign investors. Africa attracts one cross-border and two JV investments. North America is the destination of four cross-border investments. The CIS, Europe, Latin America, Middle East and Oceania regions currently do not have any cross-border investments or JV investments.

Table 2. Domestic and cross-border investments in new steelmaking capacity projects

Started in 2020, and underway and planned investments for 2021 or later

Region where the investment is taking place	Domestic Investments		Cross-Border Investments		Joint-Venture Investments	
	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)
Africa	9	6.9	1	1.0	2	1.1
Asia	127	251.4	13	73.2	14	35.0
CIS	12	10.9	0	0.0	0	0.0
Europe	12	8.3	0	0.0	0	0.0
Latin America	9	5.0	0	0.0	0	0.0
Middle East	95	90.6	0	0.0	0	0.0
North America	7	8.8	4	2.4	0	0.0
Oceania	1	n.a.	0	0.0	0	0.0
World Total	272	381.8	18	76.5	16	36.1

Note: This table includes all new investment projects that are, underway or planned, and which are scheduled to become operational in 2020 or later — including projects that have started operation in 2020, as well as projects for which the start date is not available. It does not include cancelled projects. A cross-border investment represents an investment that is based wholly on one or several foreign investors. A joint venture, on the other hand, involves both a foreign investor and a domestic counterpart. Please see Annex A for details on the plant-level investments and their respective investors/owners.

Source: OECD

50. Table 3 provides a two-way matrix of the cross-border and joint venture investments by economy. Chinese companies are involved in eight cross-border investments and participate in fourteen JV investments abroad. Asia is the most attractive region for Chinese companies, with Indonesia as the destination for four Chinese cross-border investments and five Chinese JV investments.

51. Regarding other investments, two Chinese Taipei companies and a Japanese company are jointly investing in two cross-border projects in Viet Nam. An Indian company has one cross-border investment in the United States. Another Indian company is involved in one joint venture project with a Bhutanese counterpart. Investors from Luxembourg have one cross-border investment in India. Investors from Korea, the United Arab Emirates and Qatar have one joint venture project each, with companies in Indonesia and Algeria, respectively.

Table 3. Cross-border and joint venture investments in new steelmaking capacity projects

A. Cross-Border Investments

Origins of Investments: firm based in	Location of Investments															
	Bolivia		Cambodia		India		Indonesia		Kenya		Philippines		United States		Viet Nam	
	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)
Australia													1	0.85		
China	1	0.19	1	3.1			4	19.25	1	1	1	10				
Chinese Taipei															2	15
India													1	n.a.		
Japan															2	15
Korea					1	10										
Luxembourg					1	6										
United Kingdom													1	n.a.		
Vietnam															1	2

B. Joint Venture Investments

Foreign JV partner: firm based in	Location of Investments															
	Algeria		Bhutan		Indonesia		Malaysia		Myanmar		Pakistan		Philippines		Viet Nam	
	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)	Number	Capacity (mmt)
China					5	10	3	16.3	1	4	1	0.48	3	8.5	1	0.5
India			1	0.2												
South Korea					1	4										
UAE	1	n.a.														
Qatar	1	1.1														

Note: Capacity figures are in mmt (millions of metric tonnes). These tables include all new investment projects that are underway or planned, and which are scheduled to become operational in 2020 or later — including projects that have started operation in 2020, as well as projects for which the start date is not available. It does not include cancelled projects. A cross-border investment represents an investment that is based wholly on one or several foreign investors. A joint venture, on the other hand, involves both a foreign investor and a domestic counterpart. Please see Annex A for details on the plant-level investments and their respective investors/owners.
Source: OECD

Annex A. AVAILABLE INFORMATION ON PLANT LEVEL INVESTMENTS AND THEIR OWNERS

Table 4. Investment data

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Africa	Algeria	Annaba	Emarat Dzayer Steel Company	Imetal Group (Algeria)/ Emarat Dzayer Group (UAE)	EAF	?	plan	?	Metal Expert
Africa	Algeria	Bellara, Jijel	Algerian Qatari Solb Company	Sider (Algeria)/ Qatar Steel (Qatar)	EAF	1 100	operating	2020	Metal Expert
Africa	Algeria	Berrahal	ETRHB	-	EAF	1 150	plan	?	Company HP (Danieli) Metal Expert
Africa	Algeria	Ain Temouchent	Ozmert Algeria	-	IF	260	operating	2020	Metal Expert
Africa	Egypt	Sokhna, Suez	EZZ Steel	-	EAF	850	underway	2021	World Steel Capacities
Africa	Egypt	Ain Sokhna	Arabian Steel Industries	-	Steelmaking	1 000	plan	2021	Metal Expert
Africa	Kenya	Sinosteel	Sinosteel	Sinosteel (China)	Steelmaking	1 000	plan	?	Ministry of Industry, Trade and Cooperatives of Kenya
Africa	Morocco	Jorf Lasfar	Riva Industries	-	EAF	800	underway	2021	Metal Expert
Africa	Mozambique	Tete	Baobab Resources	-	Steelmaking	500	underway	2021	World Steel Capacities, Wood Mackenzie
Africa	Namibia	Oshikango, Ohangwena region	Groot Group	-	EAF	1 000	underway	2022	Company HP Metal Expert
Africa	Nigeria	Kogi state	Ajaokuta Steel Company (ASC)	-	BOF	1 300	plan	?	World Steel Capacities CompanyHP
Africa	Nigeria	Kagarko, Kaduna	African Industries Group	-	BOF	?	operating	2020	Metal Expert
Asia	China	Xinpu, Henan	Anyang Zhoukou Steel	-	BOF	1 750	underway	2021	kallanish
Asia	China	Zijin Country, Guangdong	Heyuan Derun Iron and Steel	-	EAF	?	plan	2021	Metal Expert
Asia	China	Luzhou City, SicHunan	Luzhou Xinyang Steel	-	EAF	2 000	operating	2020	Metal Expert

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Asia	China	Meishan City, Sichuan	Sichuan Jinsheng	-	EAF	1 000	operating	2020	Finance.sina.com.cn
Asia	China	Shanxi province	Shanxi Jinnan Iron and Steel	-	BOF	3 400	plan	?	Metal Expert
Asia	China	Ningde, Fujian	Fujian Dingsheng Iron and Steel	-	EAF	2 000	operating	2020	Henan Province S Metal Expert Public Platform(中小企业河南网)
Asia	China	Zhanjiang, Guangdong	Guangdong Shaoguan Iron & Steel Co., Ltd.	-	BOF	3 625	underway	2021	Company HP Metal Expert
Asia	China	Ningde, Fujian / 福建、寧德	Anshan Iron & Steel	-	Steelmaking	10 000	plan	?	Platts
Asia	China	Yancheng city, Xiangshui	Xuzhou Baofeng Special Steel	-	Steelmaking	8 000	plan	2020	Metal Expert world Metal Experttals(世界金属导报)
Asia	China	Hanzhong, Shaanxi	Shaanxi Hanzhong Iron and Steel	-	EAF	700	plan	?	陕西发展观察 汉中时空网
Asia	China	Fangchenggang, Guangxi / 防城港	Jinxi Iron and Steel	-	Steelmaking	?	plan	?	防城港市新闻网
Asia	China	Hebei, Laoting / 河北、樂亭县	HBIS Laoting Steel Co., Ltd.	-	BOF	7470	plan	?	Platts Reuters Company HP
Asia	China	Jiangsu province	Baowu Iron & Steel Group	-	Steelmaking	?	plan	?	MySteel, Platts, Metal Expert
Asia	China	?	Baowu Iron & Steel Group	-	Steelmaking	3100	plan	2021	Platts
Asia	China	Wuzhou, Guangxi	Wuzhou Yongda Iron and Steel	-	EAF	1000	operating	2020	Metal Expert, kalkanish
Asia	Indonesia	Morowali Industrial Park, Central Sulawesi province	Dexin Steel Indonesia	Delong Holdings (China), Shanghai Decent Group (China)	BOF	1750	operating	2020	Platts
Asia	Indonesia	Morowali Industrial Park, Central Sulawesi province	Dexin Steel Indonesia	Delong Holdings (China), Shanghai Decent Group (China)	BOF	1750	underway	2021	Platts
Asia	Indonesia	Cilegon, West Java	Krakatau POSCO	POSCO (South Korea)/ Krakatau Steel (Indonesia)	BOF	4000	plan	?	SEAISI Presentation Metal Expert Company HP
Asia	Indonesia	Medan, North Sumatra	PT Gunung Raja Paksi	Gunung Steel Group (Indonesia), Nanjing Iron & Steel (China)	EAF	500	plan	?	Platts, Metal Expert, Company HP

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Asia	Indonesia	Central Sulawesi	Anshan Iron & Steel Group Corporation	Anshan Iron & Steel Group Corporation (China)	Steelmaking	5000	plan	?	Platts
Asia	Indonesia	Ujung Jabung, Jambi, Sumatra	Fuhai Group & Ansteel Group	Fuhai Group (China)/ Ansteel Group (China)	Steelmaking	1750	plan	?	The Jakarta Post
Asia	Indonesia	Kendal, Central Java	Hebel Bishi Steel Group	Hebel Bishi Steel Group (China) / PT Seafer Kawasan Industri (Indonesia)	Steelmaking	3000	plan	?	Metal Expert
Asia	Indonesia	Batulicin (South Kalimantan)	PT Gunung Raja Paksi	Gunung Steel Group (GSG) (Indonesia)/ Shenwu Technology Corp (China)	Steelmaking	3 000	plan	?	Metal Expert
Asia	Indonesia		Shaanxi Iron and Steel Group	-	Steelmaking	7 500	plan	?	陕西日报 (Shaanxi' Daily) China Belt and Road Portal (中国一带一路) 陕西煤业化工集团有限责任公司
Asia	Indonesia	East Java	Wuhan Iron & Steel (Wugang)	-	EAF	5 000	plan	?	Platts
Asia	India	Meramandali, Odisha state	Tata Steel BSL Ltd.	-	BOF	6 070	plan	2030	Wood Mackenzie
Asia	India	Meramandali, Odisha state	Tata Steel BSL Ltd.	-	EAF	1 550	plan	2030	Wood Mackenzie
Asia	India	Kalinganagar, Odisha	Tata Steel	-	BOF	5 000	plan	?	Metal Expert
Asia	India	Dolvi, Maharashtra	JSW Steel Limited	-	BOF	5 000	underway	2021	CHP
Asia	India	Toranagallu, Karnataka State	JSW Steel Limited	-	BOF	400	plan	2021	Wood Mackenzie
Asia	India	Toranagallu, Karnataka State	JSW Steel Limited	-	BOF	1 800	plan	2026	Wood Mackenzie
Asia	India	Toranagallu, Karnataka State	JSW Steel Limited	-	EAF	1 200	plan	2022	Wood Mackenzie
Asia	India	Toranagallu, Karnataka State	JSW Steel Limited	-	EAF	?	plan	2021	Sarralle
Asia	India	Nagarnar, Chhattisgarh	NMDC	-	BOF	3 000	underway	2021	CHP
Asia	India	Sindhudurg, Maharashtra	Shree Uttam Steel and Power Ltd	-	BOF	1 550	underway	2021	World Steel Capacities
Asia	India	Sindhudurg, Maharashtra	Shree Uttam Steel and Power Ltd	-	BOF	1 550	plan	?	Metal Expert

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Asia	India	Gandhidham, Kutch, Gujarat	Mono Steel (India) Ltd.	-	IF	?	underway	2021	World Steel Capacities
Asia	India	Himachal Pradesh, Himachal Pradesh	Crest Steel (Una) Pvt. Ltd.	-	IF	?	plan	2021	Metal Expert, World Steel Capacities
Asia	India	Kharagpur, West Bengal	Ramsarup Lohh Udyog Limited (RLUL)	-	EAF	700	plan	?	World Steel Capacities
Asia	India	Hindula	Brand Steel and Power Ltd	-	EAF	450	plan	2025	Wood Mackenzie
Asia	India	Ramgarh, Jharkhand	Aloke Steel Industries	-	EAF	70	plan	2030	Wood Mackenzie
Asia	India	?	Ankur Udyog Limited	-	EAF	250	plan	2032	Wood Mackenzie
Asia	India	Rangarddy, Andhra Pradesh	Texcon Steels Ltd	-	EAF	130	plan	2030	Wood Mackenzie
Asia	India	?	Ultra Mega Steel Project	-	BOF	9 000	plan	2025	Wood Mackenzie
Asia	India	Versamedi,Gujarat	Welspun Power and Steel Ltd (WPSL)	-	BOF	3 100	plan	2030	Wood Mackenzie
Asia	India	Versamedi,Gujarat	Welspun Power and Steel Ltd (WPSL)	-	BOF	3 300	plan	2030	Wood Mackenzie
Asia	India	Koppal, Karnataka	Xindia Steels	-	BOF	2 500	plan	2036	Wood Mackenzie
Asia	India	Koppal, Karnataka	Xindia Steels	-	BOF	2 500	plan	2029	Wood Mackenzie
Asia	India	Koppal, Karnataka	Kalyani Steel	-	BOF	500	plan	2025	Wood Mackenzie
Asia	India	Koppal, Karnataka	Kalyani Steel	-	EAF	40	plan	2025	Wood Mackenzie
Asia	India	Yadgir, Karnataka	Kalyani Steel	-	BOF	3 000	plan	2030	Wood Mackenzie
Asia	India	Raturia, Durgapur	KIC Metaliks	-	EAF	380	plan	2025	Wood Mackenzie
Asia	India	Gollapuram, Andhra Pradesh	Knovus Steels and Infrastructure	-	EAF	150	plan	2030	Wood Mackenzie
Asia	India	Karakhendra, Jharkhand	Rungta Mines Limited (RML)	-	EAF	110	plan	2030	Wood Mackenzie
Asia	India	Haveri, Karnataka	Tata Metaliks (TML)	-	BOF	3 000	plan	2038	Wood Mackenzie
Asia	India	Lohardaga, Jharkhand	Pawanjay Steel & Power Ltd.	-	EAF	40	plan	2025	Wood Mackenzie
Asia	India	Gadag, Karnataka	POSCO	-	BOF	12 000	plan	2030	Wood Mackenzie
Asia	India	Kharagpur, West Bengal	Ramsarup Industries Limited	-	EAF	700	plan	2022	Wood Mackenzie
Asia	India	Patratu, Jharkhand	Jindal Steel and Power Ltd. (JSPL)	-	BOF	6 000	plan	2034	Wood Mackenzie
Asia	India	Patratu, Jharkhand	Jindal Steel and Power Ltd. (JSPL)	-	BOF	6 000	plan	2024	Wood Mackenzie
Asia	India	Karnataka	ArcelorMittal	ArcelorMittal (Luxembourg)	Steelmaking	6000	plan	?	Metal Expert, Company HP

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Asia	India	Jammalamadugu mandal, Kadapa district, Andhra Pradesh	AP High Grade Steel	AP High Grade Steel (India) / Hyundai Steel (Korea)	BOF	10 000	underway	?	Metal Expert
Asia	India	Chhattisgarh	Godawari Power and Ispat	-	Steelmaking	1 000	plan	?	Metal Expert
Asia	India	Bastar, Chhattisgarh	Tata Steel	-	BOF	5 500	plan	2030	Wood Mackenzie
Asia	India	Bileipada near Joda in the Keonjhar district of Odisha	Tata Sponge Iron Ltd	-	BOF	1 500	plan	2022	World Steel Capacities
Asia	India	Bileipada near Joda in the Keonjhar district of Odisha	Tata Sponge Iron Ltd	-	EAF	560	plan	2025	Wood Mackenzie
Asia	India	Hospet, Karnataka	BMM Ispat Limited	-	BOF	1 100	plan	2023	Wood Mackenzie
Asia	India	Paradip, Odisha	ArcelorMittal Nippon Steel India	-	BOF	6 000	plan	?	World Steel Capacities
Asia	India	Salboni, West Bengal	JSW Steel Limited	-	BOF	6 000	plan	2036	Wood Mackenzie
Asia	India	Barenda, Gujarat	JSW Steel Limited	-	BOF	4 000	plan	2025	Wood Mackenzie
Asia	India	Paradip, Odisha	JSW Steel Limited	-	BOF	3 440	plan	2032	Wood Mackenzie
Asia	India	Paradip, Odisha	JSW Steel Limited	-	BOF	10 050	plan	2026	Wood Mackenzie
Asia	India	Kolkata, West Bengal	JSW Bengal Steel	-	BOF	3 000	plan	?	World Steel Capacities
Asia	India	Maharashtra	Jindal Maxsteel	-	EAF	1 500	plan	?	World Steel Capacities
Asia	India	Purulia, West Bengal	Jai Balaji Industries Limited (JBIL)	-	EAF	5 000	plan	2030	Wood Mackenzie
Asia	India	Rourkela, Odisha	Jai Balaji Jyoti Steels	-	EAF	860	plan	2030	Wood Mackenzie
Asia	India	Angul, Odisha	Jindal Steel and Power Ltd. (JSPL)	-	BOF	6 500	plan	2030	Wood Mackenzie
Asia	India	Raigarh, Chhattisgarh	Jindal Steel and Power Ltd. (JSPL)	-	BOF	4 000	plan	2023	Wood Mackenzie
Asia	India	Jajpur, Odisha	Maithan Ispat Limited	-	EAF	400	plan	2020	World Steel Capacities
Asia	India	Kalinganagar, Odisha	Mesco Kalinga Steel Limited (MKSL)	-	BOF	1 200	plan	2020	World Steel Capacities
Asia	India	Kalinganagar, Odisha	Mesco Kalinga Steel Limited (MKSL)	-	BOF	2 300	plan	2020	World Steel Capacities
Asia	India	Jajpur, Odisha	Neelachal Ispat Nigam Limited (NINL)	-	BOF	1 000	plan	?	World Steel Capacities
Asia	India	Bellary Taluk, Karnataka	NMDC	-	BOF	5 000	plan	2030	Wood Mackenzie
Asia	India	Bokaro, Jharkhand	SAIL	-	BOF	8 800	plan	2035	Wood Mackenzie
Asia	India	sindri, Jharkhand	SAIL	-	BOF	5 600	plan	2030	Wood Mackenzie
Asia	India	Paradip, Odisha	SAIL	-	BOF	3 000	plan	2025	Wood Mackenzie

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Asia	India	Chhattisgarh	SAIL	-	BOF	3 000	plan	2025	Wood Mackenzie
Asia	India	Thelkoloji, Odisha	Bhushan Power and Steel Limited (BPSL)	-	BOF	2 800	plan	2022	Wood Mackenzie
Asia	India	Thelkoloji, Odisha	Bhushan Power and Steel Limited (BPSL)	-	EAF	900	plan	2022	Wood Mackenzie
Asia	India	Potka, Jharkhand	Bhushan Power and Steel Limited (BPSL)	-	EAF	3 000	plan	2030	Wood Mackenzie
Asia	India	Tadipatri Mandal, Anantapur, Andhra Pradesh	Arjas Steel	-	BOF	620	plan	2030	Wood Mackenzie
Asia	India	Raigarh, Chhattisgarh	MSP Steel & Power Ltd (MSPSPL)	-	EAF	580	plan	2025	Wood Mackenzie
Asia	India	Marakuta, Jharsuguda district in Orissa	MSP Metalics Ltd	-	IF	240	plan	?	World Steel Capacities
Asia	India	Marakuta, Jharsuguda district in Orissa	MSP Metalics Ltd	-	EAF	50	plan	2020	Wood Mackenzie
Asia	India	Raigarh, Chhattisgarh	Visa Steel	-	EAF	2 500	plan	2022	Wood Mackenzie
Asia	India	Durgapur, West Bengal	Shyam Steel Industries	-	EAF	320	plan	2021	Wood Mackenzie
Asia	India	Jharsuguda, Odisha	Action Ispat & Power (P) Ltd.	-	EAF	680	plan	2024	Wood Mackenzie
Asia	India	Bhorandiha, Jharkhand	Atibir Industries Co. Ltd (AICL)	-	BOF	600	plan	2020	Wood Mackenzie
Asia	India	Mandu, Madhya Pradesh	Chintpurni Steel	-	EAF	300	plan	2023	Wood Mackenzie
Asia	India	Hindupur, Ananthpur	Hindupur Steel & Alloys Pvt Ltd (HSAPL)	-	EAF	50	plan	2020	Wood Mackenzie
Asia	India	PURULIA, WEST BENGAL	Ispat Damodar Ltd.	-	EAF	190	plan	2025	Wood Mackenzie
Asia	India	Ramgarh, Jharkhand	Jharkhand Ispat Pvt Ltd	-	EAF	70	plan	2030	Wood Mackenzie
Asia	India	Jalna, Maharashtra	Kalika Steel	-	EAF	20	plan	2020	Wood Mackenzie
Asia	India	Dhenkanal, Odisha	Narbheram Power & Steel	-	EAF	90	plan	2020	Wood Mackenzie
Asia	India	Dhenkanal, Odisha	Narbheram Power & Steel	-	EAF	670	plan	2030	Wood Mackenzie
Asia	India	Keonjhar, Odisha	OSIL (Odisha Sponge Iron)	-	EAF	900	plan	2025	Wood Mackenzie
Asia	India	Janjgir, Chhattisgarh	Prakash Industries	-	EAF	1 000	plan	2025	Wood Mackenzie
Asia	India	Jhargam, West Bengal	Rashmi Metaliks Limited (RML)	-	EAF	350	plan	2022	Wood Mackenzie
Asia	India	Bilaspur, Chhattisgarh	Rashi Steel and Power Limited (RSPL)	-	EAF	240	plan	2030	Wood Mackenzie
Asia	India	Jamuria, Burdwan	Rashmi Cement Limited	-	EAF	1 000	plan	2020	Wood Mackenzie
Asia	India	Sundargarh, Odisha	Scan Steels Ltd	-	EAF	310	plan	2020	Wood Mackenzie

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Asia	India	Raigarh, Chhattisgarh	Singhal Enterprises	-	EAF	170	plan	2020	Wood Mackenzie
Asia	India	Anra	Sree Metaliks	-	EAF	700	plan	2020	Wood Mackenzie
Asia	India	Raipur, Chattisgarh	Jayaswal Neco Industries Limited	-	EAF	570	plan	2025	Wood Mackenzie
Asia	Bangladesh	Mirsarai economic zone	Star Consortium	-	BOF	2 000	plan	?	Company HP
Asia	Bangladesh	Chittagong	GPH Ispat Ltd	-	EAF	840	operating	2020	Company HP Metal Expert Metal Expert
Asia	Bhutan	Samdrup Jongkhar	Druk Metallurgy Limited (DML)	Druk Holding and Investments Limited (Bhutan)/ Mr. Dilip Kumar Goenka (Principal Partner of KD Iron and Steel) (India)	IF	200	underway	?	Company HP Platts
Asia	Cambodia	Preah Vihear, Phnom Penh	Cambodia Iron and Steel	-	BOF	1 000	plan	?	Wood Mackenzie
Asia	Cambodia	?	Xinjiang Bayi Nanjiang Steel Baicheng Co Ltd-Aksu	Baowu Steel Group Corporation (China)	BOF	3 100	plan	?	Reuters, my steel news and SEAISI presentation
Asia	Myanmar	?	Myingyan plant	-	EAF	200	plan	?	World Steel Capacities
Asia	Myanmar	?	Kunming Steel	-	BOF	4 000	plan	?	Metal Expert
Asia	Malaysia	Kemaman, Terengganu	Eastern Steel Sdn Bhd	Hiap Teck Venture (HYVB) (Malaysia)/ Orient Steel Investment (China)	Steelmaking	1 300	plan	?	SEAISI
Asia	Malaysia	Gurun, Kedah	Kinsteel Bhd	-	IF	500	underway	2021	Metal Expert
Asia	Malaysia	Gurun, Kedah	Kinsteel Bhd	-	EAF	500	plan	?	Metal Expert
Asia	Malaysia	Selangor Darul Ehsan	New project by The Lion Group	-	BOF	1 600	plan	?	World Steel Capacities
Asia	Malaysia	Sarawak	Sarawak Iron and Steel	Hebei Xinwuan Steel Group (China) /MCC Overseas Ltd (China)	BOF	10 000	plan	?	Metal Expert
Asia	Malaysia	Sarawak State	Hebei Xinwuan Steel Group	Hebei Xinwuan Steel Group (China) /MCC Overseas Ltd (China)	BOF	5 000	plan	?	Metal Expert Metal Expert MCC
Asia	Philippines	Carcar, Cebu	SteelAsia Manufacturing Corporation	-	EAF	500	underway	2021	World Steel Capacities
Asia	Philippines	Misamis Oriental in northern Mindanao	Philippine Iron and Steel Project	SteelAsia Manufacturing	Steelmaking	4 500	plan	2023	SEAISI

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				(Philippines)/ HBIS (China)					
Asia	Philippines	Misamis Oriental in northern Mindanao	Philippine Iron and Steel Project	SteelAsia Manufacturing (Philippines)/ HBIS (China)	Steelmaking	3 500	plan	2026	SEAISI
Asia	Philippines	Misamis Oriental province	Panhua Group	Panhua Group (China)	Steelmaking	10 000	plan	?	PNA
Asia	Philippines	Villanueva, Misamis Oriental	SteelAsia Manufacturing Corporation	-	EAF	500	plan	2021	Metal Expert
Asia	Philippines	Compostela, Cebu	SteelAsia Manufacturing Corporation	-	EAF	800	underway	2021	Metal Expert Company HP Platts
Asia	Philippines	Lemery, Batangas	SteelAsia Manufacturing Corporation	SteelAsia Manufacturing (Philippines)/ HBIS (China)	EAF	500	underway	?	Metal Expert
Asia	Philippines	Davao, Mindanao	SteelAsia Manufacturing Corporation	-	Steelmaking	?	plan	2021	World Steel Capacities
Asia	Philippines	Bulacan, Central Luzon	SteelAsia Manufacturing Corporation	-	EAF	800	plan	?	Metal Expert
Asia	Philippines	Bulacan, Central Luzon	SteelAsia Manufacturing Corporation	-	EAF	600	plan	?	Metal Expert
Asia	Philippines	Concepcion, Tarlac	SteelAsia Manufacturing Corporation	-	EAF	1 200	plan	?	Metal Expert Metal Expert
Asia	Viet Nam	Vung Ang Economic Zone, Ha Tinh province	Formosa Plastics Group	Formosa Plastics Group (Chinese Taipei)/ China Steel Corp (Chinese Taipei)	BOF	7 500	plan	?	SEAISI
Asia	Viet Nam	Vung Ang Economic Zone, Ha Tinh province	Formosa Plastics Group	Formosa Plastics Group (Chinese Taipei)/ China Steel Corp (Chinese Taipei)	BOF	7 500	plan	?	SEAISI
Asia	Viet Nam	Phu My, Ba Ria Vung Tau	Hoa Sen Group	-	EAF	800	plan	?	World Steel Capacities
Asia	Viet Nam	Phu My, Ba Ria Vung Tau	Hoa Sen Group	-	EAF	500	plan	?	World Steel Capacities
Asia	Viet Nam	Dung Quat Economic Zone, Quang Ngai province	Hoa Phat Group	-	BOF	2 000	operating	2020	Metal Expert
Asia	Viet Nam	Thai Nguyen	Vietnam Steel Corporation	-	BOF	500	plan	?	Metal Expert

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Asia	Viet Nam	Tang Loong Industrial Zone in Bao Thang district, Lao Cai province	Viet - Trung Metallurgy Company	-	BOF	500	plan	?	Company HP
Asia	Viet Nam	Ho Chi Minh City	Nam Thuan Investment Development	-	IF	?	operating	2020	World Steel Capacities
Asia	Viet Nam	Ho Chi Minh City	Nam Thuan Investment Development	-	BOF	300	operating	2020	World Steel Capacities
Asia	Pakistan	Dhabeji	Amreli Steels	-	IF	200	operating	2020	World Steel Capacities
Asia	Pakistan	Karachi	Agha Steel Industries	-	EAF	600	operating	2020	Danieli PR Company HP
Asia	Pakistan	Faisalabad	Ittehad Steel	-	IF	600	underway	?	Metal Expert
Asia	Pakistan	Karachi	Faizan Steel Mills	-	IF	80	underway	2021	Metal Expert
Asia	Pakistan	Karachi	Naveena Steel Mills	-	IF	270	operating	2020	Metal Expert
Asia	Pakistan	Khyber Pakhtunkhwa	Al-Haj Asia Star Mills	Al-Haj Group (Pakistan) / HeBei Xin Gang Steel Group (China)	IF	480	operating	2020	Metal Expert
Asia	Pakistan	?	Indus Consortium Mining & Steel Industry	-	BOF	1 000	plan	?	World Steel Capacities
CIS	Azerbaijan	Ganja	Baku Steel Company	-	EAF	?	underway	2022	Company HP
CIS	Georgia	Rustavi	Georgian Steel	-	EAF	250	operating	2020	World Steel Capacities
CIS	Russia	Usolye-Sibirskoye	Usolye Metallurgical Plant	-	Steelmaking	?	underway	2021	Metal Expert
CIS	Russia	Kamensk-Shahtinskiy	Don-Metal	-	EAF	160	plan	?	Metal Expert, ComMetal Expert
CIS	Russia	Hrombur	Hrombur	-	EAF	500	plan	?	Metal Expert
CIS	Russia	Ishimbai	Ishstal plant	-	EAF	300	plan	?	World Steel Capacities
CIS	Russia		Don-Metal	-	EAF	160	plan	?	Metal Expert
CIS	Russia		United Metallurgical Company (OMK)	-	EAF	1 800	plan	2024	Metal Expert
CIS	Russia	Balakovo	Novostal-M	-	EAF	1 200	plan	2024	World Steel Capacities
CIS	Russia	Lipetsk	NLMK	-	BOF	1 500	operating	2020	Company HP Company HP

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CIS	Ukraine	Zaporizhzhya	Metinvest	-	BOF	3 200	plan	2022	World Steel Capacities Platts
CIS	Ukraine	Donetsk	Donetsksteel	-	EAF	1 800	plan	?	Platts,Metal Expert
Europe	Austria	Kapfenberg	Böhler Edelstahl Gmbh	-	EAF	205	underway	2021	CHP
Europe	Italy	Cremona	Arvedi	-	EAF	2 000	operating	2020	World Steel Capacities
Europe	Italy	Taranto	ArcelorMittal	-	EAF	?	plan	?	Metal Expert, Platts
Europe	Italy	Taranto	ArcelorMittal	-	EAF	?	plan	?	Metal Expert, Platts
Europe	Italy	Piombino	JSW Steel Limited	-	EAF	1 400	plan	2022	World Steel Capacities, Wood Mackenzie,Platts
Europe	Netherlands	Eemshaven	Van Merksteijn International	-	EAF	1 000	plan	?	Danieli
Europe	Poland	Stalowa Wola	Cognor Group	-	EAF	200	plan	2021	Company HP, World Steel Capacities
Europe	Turkey	Orhangazi, Bursa	Asil Celik Ticaret	-	EAF	500	plan	?	Metal Expert
Europe	Turkey	Bartın	MESC Iron and Steel	-	EAF	1 000	operating	2020	Platts
Europe	Turkey	Iskenderun, Hatay	Tosyali Holding	-	EAF	2 000	underway	2022	World Steel Capacities, kallanish
Europe	United Kingdom	Newport	Liberty House Group	-	EAF	?	plan	?	Company HP
Europe	United Kingdom	Tees Valley	South Tees Development Corporation (STDC)	-	EAF	?	plan	?	Metal Expert
Latin America	Bolivia	San Jacinto, Buena Vista municipality, Santa Cruz district	Las Lomas	-	IF	200	underway	2021	Company HP, Platts
Latin America	Bolivia	El Mutún, Santa Cruz	Empresa Siderurgica del Mutun	-	EAF	190	underway	2022	Metal Expert, Company HP, Platts
Latin America	Brazil	Juiz de Fora, Minas Gerais	ArcelorMittal	-	EAF	200	plan	?	World Steel Capacities, WOOD MACKENZIE, Company HP
Latin America	Brazil	Pindamonhangaba	Gerdau S.A.	-	Steelmaking	1 200	plan	?	Platts
Latin America	Brazil	Rio de Janeiro	Gerdau S.A.	-	EAF	700	plan	?	World Steel Capacities WOOD MACKENZIE Company HP
Latin America	Brazil	Caucaia	Grupo Hierros Anon	-	EAF	1 200	plan	?	Metal Expert

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Latin America	Brazil	Pindamonhangaba	Grupo Simec	-	EAF	800	plan	?	Metal Expert
Latin America	Cuba	Havana	Empresa Siderurgica Jose Marti	-	EAF	170	plan	2025	World Steel Capacities
Latin America	Peru	Pisco	Aceros Arequipa	-	EAF	350	underway	2021	Metal Expert
Middle East	Iran	Hormozgan, Hormozgan	Mobarakeh Steel	-	EAF	1 500	plan	2023	World Steel Capacities Platts
Middle East	Iran	Charmahal-va-Bakhtiyari	Mobarakeh Steel	-	EAF	1 000	underway	2021	Metal Expert
Middle East	Iran	Charmahal-va-Bakhtiyari	Mobarakeh Steel	-	EAF	1 000	plan	?	World Steel Capacities
Middle East	Iran	Ahvaz, Khuzestan	Khouzestan Oxin Steel	-	EAF	1 100	plan	?	World Steel Capacities
Middle East	Iran	Isfahan, Isfahan	Esfahan Steel	-	BOF	2 280	plan	?	World Steel Capacities
Middle East	Iran	Isfahan, Isfahan	Esfahan Steel	-	EAF	1 650	plan	?	World Steel Capacities
Middle East	Iran	Khorramshahr, Khuzestan	Khouzestan Steel	-	EAF	1 250	plan	?	World Steel Capacities
Middle East	Iran	Khorramshahr, Khuzestan	Khouzestan Steel	-	EAF	1 250	plan	?	World Steel Capacities
Middle East	Iran	Khorramshahr, Khuzestan	Khouzestan Steel	-	EAF	1 250	plan	?	World Steel Capacities
Middle East	Iran	Khorramshahr, Khuzestan	Khouzestan Steel	-	EAF	1 250	plan	?	World Steel Capacities
Middle East	Iran	Shadegan, Khuzestan	Khouzestan Steel	-	EAF	1 000	plan	?	Company HP(IMIDRO) Metal Expert
Middle East	Iran	Shadegan, Khuzestan	Khouzestan Steel	-	EAF	1 300	plan	?	World Steel Capacities
Middle East	Iran	Shadegan, Khuzestan	Khouzestan Steel	-	EAF	1 300	plan	?	World Steel Capacities
Middle East	Iran	Azadegan	Iran Alloy Steel Company (IASCO)	-	EAF	1 000	underway	2022	World Steel Capacities
Middle East	Iran	Ahvaz, Khuzestan	Iran National Steel Industrial Group (INSIG)	-	EAF	430	plan	?	World Steel Capacities
Middle East	Iran	Tehran	Kaavian Steel	-	EAF	700	plan	?	World Steel Capacities
Middle East	Iran	Mianeh, East Azerbaijan	Mianeh Steel	-	EAF	800	underway	2021	Metal Expert
Middle East	Iran	Jovein, Khorasan Rezavi	Sabzevar Steel Complex	-	EAF	800	underway	2022	Metal Expert Metal Expert
Middle East	Iran	Qaen, South Khorasan	Ghaenat Steel Complex	-	EAF	800	underway	2021	Metal Expert
Middle East	Iran	Ajabshir, East Azerbaijan	Saeb Steel Complex	-	EAF	550	plan	?	Metal Expert

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iran	Ajabshir, East Azerbaijan	Shams Iron & Steel Complex	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Sabalan	Sabalan Iron and Steel Complex	-	EAF	500	plan	?	World Steel Capacities
Middle East	Iran	Zonouz	Zonouz steel complex	-	EAF	500	plan	?	Company HP
Middle East	Iran	Bandar Abbas, Hormozgan	Kish South Kaveh Steel (SKS)	-	EAF	1 200	operating	2020	Metal Expert
Middle East	Iran	Arvand, Khoramshahr	East Kaveh Steel Company (EKSC)	-	EAF	1 000	plan	?	World Steel Capacities
Middle East	Iran	Arvand, Khoramshahr	Arvand Kaveh Steel	-	EAF	2 500	plan	?	World Steel Capacities
Middle East	Iran	Chabahar city, Sistan and Baluchestan	Makran Steel Complex	-	EAF	3 200	underway	?	Metal Expert
Middle East	Iran	Bandar Abbas, Hormozgan	Gambron Steel	-	EAF	2 000	plan	?	World Steel Capacities
Middle East	Iran	Abhar, Zanjan	West Alborz Steel	-	EAF	1 000	underway	2021	Company HP, Metal Expert, World Steel Capacities
Middle East	Iran	Chatroud, Kerman Province	Butia Steel	-	EAF	1 500	underway	2021	Metal Expert Metal Expert
Middle East	Iran	Kermanshah	Jahan Foulad Gharb	-	EAF	500	plan	2025	Wood Mackenzie
Middle East	Iran	Zarand, Kerman	Zarand Iron & Steel Company (Zisco)	-	BOF	1 700	underway	2021	Metal Expert Company HP, World Steel Capacities
Middle East	Iran	Shahrood, Semnan	Shahrood Steel	-	IF	150	plan	2021	World Steel Capacities Company HP
Middle East	Iran	Fars	Neyriz Ghadir Steel Company (NGHSCO)	-	EAF	800	underway	2021	Metal Expert Company HP
Middle East	Iran	East Azerbaijan	Afa Steel	-	EAF	600	plan	?	World Steel Capacities, CHP
Middle East	Iran	Arak, Markazi	Amir Kabir Khazar Steel	-	EAF	500	plan	?	World Steel Capacities
Middle East	Iran	Eshtehard, Alborz	Aria Zob Steel	-	EAF	100	operating	2020	Company HP
Middle East	Iran	Buin Zahra, Qazvin	Arian Steel	-	EAF	550	plan	2020	World Steel Capacities
Middle East	Iran	Arvand, Khoramshahr	Arvand Jahanara Steel Company (AJSCO)	-	EAF	1 200	underway	2021	Metal Expert
Middle East	Iran	Arvand, Khoramshahr	Arvand Jahanara Steel Company (AJSCO)	-	EAF	1 200	plan	2022	World Steel Capacities
Middle East	Iran	Azna, Lorestan Province	Azna Steel	-	EAF	700	plan	?	World Steel Capacities
Middle East	Iran	Bafgh, Yazd	Bafgh Mineral Complex Iron & Steel	-	EAF	800	underway	2021	Metal Expert

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
			Company (B-MISCO)				ay		
Middle East	Iran	Yasouj, Kohgiluyeh and Boyer-Ahmad	Boyer Ahmad Steel Complex (Boyer Sanat)	-	EAF	300	plan	?	World Steel Capacities
Middle East	Iran	Ardakan, Yazd	Ardakan Steel	-	EAF	1 000	plan	?	World Steel Capacities
Middle East	Iran	Abarkooh, Yazd	Abar Kouh Steel & Rolling	-	EAF	600	underway	2022	Metal Expert
Middle East	Iran	Fars	Eghlid Steel	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Fasa, Fars	Fasa Steel Complex Co (Fasco)	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Sari, Mazandaran	Foolad Alborz Iranian Company (FAICO)	-	EAF	800	plan	?	World Steel Capacities
Middle East	Iran	Sirjan, Kerman	MIDHCO	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Sirjan, Kerman	MIDHCO	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Kavir Damghan Steel Complex (KADASCO)	-	EAF	?	plan	?	World Steel Capacities
Middle East	Iran	Damghan, Semnan	Kavir Damghan Steel Complex (KADASCO)	-	IF	200	plan	?	World Steel Capacities
Middle East	Iran	Nishapur, Razavi Khorasan	Khayyam Steel	-	EAF	800	underway	2023	Metal Expert
Middle East	Iran	Saqhez, Kurdistan	Kurdistan Steel Company	-	EAF	1 000	underway	2022	Platts Company HP Metal Expert
Middle East	Iran	Malayer, Hamedan	Malayer Steel Company	-	IF	300	plan	?	World Steel Capacities
Middle East	Iran	Malekan, Eastern Azerbaijan	Malekan Steel	-	EAF	400	plan	?	Metal Expert World Steel Capacities News
Middle East	Iran	Malekan, Eastern Azerbaijan	Malekan Steel	-	EAF	400	plan	?	World Steel Capacities
Middle East	Iran	Natanz, Isfahan	Natanz Steel Company	-	EAF	850	plan	?	Metal Expert
Middle East	Iran	Sabzevar, Razavi Khorasan	Neyshabur Steel Complex	-	EAF	800	plan	?	Metal Expert
Middle East	Iran	Natanz	North West Steel Industries (NWSI)	-	EAF	800	plan	?	Metal Expert
Middle East	Iran	Urmia 2nd Industrial Zone, Western Azerbaijan	Orumieh Steel Company	-	EAF	1 200	plan	?	World Steel Capacities Metal Expert Company HP
Middle East	Iran	Urmia 2nd Industrial Zone, Western Azerbaijan	Orumieh Steel Company	-	IF	400	plan	?	World Steel Capacities
Middle East	Iran	Urmia 2nd Industrial Zone, Western Azerbaijan	Orumieh Steel Company	-	EAF	800	plan	?	World Steel Capacities

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Bandar Abbas, Hormozgan	Persian Gulf Saba Steel	-	EAF	1 500	plan	?	World Steel Capacities
Middle East	Iran	Qeshm Free Zone	Qeshm Steel Development Co.(Q.E.S.D.Co)	-	EAF	1 500	plan	2021	Platts,Metal Expert,Company HP
Middle East	Iran	Qeshm Free Zone	Qeshm Steel Development Co.(Q.E.S.D.Co)	-	EAF	1 500	plan	2023	Platts,Metal Expert,Company HP
Middle East	Iran	Sefid dasht Industrial Park, Chaharmahal and Bakhtiari	Saba Foulad Zagros	-	EAF	460	underway	2023	Company HP
Middle East	Iran	Sadr, West Azerbaijan	Sadrfulad complex	-	EAF	400	plan	?	World Steel Capacities
Middle East	Iran	Sirjan, Kerman	Samangan Steel Industries	-	EAF	750	plan	?	Metal Expert World Steel Capacities
Middle East	Iran	Sirjan, Kerman	Samangan Steel Industries	-	EAF	750	plan	?	Metal Expert World Steel Capacities
Middle East	Iran	Mashhad, Razavi Khorasan	Kabkan Steel Company	-	EAF	150	underway	2021	World Steel Capacities
Middle East	Iran	Dezful, Khorasan province	South Rouhina Steel	-	EAF	450	operating	2020	World Steel Capacities
Middle East	Iran	Dezful, Khorasan province	South Rouhina Steel	-	EAF	550	plan	?	World Steel Capacities
Middle East	Iran	Torbat Heydariyeh, Razavi Khorasan	Torbat Heydariyeh Steel	-	EAF	1 450	underway	2021	World Steel Capacities,Metal Expert
Middle East	Iran	Torbat Heydariyeh, Razavi Khorasan	Torbat Heydariyeh Steel	-	EAF	1 450	plan	?	World Steel Capacities
Middle East	Iran	Bandar Abbas	Steel Authority of India Limited	-	EAF	2 000	plan	2020	Wood Mackenzie
Middle East	Iran	Neyzar	Neizar Qom Steel	-	EAF	1 200	plan	2020	Wood Mackenzie
Middle East	Iran	Chahar Mahal Bakhtiari	Brojen Steel	-	EAF	1 000	plan	2025	Wood Mackenzie
Middle East	Iran	Damghan, Semnan	Kavir Damghan Steel Complex (KADASCO)	-	IF	200	plan	?	Metal Expert
Middle East	Iran	Sirjan, Kerman	Jahan Foolad Sirjan Steel Complex	-	EAF	1 300	plan	2022	World Steel Capacities
Middle East	Iran	Bonab	Azar Hadid Steel	-	IF	200	operating	2020	Metal Expert
Middle East	Iran	Torbat-e Heydariyeh	National Iranian Steel Company	-	EAF	800	plan	?	Metal Expert
Middle East	Iran	Natanz	North West Steel Industries (NWSI)	-	EAF	800	plan	?	World Steel Capacities
Middle East	UAE	Abu Dhabi	BILDCO	-	EAF	1 000	plan	?	Metal Expert

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
Middle East	Iraq	Erbil	Darin Group	-	IF	300	operating	2020	Metal Expert
Middle East	Iraq	Khor Al-Zubair, Basra	State Company for Iron & Steel (SCIS)	-	EAF	500	underway	2021	Metal Expert
Middle East	Oman	Rusayl	Muscat Steel Industries	-	EAF	200	plan	?	World Steel Capacities
Middle East	Oman	Sohar	Moon Iron and Steel Co.	-	EAF	1 200	operating	2020	Metal Expert
Middle East	Saudi Arabia	Dammam	Al-Qaryan Steel Company	-	EAF	300	plan	?	Metal Expert
Middle East	Saudi Arabia	Jizan	Al-Yamamah Steel Industries	-	EAF	1 000	plan	?	Platts, Metal Expert
Middle East	Saudi Arabia	Jeddah	Arkan Steel	-	EAF	600	plan	?	World Steel Capacities
Middle East	Saudi Arabia	Yanbu, Medina	Atoun Steel Industry	-	EAF	910	plan	?	Platts, Metal Expert
Middle East	Saudi Arabia	Ras Al-Khair	Gulf Tubing Co	-	EAF	600	plan	?	Company HP
North America	United States	Sinton, Texas	Steel Dynamics	-	EAF	2 722	underway	2021	Company HP
North America	United States	Fairfield, Alabama	U.S. Steel	-	EAF	1 451	operating	2020	Company HP
North America	United States	Brandenburg, Kentucky	Nucor Steel Kentucky	-	EAF	1 088	plan	2022	Company HP
North America	United States	Delta, Ohio	North Star BlueScope Steel	BlueScope Steel (Australia)	EAF	850	plan	2022	Company HP
North America	United States	Calvert, Alabama	ArcelorMittal USA	ArcelorMittal (Luxembourg)/ Nippon Steel (Japan)	EAF	1 500	plan	2023	Metal Expert
North America	United States	Osceola, Arkansas	Big River Steel	-	EAF	1 496	operating	2020	Company HP, Metal Expert
North America	United States	Mesa, Arizona	Commercial Metals Company (CMC)	-	EAF	453	plan	2023	Metal Expert
North America	United States	Baytown, Texas	JSW USA	JSW Holdings (India)	EAF	?	plan	?	Platts
North America	United States	Georgetown, South Carolina	Liberty House Group	Liberty House Group (United Kingdom)	EAF	?	plan	?	Company HP
North America	United States	Ghent, Kentucky	Nucor Corporation	-	EAF	1 271	underway	2021	Company HP, Metal Expert
North	United	Frostproof, Florida	Nucor Corporation	-	EAF	318	operating	2020	Metal Expert

REGION	ECONOMIES	LOCATION	COMPANY	OWNER(ECONOMIES) except themselves	EQUIPMENT	CAPACITY	STATUS	START	SOURCES
America	States						g		
Oceania	Australia	Whyalla, Australia	Liberty One Steel	-	EAF	?	plan	?	Metal Expert

Source: Company HP and media sources in the table

Annex B. AVAILABLE INFORMATION ON PLANT-LEVEL CLOSURES

Table 5 summarises the plant-level closure information reported by public and commercial sources for the year 2020. Please note that this does not represent an exhaustive list of closures.

Table 5. Closure data

REGION	ECONOMIES	LOCATION	COMPANY	EQUIPMENT	CAPACITY (thousand metric tonnes)	SOURCES
Africa	South Africa	Saldanha	ArcelorMittal	EAF	1 318	Metal Expert
Asia	China	Meishan City, SicHunan	Sichuan Meishan	EAF	1 000	Company HP
Asia	China	Meishan City, SicHunan	Sichuan Meishan	EAF	830	Company HP
Asia	China	Xingtai City, Hebei	Xingtai Iron and Steel	BOF	1 875	Gov of Hebei
Asia	China	Xingtai City, Hebei	Xingtai Iron and Steel	BOF	1 000	Gov of Hebei
Asia	China	Langfang City, Hebei	Langfang Guangyuan Metalwork	BOF	1 700	WOOD MACKENZIE
CIS	Ukraine	Kryvyi Rih	ArcelorMittal	OHF	1 500	Metal Expert
Europe	Poland	Krakow	ArcelorMittal	BOF	2 600	Company HP, Metal Expert

Note: The data on nominal crude steelmaking capacity provided for China do not include the production capacity of “illegal” (“违法 Wéifǎ”) induction furnaces, nor do they reflect any changes in steelmaking capacity associated with those furnaces.

Source: Company HP, government HP and media sources in the table.

Annex C. STEELMAKING CAPACITY DATA BY ECONOMY

Table 6. Crude Steelmaking capacity developments (in mmt)

	Nominal crude steelmaking capacity					
	2010	2016	2017	2018	2019	2020
Africa	33.6	39.9	40.7	43.3	44.6	44.7
Algeria	3.3	4.5	4.5	6.8	7.9	9.3
Angola	0.0	0.5	0.5	0.5	0.5	0.5
Botswana	0.0	0.1	0.1	0.1	0.1	0.1
Cameroon	0.2	0.2	0.2	0.2	0.2	0.2
Democratic Republic of Congo	0.1	0.1	0.1	0.1	0.1	0.1
Côte d'Ivoire	0.0	0.0	0.0	0.0	0.0	0.0
Egypt	9.5	14.5	15.3	15.3	15.6	15.6
Ethiopia	0.5	0.8	0.8	0.8	0.8	0.8
Gabon	0.0	0.1	0.1	0.1	0.1	0.1
Ghana	0.5	0.5	0.5	0.5	0.5	0.5
Kenya	0.5	0.6	0.6	0.6	0.6	0.6
Libya	1.7	1.7	1.7	1.7	1.7	1.7
Mauritius	0.0	0.0	0.0	0.0	0.0	0.0
Morocco	1.5	2.8	2.8	2.8	2.8	2.8
Mozambique	0.0	0.0	0.0	0.0	0.0	0.0
Namibia	0.0	0.0	0.0	0.0	0.0	0.0
Nigeria	2.7	2.9	2.9	3.1	3.1	3.1
South Africa	12.0	9.4	9.4	9.4	9.4	8.1
Sudan	0.1	0.1	0.1	0.1	0.1	0.1
Tanzania	0.0	0.0	0.0	0.0	0.0	0.0
Togo	0.0	0.0	0.0	0.0	0.0	0.0
Tunisia	0.2	0.2	0.2	0.2	0.2	0.2
Uganda	0.1	0.1	0.1	0.1	0.1	0.1
Zambia	0.1	0.1	0.1	0.1	0.1	0.1
Zimbabwe	0.8	0.8	0.8	0.8	0.8	0.8

	Nominal crude steelmaking capacity					
	2010	2016	2017	2018	2019	2020
Asia	1435.3	1629.1	1612.9	1585.2	1617.6	1646.3
Non-OECD Asia	1227.3	1417.1	1402.9	1375.2	1407.5	1436.3
Bangladesh	3.2	5.6	5.6	6.1	6.1	7.0
Bhutan	0.0	0.0	0.0	0.0	0.0	0.0
Cambodia	0.0	0.0	0.0	0.0	0.0	0.0
China (People's Republic of)	1056.0	1188.6	1160.1	1124.2	1149.5	1157.1
Chinese Taipei	26.9	29.4	29.4	29.4	29.4	29.4
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0
India	84.4	120.5	124.2	127.0	128.7	143.5
Indonesia	10.3	12.5	14.5	15.5	17.8	19.6
Japan	132.0	129.9	128.5	128.5	128.5	128.5
Korea	76.0	82.2	81.6	81.6	81.6	81.6
Democratic People's Republic of Korea	11.2	11.2	11.2	11.2	11.2	11.2
Lao PDR	0.2	0.2	0.2	0.2	0.2	0.2
Malaysia	12.9	14.2	15.7	19.2	19.2	19.2
Mongolia	0.1	0.1	0.1	0.1	0.1	0.1
Myanmar	0.1	0.3	0.3	0.3	0.3	0.3
Nepal	0.3	0.3	0.3	0.3	0.3	0.3
Pakistan	3.1	6.9	7.1	7.1	7.1	8.7
Philippines	1.8	1.8	1.8	1.8	1.8	1.8
Singapore	0.8	0.8	0.8	0.8	0.8	0.8
Sri Lanka	0.2	0.2	0.2	0.2	0.2	0.2
Thailand	9.7	11.4	11.4	11.4	11.4	11.4
Viet Nam	6.3	13.1	20.1	20.5	23.5	25.8
ASEAN-6	41.8	53.8	64.3	69.2	74.4	78.5

CIS	139.6	142.3	142.3	141.9	143.4	143.6
Armenia	0.0	0.2	0.2	0.2	0.2	0.2
Azerbaijan	0.9	1.6	1.6	1.6	1.6	1.6
Belarus	2.8	3.0	3.0	3.0	3.0	3.0
Georgia	0.1	0.2	0.2	0.1	0.1	0.4
Kazakhstan	7.1	7.7	7.7	7.7	7.7	7.7
Moldova	1.0	1.0	1.0	1.0	1.0	1.0
Russia	77.7	87.1	87.2	86.7	88.3	89.8
Turkmenistan	0.2	0.2	0.2	0.2	0.2	0.2
Ukraine	48.8	40.2	40.2	40.2	40.2	38.7
Uzbekistan	1.1	1.1	1.1	1.1	1.1	1.1

	Nominal crude steelmaking capacity					
	2010	2016	2017	2018	2019	2020
Europe	308.7	294.3	292.5	292.5	292.4	291.0
Non-OECD Europe	13.9	12.9	12.9	12.9	12.9	12.9
EU	235.4	219.1	216.0	216.0	216.0	213.4
Austria	8.5	8.5	8.5	8.5	8.5	8.5
Belgium	15.1	8.9	8.9	8.9	8.9	8.9
Bulgaria	1.2	1.2	1.2	1.2	1.2	1.2
Croatia	0.5	0.3	0.3	0.3	0.3	0.3
Cyprus	0.0	0.0	0.0	0.0	0.0	0.0
Czech Republic	7.8	6.8	6.8	6.8	6.8	6.8
Denmark	0.0	0.0	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0	0.0	0.0
Finland	5.1	4.5	4.5	4.5	4.5	4.5
France	22.3	19.6	19.1	19.1	19.1	19.1
Germany	58.4	58.1	58.1	58.1	58.1	58.1
Greece	3.7	3.9	3.9	3.9	3.9	3.9
Hungary	2.0	2.0	2.0	2.0	2.0	2.0
Ireland	0.0	0.0	0.0	0.0	0.0	0.0
Italy	38.8	37.4	34.7	34.7	34.7	34.7
Latvia	0.8	0.9	0.9	0.9	0.9	0.9
Lithuania	0.0	0.0	0.0	0.0	0.0	0.0
Luxembourg	3.7	2.4	2.4	2.4	2.4	2.4
Malta	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	7.8	7.8	7.8	7.8	7.8	7.8
Poland	12.0	12.0	12.0	12.0	12.0	9.4
Portugal	1.7	1.7	1.7	1.7	1.7	1.7
Romania	6.0	5.2	5.2	5.2	5.2	5.2
Slovak Republic	5.5	4.9	4.9	4.9	4.9	4.9
Slovenia	0.7	0.7	0.7	0.7	0.7	0.7
Spain	27.9	26.6	26.6	26.6	26.6	26.6
Sweden	6.0	6.0	6.0	6.0	6.0	6.0
Other Europe	73.3	75.2	76.5	76.5	76.4	77.6
Albania	0.9	0.9	0.9	0.9	0.9	0.9
Bosnia and Herzegovina	1.8	1.8	1.8	1.8	1.8	1.8
Iceland	0.0	0.0	0.0	0.0	0.0	0.0
Montenegro	0.4	0.4	0.4	0.4	0.4	0.4
North Macedonia	0.5	0.5	0.5	0.5	0.5	0.5
Norway	1.0	1.0	1.0	1.0	1.0	1.0
Serbia	2.7	2.7	2.7	2.7	2.7	2.7
Switzerland	1.4	1.4	1.4	1.4	1.4	1.4
Turkey	46.0	54.5	55.8	55.8	55.7	56.9
United Kingdom	18.7	12.1	12.1	12.1	12.1	12.1

	Nominal crude steelmaking capacity					
	2010	2016	2017	2018	2019	2020
Latin America	72.7	77.4	78.1	78.0	78.0	78.0
South America	70.0	75.7	76.4	76.3	76.3	76.3
Non OECD Latin America	68.7	73.4	74.1	74.0	74.0	74.0
Argentina	6.7	6.7	7.3	7.3	7.3	7.3
Brazil	51.2	56.3	56.3	55.7	55.7	55.7
Bolivia	0.0	0.0	0.0	0.0	0.0	0.0
Chile	2.0	2.0	2.0	2.0	2.0	2.0
Colombia	2.0	2.0	2.0	2.0	2.0	2.0
Costa Rica	0.0	0.0	0.0	0.0	0.0	0.0
Cuba	0.7	0.7	0.7	0.7	0.7	0.7
Dominican Republic	0.4	0.4	0.4	0.4	0.4	0.4
Ecuador	0.6	0.9	0.9	1.3	1.3	1.3
El Salvador	0.2	0.2	0.2	0.2	0.2	0.2
Guatemala	0.5	0.5	0.5	0.5	0.5	0.5
Panama	0.0	0.0	0.0	0.0	0.0	0.0
Paraguay	0.1	0.1	0.1	0.3	0.3	0.3
Peru	1.6	2.0	2.0	2.0	2.0	2.0
Trinidad and Tobago	1.0	0.0	0.0	0.0	0.0	0.0
Uruguay	0.1	0.1	0.1	0.1	0.1	0.1
Venezuela	5.6	5.6	5.6	5.6	5.6	5.6

Middle East	38.5	68.0	71.2	74.8	79.5	86.7
Non OECD Middle East	37.9	67.4	70.6	74.2	78.9	86.1
Afghanistan	0.0	0.0	0.0	0.0	0.0	0.0
Bahrain	0.0	1.0	1.0	1.0	1.0	1.0
Iran	22.5	35.9	38.9	42.5	47.1	52.8
Iraq	0.2	2.6	2.6	2.6	2.6	2.9
Israel	0.6	0.6	0.6	0.6	0.6	0.6
Jordan	0.6	1.2	1.2	1.2	1.2	1.2
Kuwait	1.4	1.4	1.4	1.4	1.4	1.4
Lebanon	0.2	0.2	0.2	0.2	0.2	0.2
Oman	0.5	3.0	3.0	3.0	3.0	4.2
Qatar	2.8	3.2	3.2	3.2	3.2	3.2
Saudi Arabia	6.7	11.6	11.6	11.6	11.6	11.6
Syrian Arab Republic	0.1	2.4	2.6	2.6	2.6	2.6
United Arab Emirates	2.8	4.8	4.8	4.8	4.8	4.8
Yemen	0.1	0.3	0.3	0.3	0.3	0.3

	Nominal crude steelmaking capacity					
	2010	2016	2017	2018	2019	2020
North America	155.8	156.0	156.3	156.9	153.3	156.5
Canada	17.7	15.6	15.6	15.6	15.3	15.3
Mexico	20.3	27.1	27.1	27.7	27.7	27.7
United States	117.8	113.3	113.6	113.6	110.3	113.6
Oceania	9.1	6.4	6.4	6.4	6.4	6.4
Australia	8.1	5.4	5.4	5.4	5.4	5.4
New Zealand	1.0	1.0	1.0	1.0	1.0	1.0
OECD TOTAL	672.2	660.4	656.9	657.5	653.7	655.6
Non-OECD TOTAL	1521.1	1753.0	1743.5	1721.5	1761.3	1797.6
WORLD TOTAL	2193.4	2413.4	2400.4	2379.0	2415.1	2453.2

Note on China:

The data on nominal crude steelmaking capacity provided for China do not include production capacity by “illegal” (“违法 Wéifǎ”) induction furnaces, nor do they reflect any changes in steelmaking capacity associated with those furnaces.

Note on ASEAN-6:

ASEAN-6 denotes the aggregate of member economies of SEAISI (The South East Asia Iron and Steel Institute) in the ASEAN region, i.e. Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam.

Note by Turkey:

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the “Cyprus” issue.

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Note on Israel:

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD.

Annex D. DATA FOR GLOBAL CRUDE STEELMAKING CAPACITY AND CRUDE STEEL PRODUCTION

Table 7. Global crude steelmaking capacity and crude steel production (data from 2010)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Steelmaking Capacity	2 193	2 265	2 317	2 410	2 429	2 417	2 413	2 400	2 379	2 415	2 453
Crude Steel Production	1,435	1,540	1,562	1,652	1,674	1,625	1,633	1,736	1,825	1,846	1,828
Capacity-Production Gap	758	725	755	757	755	792	781	665	553.5	568.7	625.4
Crude steel production as a % of capacity	65.4%	68.0%	67.4%	68.6%	68.9%	67.2%	67.7%	72.3%	76.7%	76.5%	74.5%

Note: Capacity data reflect information up to December 2020. Annual production data for 2020 are based on the data published in February 2020 by the World Steel Association. Annual production data from 2010 to 2019 are from “Steel Statistical Yearbook 2020”, published by the World Steel Association (World Steel Association, 2020^[1]).

Source: OECD for capacity and World Steel Association for production.

Annex E. WORKING DEFINITIONS USED

Steelmaking capacity

52. The OECD Secretariat employs a definition of nominal crude steelmaking capacity based on maximum theoretical equipment capacity⁶. This definition does not take into account yield losses, maintenance and other factors affecting the productivity of installed steelmaking equipment. Therefore, steelmaking capacity figures provided by the OECD should not be regarded as effective capacity.

53. Capacity is defined in volume (tonnes) and annual capacity data figures reflect all existing steelmaking capacity at the end of a calendar year.

Steelmaking equipment

54. The OECD Secretariat considers as steelmaking equipment any equipment used to produce crude steel. The definition excludes iron-making equipment considered here as upstream, as well as casting, rolling or finishing equipment considered here as downstream. More specifically, the following equipment types are considered as crude steelmaking:

Type	Code
Electric arc furnace	EAF
Energy Optimising Furnace	EOF
Induction furnace	IF
LD Basic Oxygen furnace	BOF
Open hearth furnace	OHF
Steelmaking - not specified	STEELMKG

Assessing capacity developments

55. Information from the three databases described in Annexes A-C (existing capacity, new investments and closures) in this paper are used to assess capacity developments⁷. More specifically, changes in capacity are derived by taking into account new capacity additions and permanent closures in a given economy. In order to assess potential gross capacity additions in the future, investment projects are classified as “underway” or “planned”. A project classified as “underway” is one which is under construction or for which contracts for equipment have been awarded and a major financial or state commitment has been made. “Planned” projects are more uncertain because they are either at the feasibility or early planning stage, yet to receive financial or state backing, or not scheduled for completion at a specified time. The classification of projects and comments

⁶ This definition is also commonly referred to as nominal, rated or nameplate capacity.

⁷ The list of data sources is available at <http://www.oecd.org/sti/ind/steelcapacity-methodology.htm>

on their progress do not in any way represent a judgement or imply a view on the advisability or feasibility of the projects.

56. Because closures cannot be forecasted, the tables in this document provide only potential gross capacity additions and do not provide projections of net changes in capacity. It should be noted that planned or underway investments are sometimes altered due to changes in market conditions. Postponements refer to projects that were put on hold for a definite or indefinite period, while cancellations are previously announced projects that will no longer be implemented.

Principle of overestimate

57. The Secretariat assumes that in the absence of any further information, any projects classified as “underway” with a start date that expired, have since become “operating”. These projects are taken into account for the calculation of the annual capacity aggregate of the corresponding economy. The Secretariat may adjust the data retrospectively if it obtains new information of the status of the specific investment projects.

Steelmaking capacity closures

58. The OECD Secretariat distinguishes between “permanent” and “temporary” steelmaking capacity closures. Permanent closures of capacity are considered to involve dismantling and scrapping of the equipment used for producing crude steel, or otherwise rendering such equipment permanently unusable for manufacturing crude steel. Temporary closures entail measures other than permanent closures as defined above, whereby production can be resumed in the future. Temporary closures include, for example, the idling of a plant's furnace. Only permanent closures are used for the purpose of calculating existing capacity. In practice, when compiling the database, it is unfortunately not always possible to understand from media sources if a closure is only temporary or permanent. This explains why the field value of “Type of closures” is sometimes set to “Others (unidentified)” in the OECD database on closures.

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