# EXCESS CAPACITY IN THE GLOBAL STEEL INDUSTRY AND THE IMPLICATIONS OF NEW INVESTMENT PROJECTS

## POLICY PAPER

## FOREWORD

This paper combines two documents that were approved by the OECD Steel Committee in January 2015.

*Note to Delegations:*
*The two documents that comprise this Policy Paper are also available on OLIS under reference codes DSTI/SU/SC(2014)15/FINAL and DSTI/SU/SC(2014)16/FINAL*

*Note: 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.*

**TABLE OF CONTENTS**

# EXCESS CAPACITY IN THE GLOBAL STEEL INDUSTRY AND THE IMPLICATIONS OF NEW INVESTMENT PROJECTS

by Anthony de Carvalho, Naoki Sekiguchi and Filipe Silva

OECD, Paris

## ACKNOWLEDGMENTS

Government and industry representatives participating in the OECD Steel Committee are increasingly concerned about excess capacity in the global steel industry. Excess capacity has led to deterioration in the financial situation of steelmakers and is raising questions about its impact on the longer-term economic viability and efficiency of the industry. As a result, the OECD Steel Committee plans to deepen its work on excess capacity in the next biennium. This paper combines two documents that were declassified by the Steel Committee in early 2015, one that summarises the main policy issues regarding excess capacity and one which focusses on monitoring new steel investment projects taking place around the world. The Secretariat would like to thank all delegations that have contributed actively to the Steel Committee's activities on excess capacity, particularly those that provided very useful comments and feedback on the two papers that were combined to form this Policy Paper. Nevertheless, any remaining errors or omissions are the responsibility of the Secretariat.

## EXECUTIVE SUMMARY

Governments participating in the OECD Steel Committee consider excess capacity as being one of the main challenges facing the global steel sector today. Following the Ministerial Council Meeting on 6-7 May 2014, where Ministers stressed the need to address the issue of excess capacity in some industries such as steel, the OECD Steel Committee has deepened its discussions on capacity, and will take this work further in the next few years. To increase visibility of the key issues, the Steel Committee declassified two papers linked to excess capacity in early 2015. Those two papers have been combined to form this Policy Paper on excess steelmaking capacity and the implications of new investment projects.

More specifically, this paper examines the extent, causes, and impacts of excess capacity in the global steel industry, and provides detailed information on new investment projects that are taking place around the world in order to help governments and industry better understand the extent to which excess steelmaking capacity may evolve in the future. For readers interested in knowing further details about investment developments taking place in the global steel industry, an Annex is provided that presents tables with detailed information on the companies that are investing and the financial amounts involved, the technologies being invested in, the ownership status of the projects and their expected starting date, as well as some qualitative comments about the projects to provide context where needed.

The results indicate that global steelmaking capacity will continue to expand, with regions that are currently net importers of steel products expected to record the largest capacity increases. Of particular importance for governments in this context will be to work towards removing market distorting policies such as subsidies that promote the emergence of new capacity or delay the closure of failing companies. The main findings of this paper are:

- **Excess capacity remains high.** The global steel industry's capacity to produce steel has more than doubled since the early 2000s to support growing construction and manufacturing activity, as well as to help build infrastructure particularly in emerging economies. With investment projects continuing to increase in a number of economies, and while steel consumption growth is anticipated to remain moderate, the global imbalance between capacity and demand will continue to pose risks for the industry for the foreseeable future, unless more concerted efforts are made by industry and governments to address the challenge. Global nominal steelmaking capacity is projected to increase to 2.36 billion tonnes by 2017, up from 2.16 billion tonnes in 2013. Non-OECD economies will continue to lead the capacity expansion in the global steel industry, with their share of world capacity expected to increase to 71.4% by 2017.
- **Government interventions are contributing to global excess capacity.** Specific concerns related to government steel policies include continued government subsidies (notably subsidies for the creation of new capacity or the maintenance of inefficient capacities) and continued approvals for new steel facilities. Governments have also noted that trade related measures, constraints on foreign investment, and the activities of government financial agencies are also contributing to global excess capacity and creating difficulties for the industry in addition to weak market conditions.

- **Excess capacity is hurting the global steel industry.** Excessive levels of steelmaking capacity have important implications for the steel industry, resulting in over-supply, low prices, weak profitability, bankruptcies and localised job losses. Given the global nature of the industry, excess capacity in one region can displace production in other regions, thus harming producers in those markets and creating risks for trade actions and government interventions to protect domestic industries. It can also lead to wasteful energy use and thus have negative environmental impacts.
- **What should be done?** In competitive economies, it is the responsibility of the steel companies themselves to identify ways to adapt to changing market conditions. The role of governments should be to allow market mechanisms to work properly and avoid measures that artificially support steelmaking capacity. Of particular importance for governments will be to work towards removing market distorting policies such as subsidies that promote the emergence of new capacity or delay the closure of failing companies, eliminating trade and investment barriers that slow the restructuring that is needed for the industry, allowing market-based investment decisions in the steel sector, and ensuring that new plants are subject to standards that protect the environment and uphold worker safety.

## 1. Introduction

Excess capacity is one of the main challenges facing the global steel sector today. The growing gap between global steelmaking capacity and demand has led to deterioration in the financial situation of steelmakers, and has raised concerns about the longer-term economic viability and efficiency of the industry. Although excess capacity in the global steel industry has increased significantly since the financial crisis, and despite slowing demand growth in global markets, there continues to be new investment projects in many parts of the world.

On the one hand, while the opening and closure of steel plants is usually based on the commercial decisions of private companies, government interventions that support the building of new capacity or keep inefficient facilities in operation can exacerbate the problem of global excess capacity and harm the business conditions of efficient steel producers in all markets. On the other hand, policies that promote the efficient restructuring of the industry or provide assistance to workers who may be displaced by the closure of uneconomic mills can be useful tools to address the problem and promote greater stability in global steel markets.

Following the Ministerial Council Meeting on 6-7 May 2014, where Ministers stressed the need to address the issue of excess capacity in some industries such as steel, the OECD Steel Committee has deepened its discussions on capacity, and will take this work further in the next few years.[1] In addition to monitoring capacity developments, the Committee plans on examining government policies and their effects on global excess capacity, with an aim to reach a common understanding about which policies: i) promote a better functioning of the market and more efficient global steel industry; and ii) contribute to excess steelmaking capacity by distorting trade and competition in domestic and global markets.

This paper examines the extent, reasons and impacts of excess capacity in the global steel industry, as well as the implications of new investment projects that continue to take place at a rapid pace in many parts of the world. By focussing on new investment projects taking place in the global steel industry, this study intends to help governments and industry better understand the extent to which global steelmaking excess capacity may evolve in the future. The information on individual investment projects presented in the Annex of this paper is also provided via an online database available to the public at www.oecd.org/sti/steel.[2]

This Policy Paper finds that global steelmaking capacity will continue to expand, with regions that are currently net importers of steel products expected to record the largest capacity increases. Global nominal

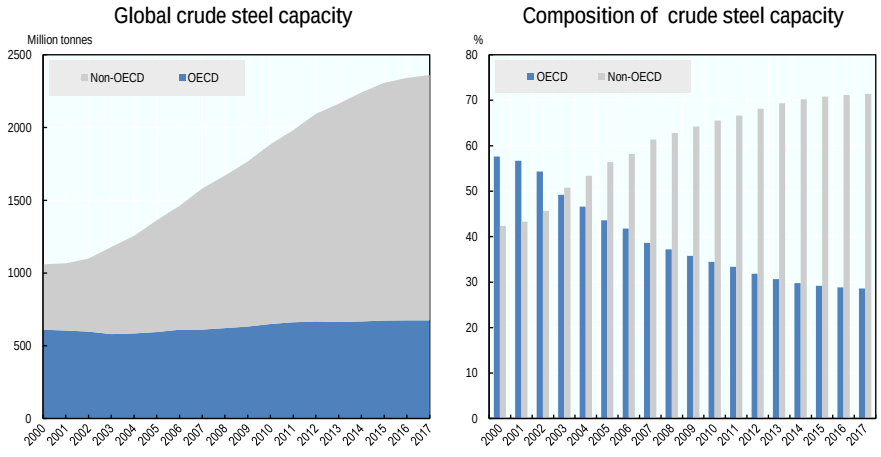
steelmaking capacity is projected to increase to 2.36 billion tonnes by 2017, up from 2.16 billion tonnes in 2013. Non-OECD economies will continue to lead the capacity expansion in the global steel industry, with their share of world capacity expected to increase to 71.4% by 2017. Of particular importance for governments in this context will be to work towards removing market distorting policies such as subsidies that promote the emergence of new capacity or delay the closure of failing companies.

The remainder of the paper is organised as follows. The next two sections briefly summarise the extent and reasons for global excess capacity. The fourth section provides an overview of steel projects currently taking place around the world, but leaves details about the types of equipment and furnaces that companies are investing in for the tables in the Annex. The final two sections summarise some of the OECD's work on the impacts of excess capacity and what should be done to address the challenge. Again, readers interested in the details of investment projects by company and region are invited to refer to the Annex or to the above-mentioned online database.

## 2. What is the extent of global excess capacity?

The global steel industry's capacity to produce steel has increased rapidly since the early 2000s, after two decades of little growth. Most of the growth in steelmaking capacity has occurred in non-OECD economies, to support growing construction and manufacturing activity, as well as to help build the infrastructure necessary for the economic development of these emerging economies. The world's nominal steelmaking capacity is estimated to have reached 2 241 million metric tonnes (mmt) in 2014, according to the OECD Secretariat, a level that is more than twice as high as the 1 060 mmt capacity level observed in 2000. With investment projects continuing to take place in many parts of the world, nominal global steelmaking capacity is expected to climb by a further 120 mmt in the period to 2017, bringing total worldwide capacity to 2 361 mmt. At that point, non-OECD economies are expected to account for approximately 71.4% of the world's total capacity (Figure 1).

**Figure 1. Nominal crude steel capacity in OECD and Non-OECD economies**



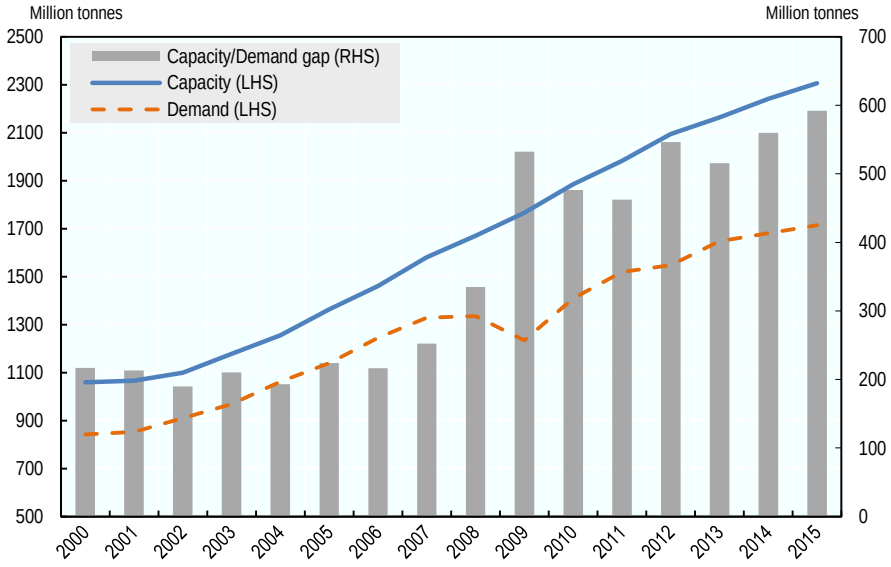

*Source: OECD Secretariat.*

Whether or not excess capacity arises is a function of whether demand has kept pace with this rapid growth in supply. Although the industry is emerging from a severe cyclical downturn that was triggered by the global economic and financial crisis of 2008-2009, demand recovery has been uneven and sluggish in many economies. In 2013, crude steel demand stood at 1 648 mmt, or about 516 mmt below nominal capacity, representing one of the highest gaps in the history of the global steel industry (Figure 2). With investment projects continuing to increase in a number of economies while steel consumption growth is anticipated to remain moderate, the global imbalance will continue to pose risks for the industry for the

foreseeable future, unless more concerted efforts are made by industry and governments to address the challenge.

However, it is important to note that measures of excess capacity cannot be imputed directly from the gap between nominal capacity and demand. Indeed, it is not economic for the steel industry to run at full capacity, even when pricing is attractive and companies appear to be maximising their output. During the peak of the pre-crisis price upturn in the first half of 2008, for example, monthly global capacity utilisation did not rise above 91%.[1] Seasonal factors as well as the need to occasionally close down operations to refurbish steel plants and add new facilities tend to reduce the effective capacity of steel mills.

**Figure 2. World crude steel capacity (nominal) and demand**




*Notes: The Secretariat assumes demand growth of 2% in 2014 and 2015. These are the most recent rates of growth forecast by the World Steel Association for world apparent steel use (October 2014 Short Range Outlook).*

*Sources: OECD for nominal capacity and the World Steel Association for demand.*

## 3. What are the reasons for global excess capacity?

The main factors that contribute to capacity imbalances in the steel industry include market downturns, but also a number of government interventions and other market-distorting practices. As noted above, for most steel mills, it is normal to have periods of under-utilised capacity. When demand and prices of steel fall, profit-maximising firms should reduce production and thus leave a certain amount of capacity idle. Profits will tend to be lower because the firms still have to finance their fixed assets, including their under-utilised steelmaking furnaces and rolling facilities. If the situation persists over time, however, then firms operating under normal market conditions would try to minimise their fixed costs by scaling back on capacity, thus making excess capacity a short-run phenomenon. History has nevertheless demonstrated that the adjustment process can be long and arduous in the steel industry, with some regions experiencing extended periods of excess capacity.

1. Monthly capacity utilisation rates are according to World Steel Association data.

On the one hand, this can be due to high exit barriers, namely the costs of closure that discourage rapid adjustments in capacity. For example, capacity closures entail high costs of dismantling the mills, potential clean-up and other environmental and labour-related costs. In the face of market uncertainty firms may choose to delay exit rather than incur such costs. Expectations about future market conditions may also be contributing to current excess capacity; for example, steelmakers in some countries are investing heavily today in new steel production facilities in anticipation of much higher demand several years from now.

On the other hand, excess capacity that persists over time can also be indicative of government actions that hinder adjustments that would normally occur in competitive markets. Due to the importance and strategic nature of the steel industry to many national economies, a tendency during market downturns is to preserve the capacity of the industry, in order to alleviate unemployment and other social problems that would otherwise occur due to capacity closures. In addition, in some large net steel-importing regions, governments are also interested in moving towards greater "self-sufficiency" in steel production in order to reduce their dependency on imports. Research by the Secretariat shows that, despite current market conditions, a large number of new projects are taking place, which will increase global crude steelmaking capacity significantly in the coming years.

In the current context, recent discussions at the OECD Steel Committee have suggested that in some regions excess capacity reflects temporary factors related to the business cycle while in other cases it reflects structural factors connected to government interventions. Specific concerns related to government steel policies include continued government subsidies (notably subsidies for the creation of new capacity or the maintenance of inefficient capacities) and continued approvals for new steel facilities. Governments have also noted that trade related measures, constraints on foreign investment, and the activities of government financial agencies are also contributing to global excess capacity and creating difficulties for the industry in addition to weak market conditions. And finally, policy measures which discourage "optimal" exit of the least productive plants may also contribute to excess capacity.

## 4. Future investment projects in the global steel industry

### *4.1. Brief summary of regional investment developments*

Since the start of the 21st century, many blast furnaces have been built around the world, particularly in Asia (see Box 1). That region will continue to lead BF/BOF capacity expansions, supported by large-scale integrated projects. As a consequence, the BF/BOF route is likely to remain the major technology for iron/steelmaking, despite the announcement of many mini-mill projects in recent years. However, this paper shows that regional differences are very large. Detailed information can be found in the tables in the Annex, while a summary of key developments by region is provided below:

- There are no capacity additions being planned in the **European Union**.

- In the region referred to as "**Other Europe**",[3] crude steelmaking capacity is forecast to increase to 64.4 million tonnes per year (tpy) by 2017. All of the increase in this region will occur in Turkey, where many EAF projects are taking place. In line with EAF capacity expansions, imports of scrap are expected to grow further in "Other Europe". Iron ore imports into the region are also expected to increase to some extent as some projects are intensive in iron ore/coking coal.

- In the **Commonwealth of Independent States (CIS)** region, steel mills are replacing out-dated OHFs with BOF and EAF furnaces. Numerous EAF projects have been planned, which may result in higher future scrap demand. Nevertheless, the BOF process is likely to remain the main

production process in the region. As a consequence of several investment projects, steelmaking capacity in the region is expected to reach 152.9 million tpy by 2017.

- In the **North American Free Trade Agreement (NAFTA)** region, the share of EAF in steel production is expected to rise due to many DRI-based mini-mill projects, supported by the shale gas boom and the relatively low natural gas prices associated with this development. DRI is expected to be an increasingly important feedstock for producers in the region. Steelmaking capacity in the region is projected to increase from 158.0 million tpy in 2013 to 163.5 million tpy in 2017.

- In **Latin America**, BOF's share is likely to grow in the future owing to many greenfield slab-for-export projects, even though some projects have been postponed. Also, some projects in the long products segment are under way. As a result of these investment projects, steelmaking capacity in the region is forecast to reach 77.4 million tpy by 2017.

- Although **Africa** is still reliant on imports to meet demand, some DRI-based mini-mill projects are expected to raise the region's self-sufficiency (domestic production as a share of demand) gradually. Steel production via the EAF route is expected to remain the major steelmaking process. Steelmaking capacity in the region is forecast to increase from 33.2 million tpy in 2013 to 40.2 million tpy by 2017.

- In the **Middle East**, steelmaking is expected to be predominantly EAF-based, and the preferred feedstock would remain DRI (due to natural gas availability). Many DRI-based EAF projects have been announced recently in the region, and are expected to contribute to reducing import dependency. The region's production capacity is projected to increase to 69.5 million tpy by 2017.

- In **China**, steel production via the BOF route is expected to continue to play a dominant role in steelmaking. However, EAF's share could gradually increase in the future, along with the increasing availability of scrap, thus affecting the balance between BOF and EAF technologies. Steelmaking capacity in the country is expected to reach 1.1 billion tpy by 2017.[4]

- Although EAF is still the major steelmaking process in **India**, BOF's share may increase significantly, supported by new investment projects that are iron ore/coking coal-intensive. The country's crude steelmaking capacity was estimated to have reached more than 100 million tpy in 2013, and is expected to continue to increase to a level of 132.7 million tpy by 2017.

- In ASEAN-6, BOF's share in the region's crude steel production is expected to increase gradually due to many BF/BOF investment projects. Therefore, iron ore/coking coal are expected to become important raw materials for the region. Scrap imports have also been increasing due to several mini-mill projects. The region's total steelmaking capacity is expected to increase to 58.8 million tpy by 2017.

**Table 1. Change in steelmaking capacity (million tonnes)**

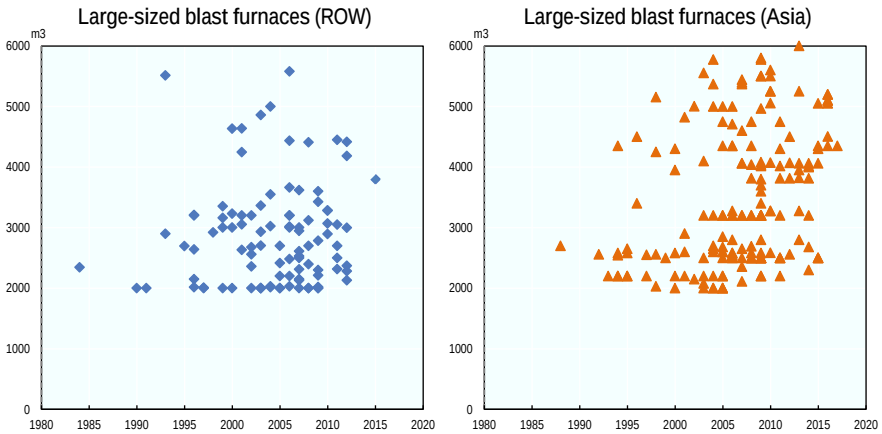
| | 2013 (A) | 2017 (B) | Changes (B-A) | (B/A %) |
|---|---|---|---|---|
| European Union | 233.6 | 231.6 | -2.0 | -0.9 |
| Other Europe | 58.7 | 64.4 | 5.8 | 9.8 |
| CIS | 145.9 | 152.9 | 7.0 | 4.8 |
| NAFTA | 158.0 | 163.5 | 5.5 | 3.5 |
| Latin America | 70.0 | 77.4 | 7.4 | 10.6 |
| Africa | 33.2 | 40.2 | 7.0 | 20.9 |
| Middle East | 46.2 | 69.5 | 23.3 | 50.5 |
| Asia | 1409.2 | 1552.2 | 143.0 | 10.1 |
| Oceania | 9.1 | 9.1 | 0.0 | 0.0 |
| **Total** | 2163.9 | 2360.9 | 197.0 | 9.1 |

*Note: Some projects listed in the Annex tables have been announced, but are not likely to come on stream. In calculating future capacity, only those projects likely to come on stream have been taken into account.*

*Source: OECD Secretariat.*

**Box 1. Asia will continue to lead the capacity expansion in terms of the BF/BOF process**

*Since the start of the 21st century, Asia has experienced a steel mill construction boom, supported by investments in many large-sized blast furnaces (with inner volumes of more than 2000 $m^3$). The figure below maps blast furnaces with inner volumes greater than 2000 m3 in Asia compared to the rest of the world. As a consequence, Asian pig iron production expanded rapidly over the decade, rising from 361.3 mmt in 2003 to 900.2 mmt in 2013 and accounting for 77.0% of global pig iron production in 2013. Compared with other regions, Asian integrated mills are typically more modern and have a larger capacity. The region is expected to continue to lead the capacity expansion in the integrated steelmaking route, not least since the figure below indicates a trend towards ever-larger plants in Asia, but not in ROW.*




*Source: OECD calculations based on data from World Steel Dynamics, China Iron and Steel Association, the Japan Iron and Steel Federation and Korea Iron and Steel Association.*

### *4.2. Regional steel investments in more detail*

#### *4.2.1. Other Europe*

The EAF route is common in Turkey and the country has one of the highest shares of EAF output in the world. However, the BF/BOF route has gained some importance in recent years.[5] Platts (2014b) recently reported that the Turkish government plans to reduce the domestic industry's dependency on scrap by providing more incentives for domestic iron ore and ferro-alloy production. This could encourage a change in the structure of steel production in favour of BOF based integrated mills. The Turkish industry aims to reach 85 mmt of steelmaking capacity and 70 mmt of steel production by 2023 (ISPAT, 2013). Major projects taking place in Turkey include:

- *Kardemir* (one of Turkey's three integrated steelmakers) has begun to fire up its new blast furnace No. 5 with an inner volume of 1 280 $m^3$ at its Karabuk works in the northern part of the country. As a result, and also due to converter upgrades, its crude steel capacity is expected to increase to 3.4 million tpy. *Habas* has just entered the flat product market in Turkey with a new hot strip mill (2.5 million tpy of capacity) and is now building an electric steelmaking complex with a capacity of 3 million tpy.

#### *4.2.2. The Commonwealth of Independent States (CIS)*

In the CIS region, numerous mini-mill projects have been planned, reflecting good prospects for the construction sector at least before the recent political unrest. However, the BF/BOF route is likely to remain the main process in the region.[6] Between 2003 and 2013, the share of crude steel production via the EAF route has risen from 13.5% to 24.4%, according to World Steel Association data. The growth in EAFs (notably in Russia) should have a significant impact on scrap demand. Scrap demand may surpass domestic collection due to new EAFs, though some integrated producers — equipped with both BOFs and EAFs — have an option to increase the use of pig iron in their EAFs in order to reduce their dependence on scrap (Platts, 2012). Some important developments include the following:

Russian electric arc furnace steelmaking is expanding and the government expects the share of EAF production to reach 39% by 2020 (Platts, 2014c).[7] Between 2013 and 2014, some long product mini-mills were commissioned to meet steel demand from the growing construction sector in the country. *Abinsk Electrometallurgical Plant* and *NLMK Kaluga* commissioned their new EAF melting shops, both with a capacity greater than 1 million tpy. Furthermore, *Severstal* aimed to begin commercial-scale production at its 1 million tpy mini-mill in Balakovo (in central Russia's Saratov region) by the end of the second quarter of 2014.

#### *4.2.3. North American Free Trade Agreement (NAFTA)*

In NAFTA, some steelmakers are exploring opportunities for building DRI-based plants. Several DRI plant projects have been announced in recent years to take advantage of shale gas developments. DRI provides opportunities for mini-mill steelmakers to minimize the impact of typically more volatile steel scrap markets (AMM, 2013). Growing DRI production is also likely to affect demand for substitute materials such as pig iron and scrap. EAF's share of steel production in the NAFTA region is expected to rise due to both DRI and scrap-based EAF projects. The upstream (crude) projects that are underway in the region include:

- Some DRI technology suppliers forecast DRI capacity in the United States could reach 10 million tpy by 2020 (Platts, 2014d and 2014e). On 24 December 2013, *Nucor* commissioned its first DRI facility with a capacity of 2 million tpy in Louisiana. Moreover, the European

integrated steelmaker *Voestalpine* is investing USD 740 million to build a 2 million tpy DRI plant in Texas. Also, *Big River Steel* broke ground on its USD 1.3 billion EAF-based steel mill in Osceola, Arkansas on 24 September 2014.

- In Mexico, some mini-mill projects are underway to meet growing demand from the construction sector. For example, *Talleres y Aceros (Tyasa)* has been testing its new EAF with a capacity of 1.2 million tpy in Orizaba. In addition to this, *Altos Hornos de México (Ahmsa)*'s 1.5 million tpy EAF, (part of its USD 1.5 billion *Fenix* program) is expected to be commissioned in 2014. *Gerdau Corsa*'s new EAF plant is expected to come on stream in 2015.

*4.2.4. Latin America*

In Latin America, many greenfield slab-for-export projects have been announced by major mining groups. However, some projects have been postponed due to reasons such as the global economic slowdown, weak markets and logistical problems. Most of the capacity expansion projects in Latin America will occur in Brazil, where some new slab projects are currently in progress. Some projects in the region are starting in the long products segment to meet demand for construction steel. Major projects occurring in Brazil are provided below.

- Future slab maker *Companhia Siderúrgica do Pecém (CSP)* is a joint venture between Brazilian mining group *Vale* (50%) and Korean steel producers *Dongkuk Steel* (30%) and *POSCO* (20%). The project is expected to begin producing 3 million tpy of slabs in December 2015. *CSP*'s first export shipment is scheduled for March 2016 through the Port of Pecém, in north-eastern Ceará State. Apart from this project, another two slab projects — *Acos Laminados do Para plant (ALPA)* and *Companhia Siderurgica Ubu* (*CSU*) — have been planned in the country.[8]

*4.2.5. Africa*

Currently, Africa is aiming to lower its dependence on imports through various upstream projects. Although Egypt and South Africa have played a key role in supplying steel products in Africa, the region still has a low self-sufficiency rate. To increase its self-sufficiency and press forward with industrialisation, many upstream projects (mainly DRI based mini-mill plants) have been planned. These projects are concentrated in North Africa and have the objective of supplying steel for housing and infrastructure projects. The DRI-EAF route has been the preferred steelmaking technology in the region due to its lower capital expenditure requirements and because the region has a shortage of steel scrap.[9] Projects taking place in some of the major producing countries in Africa include:

- Many DRI-EAF projects are underway in Egypt. However, the country is experiencing a shortage in natural gas allocation, which has delayed the launch of a number of steelworks.[10] *Ezz Steel*, the largest steel producer in Egypt and North Africa, is expected to commission its 1.8 million tpy DRI plant and a 850 000 tpy EAF by end-2014. Moreover, *Beshay Steel*, the second largest steelmaker in Egypt, is building a 1.76 million tpy DRI and 1.3 million tpy EAF. *Egyptian Steel* is building an EAF-based steelworks in Beni Suef and Sokhna that will each have a capacity of 850 000 tpy of square billet.
- Algeria is one of the fastest steel-consuming markets in Africa due to government plans to build infrastructure facilities (OECD, 2014). With domestic steelmakers not producing enough to meet growing demand for steel, the government announced in mid-2011 that it would invest considerable amounts over five years to boost domestic steel production (Oxford Business Group, 2012). Most of the capacity additions will be implemented by state-owned companies. For example, the governments of Qatar and Algeria have decided to enter into a joint venture, the

*Algerian Qatari Solb Company*. Moreover, state-owned *Sider* and *ArcelorMittal* aim to boost capacity at their Annaba plant.

- In South Africa, *ArcelorMittal South Africa* is a major producer, accounting for more than 70% of the country's steel production (Kumba Iron Ore, 2011). However, large scale steel plant projects have been announced in the country recently. China's state-owned *Hebei Iron & Steel (Hegang)* announced plans to build a 5 million tpy greenfield steelworks to be supplied by output from its iron ore mine in the country.[11] On 10 September 2014, *Hegang* signed a memorandum of understanding with *China-Africa Development Fund* and the South African government's *Industrial Development Corp.* for developing *Hegang's* steelworks project in South Africa. This steel plant will be China's largest steel mill outside the Chinese mainland (WSJ, 2014).

*4.2.6. Middle East*

With oil-exporting countries within the Gulf Cooperation Council aiming to diversify their economies (IMF, 2014), steel demand from downstream industries is expected to expand in the region. Many projects have been announced recently in the Middle East, often with the objective to reduce import dependency.[12] However, these developments have led to concerns that the industry's expansion might lead to over-supply issues in the region, particularly in the square billet market (Metal Expert, 2014a). Steelmaking is predominantly EAF-based, and the preferred feedstock is DRI, owing to plentiful (and thus relatively low priced) natural gas availability in the region.[13] DRI is generally expected to remain a major feedstock in EAF steelmaking, and the EAF process, in turn, is expected to continue to play a dominant role in steelmaking route in the region. Major projects taking place in the Middle East include:

Iran aims to expand its steelmaking capacity to 55 million tpy by 2025 (Reuters, 2014). Most new plants will be based on the DRI-EAF route. The country has significant resources of iron ore deposits and low-cost natural gas, and these factors are affecting the choice of raw materials used to produce steel in Iran. Although eight new steelworks have been under construction by state-owned *IMIDRO* since 2006, and numerous projects have been announced, a number of projects were put on hold because of financing constraints caused by economic sanctions.[14] Currently, *Middle East Mines Industries Development Holding Company (MIDHCO)* is involved in three greenfield projects in the country: *Butia Steel Company (BISCO)*, *Sirjan Iranian Steel Company (SISCO)* and *Zarand Iron & Steel Company (ZISCO)*.

In Oman, growing steel demand (driven by construction activity) is encouraging domestic producers to increase their capacities and is attracting new investors to the steel industry. Scrap consumption is expected to grow due to capacity expansion projects, while some companies plan to install DRI modules because domestic scrap collectors may not be able to supply enough material for several years (Metal Expert, 2014b). An example of capacity expansion projects can be found in *Jindal Shadeed Iron and Steel's* project, which involves a 2 million tpy EAF steelmaking complex, including a DRI module. *Sun Metals* and *Moon Iron & Steel (MISCO)* also plan to install EAF facilities.

Saudi Arabia is currently experiencing fast-growing demand for electricity driven by population growth and industrial development (NOREF, 2013). Although a shortage in natural gas allocation and electricity generation capacity has delayed the launch of a number of steelworks in the country, many EAF projects are currently underway to balance billet imports.[15] For example, *Saudi Iron & Steel Company*, the largest integrated steelmaker in the Middle East, started trial runs at its sixth electric arc furnace of 1 million tpy in February 2014. Also, *Arkan Steel* and *Al Atoun Steel* are building EAF-based plants.

*4.2.7. China*

Currently, the Chinese government is making efforts to restructure the steel industry, increase its efficiency and remove some excess capacity (EY, 2014). In October 2013, China's State Council released

a Guideline (the Guideline to Resolve Serious Overcapacity), targeting the closure of 80 million tpy of steel capacity by the end of 2017 (OECD, 2014), in addition to addressing overcapacity problems in the cement, aluminium, plate glass and shipbuilding industries. Targets of the plan include reasonable capacity utilisation, improved industrial concentration and structure, higher development quality, efficient environmental protection, a normal level of profit margin and asset-liability ratio, and a long-term effective mechanism in self-regulating capacity.

The Guideline to Resolve Serious Overcapacity includes supply-side management measures, notably the prohibition of new steel projects, the removal of existing illegal capacity, the enhancement of the entry threshold, and phasing out the backward capacity by raising prices of power and water. Financial support could be provided if difficulties linked to capacity shutdowns and unemployment arise. In addition, broad demand side measures as well as systematic management measures will also be used to address overcapacity. On the demand side, efforts will involve the construction sector's use of steel and improving the standards of steel. Systematic management includes encouraging mergers and acquisitions of enterprises to increase industrial concentration and reduce over-competition, among other efforts.

Since July 2014, China's Ministry of Industry and Information Technology (MIIT) has revealed lists of steelmakers that should remove obsolete capacities.[16] Also, provincial governments were requested to submit, by 30 June 2015, their targets for dismantling outdated and excess capacities in 2015 and during the 13th five-year (2016-2020) economic development plan (MIIT, 2014).[17]

Some important coastal steelworks have been put into operation over the last few years in China: *Anshan Iron & Steel* commissioned its 6.5 million tpy Bayuquan works in Liaoning Province in 2008, while *Shougang Jingtang United Iron & Steel* completed its 9.7 million tpy works in Hebei Province in 2010. Many projects have been announced in resource-rich inland regions. For example, Xinjiang's rich raw material resources have attracted many steelmakers to invest in new capacities in the region.[18] Although the BOF production process will remain the dominant production process in China in the years to come, the EAF share may increase gradually along with increasing availability of domestic scrap, but the process is likely to take some time (Japan Metal Bulletin, 2014).[19] Despite a slowdown in China's capacity growth rate compared to previous years, large steelworks that focus on the production of flat products are being built in the country, namely:

*Baosteel* could commission the first of two 5 050 $m^3$ blast furnaces at its Zhanjiang steelworks (Guangdong Province) by the end of September in 2015. The entire steelworks is expected to be commissioned by June 2016.[20] On 26 September 2014, *Wuhan Iron & Steel Group* set up the *Fangchenggang Steel Company Limited* that would be responsible for the operations management of its steel project in Guangxi Province. The new integrated steelworks is designed to be able to produce 9.2 million tpy of crude steel with two 5 200 $m^3$ blast furnaces. *Shandong Iron and Steel Group* plans to launch its 8.5 million tpy Rizhao steelworks in Shandong Province by the end of 2016, with two 5 100 $m^3$ blast furnaces.

- Other important projects are either underway or being planned. In China's Inner Mongolia, *Baotou Iron & Steel* plans to build two 4 000 $m^3$ blast furnaces at a new integrated flat steel works, which will have a crude steel capacity of 5 million tpy. Also, on 4 July 2014, a memorandum of understanding for a total investment of USD 3.3 billion was officially signed between *Chongqing Iron & Steel* (*Chonggang*) and *POSCO*. The two companies will cooperate to construct a plant using *POSCO*'s FINEX technology.

*4.2.8. India*

Based on forecasts for steel consumption, India's authorities expect that steelmaking capacity may have to increase to 300 million tpy by 2025-26 in order to meet future demand (Government of India, Ministry of Steel, 2013). In order to reach that level of capacity, the industry may need to invest around 12 trillion rupees, according to some news sources, with investment being concentrated in the mineral-rich states of Odisha and Jharkhand (Platts, 2014i). New investment projects that are iron ore/coking coal intensive should have significant impacts on the balance between BOF and EAF production in the future. Despite the declining trend over the last 10 years, BOF's share in Indian production is expected to grow significantly as many BF/BOF projects have been announced or are currently being built in the country.[21] Many important BF/BOF projects are taking place in India, amongst which:

- Some upstream projects are underway by state-owned companies that have already launched their strategic plans.[22] *National Mineral Development Corp (NMDC)* has delayed commissioning of its 3 million tpy integrated steel plant with a 4 506 $m^3$ blast furnace, currently under construction at Nagarnar in the eastern state of Chhattisgarh. *Steel Authority of India Ltd. (SAIL)* is also building two blast furnaces with inner volumes of 4 060 $m^3$ at IISCO Burnpur works and Bhilai works. Also, India's leading private company, *Tata Steel*, expects to commission the first phase of its 3 million tpy integrated mill by March 2015, including a 4 300 $m^3$ blast furnace.

*4.2.9. Association of Southeast Asian Nations (ASEAN)*

Although the Association of Southeast Asian Nations (ASEAN) has traditionally been a large net importer of steel, a steel mill construction boom has been taking place in the region, as well as in other East Asian economies that export to ASEAN.[23] Many steel projects should support the increase in ASEAN's self-sufficiency rate. However, these developments have led to concerns that the industry's expansion might lead to over-supply problems (OECD, 2013a). DRI and scrap have been the major feedstock for steel production in the region because production takes place primarily in EAF-based facilities. However, BOF's share in the region's production is expected to increase gradually, thus affecting the balance of steelmaking technologies and, ultimately, raw material demand. Below is a brief summary of the major projects taking place in ASEAN.

- In Indonesia, investment in new steelmaking capacity is taking place in view of relatively favourable demand prospects. Examples of investment projects include *PT Krakatau POSCO*, which formally began operating its first blast furnace (the size of which is 3 950 $m^3$) on 23 December 2013 in Cilegon. The plant has a capacity of 3 million tpy. This project is part of Indonesia's Master Plan to accelerate economic development (OECD, 2013b). *PT Krakatau POSCO* will make a decision on whether to proceed with the second stage expansion in 2015. Moreover, *PT Gunung Raja Paksi* is building a 2 500 $m^3$ blast furnace with a capacity of 1.5 million tpy in West Java, along with a sinter plant and a coke battery.
- In Viet Nam, strong steel demand growth has attracted many foreign investors and numerous projects have been planned. According to the government of Viet Nam, capacity is targeted to reach 40 million tpy of steel billets by 2025 (Ministry of Industry and Trade of Vietnam, 2013). Currently, some BF-BOF projects are underway in the country. For example, *Formosa Ha Tinh Steel Corp* has already started construction, with the first phase of a 10.5 million tpy plant to be fully commissioned by end-May 2017.[24] In addition, state-owned *Vietnam Steel Corporation (VSC)* has commissioned its new steel plant. Also, *POSCO Specialty Steel* aims to officially inaugurate its 1 million tpy EAF in Ba Ria-Vung Tau province either in December 2014 or slightly thereafter.[25]

## 5. Concluding remarks

Excessive levels of steelmaking capacity have important implications for the steel industry, often associated with over-supply, low prices, weak profitability, bankruptcies and localised job losses. Recent work conducted by the OECD has examined the financial health of the steel industry and established a link between excess capacity and profitability. It has shown that the financial performance of the industry is perhaps worse now than it was during the global steel crisis of the late 1990s, in large part due to the significant excess capacity that exists today.

Given the global nature of the industry, excess capacity in one region can displace production in other regions, thus harming producers in those markets and creating risks for trade actions and government interventions to protect domestic industries. It can also lead to wasteful energy use and thus have negative environmental impacts.

Increased trade frictions are already visible amongst trading partners today. Subsidies and government support measures that promote investment in steelmaking facilities or sustain companies in distress that would otherwise shut down are a major source of this trade friction. Subsidies that encourage steelmakers to keep production running at high levels, even under weak market conditions, have had significant effects on trade, with unfair trade practices such as dumping having resulted in injury to the industries of other economies.

In competitive economies, it is the responsibility of the steel companies themselves to identify ways to adapt to changing market conditions. That is, businesses are best placed to decide on when to invest in new capacity or when to scale it back when market conditions change. The role of governments should be to allow market mechanisms to work properly and avoid measures that artificially support steelmaking capacity.

A key priority, therefore, is to identify appropriate policy approaches to address excess capacity. In this context, of particular importance for governments will be to work towards removing market distorting policies such as subsidies that promote the emergence of new capacity or delay the closure of failing companies, eliminating trade and investment barriers that slow the restructuring that is needed for the industry, allowing market-based investment decisions in the steel sector, and ensuring that new plants are subject to standards that protect the environment and uphold worker safety.

The OECD Steel Committee has continued to deepen its discussions on capacity, and plans to take this work further in its programme of work and budget for 2015-2016. For example, the Committee’s programme of work calls for analyses of government policies and their implications for global excess capacity developments, as well as maintaining a database of ongoing investment projects, including the sources of finance for steel projects and any government support measures provided. At a later stage, the Committee may consider organising a high-level meeting to facilitate discussion on excess capacity issues at a higher political level. A key aim of this work will be to establish common perspectives on ways to avoid practices that create harmful trade and competitive distortions, and which can lead to a long-lasting positive impact on the effective functioning of the global steel market.

## NOTES

1. An important item discussed at the OECD Ministerial Council Meeting (MCM), which was held in May 2014 and chaired by Japan, was about resilient economies and societies. The MCM Chair's Summary made specific reference to steel: "Ministers also discussed positive shifts in employment and production patterns, the future of manufacturing as well as entrepreneurship, including the role of young firms and SMEs, and stressed the need to address the issue of excess capacity in some global industries, such as steel, in relation to supporting measures."

2. Readers who identify changes in project characteristics are encouraged to contact the Secretariat.

3. This comprises Albania, Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Norway, Serbia, Switzerland, and Turkey.

4. Recent reports suggest that China's actual crude steelmaking capacity could be higher than estimated. A Platts (2014a) report notes that Chinese capacity reached 1.11 billion tpy in 2013 and will increase to 1.14 billion tpy in 2014, according to China Iron and Steel Association.

5. For example, Isdemir blew-in its No. 4 blast furnace with an inner volume of 2 500 $m^3$ in 2011. In 2013, scrap imports decreased by 12.0% to 19.7 mmt compared with 2012, while iron ore imports were up by 3.5% to 8.1 mmt, according to data from the World Steel Association.

6. According to the World Steel Association data, the share of BOF in the CIS region has grown to 67.7% in 2013, i.e. by 10 percentage points from its level 10 years earlier.

7. The Russian steel industry is aiming to replace all of its OHF facilities by 2015 (Russian Steel Consortium, 2013). Ukraine expects to complete the replacement of its OHF technology by 2018 (SE UEX, 2014).

8. These projects do not seem however to be progressing as expected.

9. The BOF to EAF ratio in South Africa is high (59:41), according to the World Steel Association data. This reflects the important role of iron ore and coking coal in the country.

10. Egypt has decided to remove natural gas subsidies, and some observers expect the price of gas used by cement, iron and durable good factories to increase by 30-75% (Al-Monitor, 2014). This measure will affect those steelmakers operating DRI modules that use natural gas. Observers have noted that scrap imports could increase due to natural gas shortage (Platts, 2013a).

11. *Hegang* already owns iron-ore mining assets in South Africa, having participated in a consortium established to buy *Rio Tinto*'s 57.7% interest in *Palabora Mining Company* (Creamer Media, 2014).

12. Observers have noted, however, that the fast growth in power consumption may curb future capacity growth (Markaz, 2013).

13. According to data from the World Steel Association, the region's share of crude steel production via the EAF route has risen significantly to 92.4% in 2013 (9.3 percentage points higher than 10 years earlier).

14 . Although the Iranian government is making efforts to attract private investors. See Platts (2014f) for more on this.

15 . Saudi Arabia's government aims to boost power-generation capacity by more than 50% from less than 60 gigawatts (GW) to approximately 91 GW by 2020 (ABB, 2014).

16 . In July 2014, MIIT announced the first list of steelmakers that should remove obsolete capacities in 2014, including iron and steel and a total of 25.45 million tpy of ironmaking capacities and 22.60 million tpy of steelmaking capacities should be removed by end-2014. Furthermore, MIIT released the second list on 18 August 2014 and the third list on 25 August 2014.

17 . This information is available at: http://cys.miit.gov.cn/n11293472/n11295023/n11297848/16159494.html

18. Observers have noted that the central government's keenness to develop western China's economy caused a rush of new steel projects in Xinjiang, which may lead to oversupply (Platts, 2013b).

19. China Iron and Steel Association (CISA) expects EAF output will be 25-30% of the total crude steel production by 2025 (Platts, 2014g).

20. The Guangdong Provincial Development & Reform Commission decided to remove 4.5 million tpy of crude steel capacity in the province by 2017, in order to make room for the Zhanjiang steelworks (Platts, 2014h).

21. India has faced several barriers to capacity expansions. For example, the acquisition of land, the granting of environmental and forest clearances, the availability of raw materials and the lack of infrastructure are major challenges (OECD, 2014).

22. SAIL aims to increase its steelmaking capacity to 50 million tpy by 2025. On the other hand, RINL plans to expand capacity of its Visakhapatnam steelworks to 12 million tpy by 2020.

23. For example, in East Asian economies, operations at large-scale blast furnaces were started in both Korea and Chinese Taipei in 2013.

24. The commissioning of the No. 1 blast furnace with an inner volume of 4 350 $m^3$ is expected to be delayed until November 2015 due to the protests which occurred in May 2014. When fully implemented by 2020, this steelworks will be the largest integrated steel plant in the ASEAN region (OECD, 2013a).

25 Ferrous scrap imports have been increasing, notably in Viet Nam, while Australia has become a major scrap exporter to ASEAN.

## REFERENCES

ABB (2014), "ABB wins power order worth $78 million in Saudi Arabia", 2 July 2014, available at: http://www.abb.com/cawp/seitp202/0e09cf106ddd7202c1257d09002a530f.aspx.

Al-Monitor (2014), "Egypt decides to cut subsidies", July 27, 2014, available at: http://www.al-monitor.com/pulse/business/2014/07/httpalhayatcomopinionwriters3756908d8aed981d8.html.

AMM (2013), "World and US Production of DRI and HBI", American Metal Market, available at: http://www.amm.com/EventAssets/25/5847/elements/AMM_DRI_MM_2013_PDF_Report_1D_opt.pdf.

CISA (2013), "Handbook for Iron and Steel Statistics", China Iron and Steel Association, Beijing.

Creamer Media (2014), "Davies confirms plans for Chinese steel project in Limpopo", Creamer Media's Engineering News, available at: http://www.engineeringnews.co.za/print-version/davies-confirms-plans-for-chinese-steel-project-in-limpopo-2014-09-12.

EY (2014), "Global steel 2014", Ernst & Young, available at: http://www.ey.com/Publication/vwLUAssets/EY_-_Global_steel_2014/$FILE/EY-Global-steel-2014.pdf.

Government of India, Ministry of Steel (2013), "National Steel Policy 2012 (Draft)", available at: http://steel.gov.in/06112012%20National%20Steel%20Policy%20Draft.pdf.

IMF (2014), "Soaring of the Gulf Falcons: Diversification in the GCC Oil Exporters in Seven Propositions", available at: http://www.imf.org/external/pubs/ft/wp/2014/wp14177.pdf.

ISPAT (2013), "The Iron and Steel Industry in Turkey", Republic of Turkey Prime Ministry Investment Support and Promotion Agency, Ankara, available at: http://www.invest.gov.tr/en-US/infocenter/publications/Documents/IRON-STEEL-INDUSTRY.pdf.

Japan Metal Bulletin (2014), "Use of Ferrous Scrap to Rise in China", 2 September 2014, available at: http://www.japanmetalbulletin.com/?p=22255.

JISF (2014), "Handbook for Iron and Steel Statistics", The Japan Iron and Steel Federation, Tokyo.

KOSA (2013), "Steel Statistical Yearbook", Korea Iron and Steel Association, Seoul.

Kumba Iron Ore (2011), "The South African Iron and Steel Value Chain" web resource available at: http://www.kumba.co.za/pdf/presentations/iron_steel_2final.pdf.

Markaz (2013), "GCC Metals and Mines Sector: Industrial Revolution or Pet Projects?", available at: http://www.markaz.com/DesktopModules/CRD/News_Single.aspx?ikey=570&Module_IKey=32.

Metal Expert (2014a), "GCC rerollers expect fierce competition in square billet market", 24 February 2014, available at: http://www.menasteeltrade.com/market-news?start=45.

Metal Expert (2014b), "Scrap consumption to surge in Oman on steelmaking capacity expansion", 11 June 2014, available at: http://www.menasteeltrade.com/market-news?start=10.

Ministry of Industry and Trade of Vietnam (2013), "Vietnam's economy and the development of steel industry" Presented at 74th session of the OECD Steel Committee, Paris, available at: http://www.oecd.org/sti/ind/Item%203.%20Vietnam%20-%20Mr.%20Trinh%20Dinh%20Thang%20-%20July%202013.pdf.

NOREF (2013), "The domestic challenges in the Saudi energy market and their regional and geopolitical implications", The Norwegian Peacebuilding Resource Centre, available at: http://www.peacebuilding.no/var/ezflow_site/storage/original/application/05a485f202440778052158eb7ef9808b.pdf.

OECD (2013a), "Overview of the ASEAN Steel Market", internal working document, Directorate for Science, Technology and Industry, DSTI/SU/SC(2013)4.

OECD (2013b), "The Structure and prospects of the Indonesian Steel Industry", Directorate for Science, Technology and Industry DSTI/SU/SC(2013)13.

OECD (2014), "Future investment projects in the global steel industry", internal working document, Directorate for Science, Technology and Industry, DSTI/SU/SC(2014)2.

Oxford Business Group (2012), "In demand: Raising steel output in line with infrastructure development plans", available at: http://www.oxfordbusinessgroup.com/analysis/demand-raising-steel-output-line-infrastructure-development-plans.

Platts Steel Business Briefing (2012), "Russian EAF growth puts spotlight on metallics", SBB Insight Issue 156, 17 February 2012, available at: file:///C:/Users/Sekiguchi_N/Downloads/Platts_SBB_Insight%20156%20-%20Russia%20electric%20steelmaking%20(4).pdf.

Platts Steel Business Briefing (2013a), "Egypt's natural gas shortage could see more scrap imports", 28 February 2013, available at: https://www.steelbb.com/?PageID=164&article_id=117594.

Platts Steel Business Briefing (2013b), "Special Report: Another new rolling mill starts in NW China", 21 August 2013, available at: https://www.steelbb.com/?PageID=157&article_id=123611.

Platts Steel Business Briefing (2014a), "CISA warns Chinese mills: Be prepared for a tougher H2", 5 August 2014, available at: https://www.steelbb.com/?PageID=157&article_id=134220.

Platts Steel Business Briefing (2014b), "Turkey aims to reduce dependency on scrap, boost iron ore", 18 November 2014, available at: https://www.steelbb.com/?PageID=157&article_id=137296.

Platts Steel Business Briefing (2014c), "EAFs to make 40% of Russian steel output by 2020: government", 30 January 2014, available at: https://www.steelbb.com/?PageID=157&article_id=133172.

Platts Steel Business Briefing (2014d), "DRI capacity in the US forecast to grow", 20 March 2014, available at: https://www.steelbb.com/?PageID=157&article_id=130207.

Platts Steel Business Briefing (2014e), “Midrex sees DRI growth of 5 million mt/year over next decade”, 12 June 2014, available at: https://www.steelbb.com/?PageID=157&article_id=132699.

Platts Steel Business Briefing (2014f), “Iran seeks to lure foreign investors to steel industry”, 5 June 2014, available at: https://www.steelbb.com/?PageID=157&article_id=132499.

Platts Steel Business Briefing (2014g), “Chinese output peaking, EAF share to grow: CISA”, 4 June 2014, available at: https://www.steelbb.com/?PageID=157&article_id=132448.

Platts Steel Business Briefing (2014h), “Guangdong to close 4.5 mn mt/y capacity for Zhanjiang mill”, 18 July 2014, available at: https://www.steelbb.com/?PageID=157&article_id=133722.

Platts Steel Business Briefing (2014i), “India's steel secretary advocates 16 new steel plants”, 30 June 2014, available at: https://www.steelbb.com/?PageID=157&article_id=133197.

Reuters (2014), “Iran boosts steel output, exports in bid to buffer impact of sanctions”, available at: http://www.reuters.com/article/2014/10/05/iran-steel-idUSL6N0RY2SL20141005.

Russian Steel Consortium (2013), “Russian Steel Market Developments” Presented at 75th session of the OECD Steel Committee, Paris, available at: http://www.oecd.org/sti/ind/Item%205.12%20Russian%20steel%20market%20.pdf.

SE UEX (2013), “Global Market and Ukrainian Steel Industry in 2013-2014” Presentation by SE UEX Co. Research & Consulting at 75th session of the OECD Steel Committee, Paris, available at: http://www.oecd.org/sti/ind/75thsessionoftheoecdsteelcommittee.htm.

Worldsteel (2014), “Statistical Yearbook”, the World Steel Association, various editions. Available at: http://www.worldsteel.org/statistics/statistics-archive/yearbook-archive.html.

WSJ (2014), “China’s Hebei Iron & Steel to Build Plant in South Africa”, The Wall Street Journal, available at: http://online.wsj.com/articles/chinas-hebei-iron-steel-to-build-plant-in-south-africa-1410497371.

## ANNEX: FUTURE CAPITAL INVESTMENT PROJECTS

### Abbreviations used for equipment

| | |
|---|---|
| DR | Direct reduction unit |
| BF | Blast furnace |
| BOF | Basic oxygen furnace |
| EAF | Electric-arc furnace |
| EOF | Energy optimising furnace |
| IF | Induction furnace |
| Steelmkg | Unspecific steelmaking unit |

In the tables below the "Ownership" column shows a distinction between state-owned plants or projects (S) and those which are privately owned (P). The status of a company's ownership was taken from the information sources used to update these tables and does not necessarily correspond to definitions of state ownership used within the OECD. Investment costs given in this list show are the total investment for each project. The volume of blast furnaces refers to the inner volume. The information on individual investment projects presented in this Annex is also provided via an online database available to the public at www.oecd.org/sti/steel.

**NOTE CONCERNING THE DATA**

While this document has been declassified by the OECD Steel Committee, some of the data in the following tables may have become outdated during the course of data collection and may not accurately reflect actual investment developments in the global steel sector. In addition, some current and future investment projects that are taking place may have been overlooked and thus may not appear in the tables. Readers who identify changes in the characteristics of the projects listed are encouraged to contact the Secretariat with relevant information and documentation.

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Other Europe | Turkey | P | Corbus Celik | Metin Family | Payas, Hatay | EAF | n/a | n/a | n/a | 250 | n/a | underway | 2015 | ●Corbus plans to begin construction of its own meltshop to increase self-sufficiency in billet by 2015. |
| Other Europe | Turkey | P | Habas | Private | Aliaga, Izmir | EAF | n/a | n/a | n/a | 3000 | n/a | underway | 2015 | ●Habas is buidling an electric steelmaking complex with a capacity of 3 million tonnes per year (tpy). |
| Other Europe | Turkey | P | Kardemir | Kardemir A.Ş. Emeklileri ile Nakit Halka Arz (68.44%) Kardemir A.Ş. Çalışanları (21.08%) | Karabuk | BF | x 1 | 1280 m3 | Siemens-VAI | 1200 | n/a | operating | 2014 | ●Kardemir has signed a credit agreement worth USD 64 million with Garanti Bank to finance its new BF No. 5. |
| | | | | | | BOF | x 3 | Expansion x 2 120 t x 1 | SMS Siemag | 1700 | n/a | operating | 2014 | ●Kardemir has begun to fire up its new blast furnace No.5, which will raise crude steel capacity to 3.4 million tpy. |
| | | | | | Filyos, Zonguldak | BF/BOF | n/a | n/a | n/a | 6000 | n/a | plan | n/a | ●Kardemir plans to build a new steelworks with a capacity of 6 million tpy in Filyos. |
| Other Europe | Turkey | | Kocaer Haddecilik | | | EAF | x 1 | IF | n/a | 700 | n/a | underway | 2015 | ●Kocaer will commission an induction furnace with a capacity of 700,000 tpy by mid-2015. |
| Other Europe | Turkey | | Yolbulan Bastug | Yolbulan Metal (55.00%) | Osmaniye | n/a | n/a | n/a | n/a | 2000 | n/a | plan | n/a | ●Yolbulan Bastug plans to double its liquid steel capacity to 4 million tpy in the coming years. |
| CIS | Azerbaijan | S | The Azerbaijani Government | | | Steelmkg | n/a | n/a | n/a | n/a | n/a | plan | n/a | ●Azerbaijan may build a new steelworks and plans to have its own direct reduced iron to produce long products. |
| CIS | Kazakhstan | P | Eurasian Natural Resources Corp | Kazakhmys plc (26.00%) | Kostanay | DR | x 1 | HBI | n/a | 1800 | 650 | underway | 2019 | ●The plant site has been prepared and is ready for civil works to commence. The estimated completion date is 2019. |
| CIS | Kazakhstan | | KazFerroSteel | | Aksu | EAF | x 1 | n/a | n/a | 500 | n/a | plan | 2014 | ●This project has been delayed awaiting the government's permit. |
| CIS | Russian Federation | P | *Abinsk Electrometallurgical Plant* | | Abinsk, Southern Federal District | EAF | x 1 | 130 t | CVS | 1300 | n/a | operating | 2013 | ●Since 2013 the plant has been producing its own billet with its new 1.3 million tpy EAF melting shop. |
| CIS | Russian Federation | P | Basic Element and En+ Group | | Irkutsk, Siberian Federal District | Steelmkg | n/a | n/a | n/a | 260 | n/a | plan | n/a | ●Basic Element and En+ Group have signed a MoU with POSCO to jointly develop several projects in Russia. |
| CIS | Russian Federation | | Don-Metall | | Rostov, Southern Federal District | EAF | x 1 | n/a | n/a | 160 | n/a | underway | 2017 | ●Don-Metall is building a 160,000 tpy EAF billet plant in the south of Russia. |
| CIS | Russian Federation | | DonElectroStal | | Rostov, Southern Federal District | EAF | x 1 | n/a | n/a | 285 | 78 | underway | 2016 | ●In September 2012, Donelectrostal and the Rostov regional government signed a memorandum to build a steel plant. |
| CIS | Russian Federation | | East Siberian Metallurgical Co | | Bratsk, Siberian Federal District | EAF | n/a | n/a | n/a | 270 | n/a | plan | 2017 | ●The East Siberian Metallurgical Co aims to break ground on its mini-mill in September-October 2014. |
| CIS | Russian Federation | | *Investitsionno-stroitelniye tekhnologii* | | Kursk, Central Federal District | EAF | n/a | n/a | n/a | 350 | 152 | plan | 2017 | ●Investitsionno-stroitelniye tekhnologii plans to build an EAF-based rebar plant despite insufficient funds. |
| CIS | Russian Federation | | Mera-Stal | | Kolpino, Northwestern | EAF | n/a | n/a | n/a | 350 | n/a | underway | 2017 | ●Mera-Stal plans to build a new rebar mini-mill with an installed production capacity of 350,000 tpy. |
| CIS | Russian Federation | | Metally i Innovatsii | | Pikalyovo, Northwestern Federal | EAF | n/a | n/a | Danieli | 350 | 307 | underway | 2016 | ●This electric furnace-based rebar mill will target the domestic market. |
| CIS | Russian Federation | P | Metalloinvest | *Gallagher Holdings (50.00%) Serapaem Holdings (30.00%)* | Gubkin, Central Federal District | DR | x 1 | HBI | Siemens-VAI Midrex | 1800 | 850 | underway | 2016 | ●Metalloinvest's new plant in Belgorod region will be the largest HBI module in the world. |
| CIS | Russian Federation | P | Novolipetsk Steel (NLMK) | Fletcher Group Holdings (85.54%) | Vorsino, Kaluga Region, Central | EAF | x 1 | 120 t | Siemens-VAI | 1500 | 1200 | operating | 2013 | ●In July 2013, NLMK held a grand opening ceremony for NLMK Kaluga's EAF mill. Producing long products for construction. |
| CIS | Russian Federation | P | Severstal | Alexey Mordashov (82.40%) | *Balakovo, Saratow Region, Volga Federal District* | EAF | x 1 | 125 t | Siemens-VAI | 1000 | 700 | underway | 2014 | ●Severstal aims to begin commercial-scale production at its longs mini-mill in Balakovo in 2014. |
| CIS | Russian Federation | | StavStal | | *Nevinnomyssk, Stavropol Territory, Southern Federal District* | EAF | n/a | n/a | CVS | 500 | 167 | underway | 2015 | ●StavStal commissioned the first stage of electric steel production (300 tpy) in July 2014. |
| CIS | Russian Federation | P | Taganrog Metallurgical Works | TMK (96.00%) | Taganrog | EAF | x 1 | 135 t | SMS Siemag | 1000 | n/a | operating | 2013 | ●TMK Group commissioned its first EAF in 2013 and phased out steel production using OHF process. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| CIS | Russian Federation | P | Tulachermet | *Industrial-Metallurgical Holding (91.05%)* | Tula, Central Federal District | BOF | x 1 | 160 t | SMS Group | 2000 | 333 | underway | 2016 | ●SMS will supply a 160-metric ton oxygen converter which will convert pig iron from the adjacent Tulachermet iron work. |
| | | | | | | BOF | x 1 | 160 t | n/a | 2000 | 222 | plan | 2020 | |
| CIS | Russian Federation | P | United Metallurgical (OMK) | Private | Chusovoy, Volga Federal District | EAF | x 1 | n/a | n/a | 900 | n/a | plan | 2018 | ●OMK and state-owned Sberbank have signed a cooperation agreement to finance the construction of new facilities. |
| CIS | Russian Federation | P | Urals Mining & Metallurgical | | Tyumen, Urals Federal District | EAF | x 1 | 70 t | Danieli | 566 | 674 | operating | 2013 | ●Infrastructure for this project is partly financed from the regional budget (electric substation etc). |
| CIS | Russian Federation | P | Zlatoust Steel Plant | | Chelyabinsk | EAF | x 1 | 70 t | n/a | 700 | n/a | plan | n/a | ●Zlatoust Steel Plant (ZMZ) plans to add a 70-mt EAF to become self-sufficient for billet. |
| CIS | Ukraine | P | Donetsk Iron & Steel Works (DMZ) | | Donetsk | EAF | x 1 | 150 t | Siemens-VAI | 1500 | n/a | underway | 2014 | ●The startup of EAF is currently scheduled for the summer 2014. |
| CIS | Ukraine | P | Euro Finance | | Belaya Tserkov | EAF | x 1 | 80-90 t | n/a | 1000 | n/a | plan | 2015 | ●Euro Finance has revived its long product mill project. This plant will be equipped with 80-90 tonne EAF. |
| NAFTA | Canada | P | Ivaco Rolling Mills | Ivaco Inc | Ontario | EAF | n/a | n/a | n/a | 200 | 80 | underway | 2014 | ●FedDev Ontario's Prosperity Initiative will help Ivaco Rolling Mills to expand and upgrade its steel plant. |
| NAFTA | Mexico | P | Altos Hornos De Mexico (Ahmsa) | GAN (78.91%) | Monclova, Coahuila | EAF | x 1 | 150 t | Siemens-VAI | 1100 | 1500 | underway | 2014 | ●Altos Hornos de Mexico (AHMSA) is entering the final stage of installing a 1.2 million tpy EAF in Monclova. |
| | | | | | Monclova | Steelmkg | n/a | n/a | n/a | 3250 | 800 | plan | n/a | ●AHMSA will invest USD 800 million to build a third mill aimed at automobile industry in Mexico. |
| NAFTA | Mexico | | Frisa | | Nuevo León | EAF | x 1 | n/a | n/a | 400 | 100 | plan | 2019 | ●Frisa plans to build a new steel plant in northern Nuevo León state. |
| NAFTA | Mexico | P | Gerdau Corsa | | *Jv (Gerdau Group & Controladora Corsa), Tlalnepantla* | EAF | x 1 | 120 t | Danieli | 1000 | 496 | underway | 2015 | ●The plant will have a 1 million tpy crude steel capacity and is expected to be commissioned in 2015. |
| NAFTA | Mexico | P | Talleres Y Aceros (Tyasa) | Private | Orizaba | EAF | x 1 | 100 t | Siemens-VAI | 1200 | n/a | operating | 2014 | ●Mexican long steel producer Talleres y Aceros (Tyasa) commissioned a 1.2 million tpy EAF in 2014. |
| NAFTA | Mexico | P | Ternium Mexico | Ternium SA (88.72%) | Monterrey | DR/EAF | n/a | n/a | n/a | 2000 | 2700 | plan | n/a | ●Ternium had planned to build 2 million tpy DRI and EAF. |
| NAFTA | United States | P | Big River Steel | | Osceola, Arkansas | EAF | x 1 | 170 t | n/a | 1460 | 1300 | underway | 2016 | ●Big River Steel has agreed USD 794 million credit facility for 10 years with the German state-owned KfW IPEX-Bank. |
| NAFTA | United States | P | Essar Steel Minnesota | Essar Steel Holdings | Nashwauk, Minnesota | DR | x 1 | Hyl | n/a | 1800 | 1650 | plan | 2016 | ●Essar Steel's 2.5 million tpy complex will include a pellet plant, a DRI plant, an electric furnace shop and a slab caster. |
| | | | | | | EAF | x 1 | n/a | n/a | 1500 | | plan | 2016 | ●Essar Steel has received USD 1.4m grant from the U.S. government to finance water and sewer infrastructure. |
| NAFTA | United States | P | Nucor | Public | Saint James Parish, Louisiana | DR | x 1 | Hyl | Tenova | 2500 | 750 | operating | 2013 | ●On 24 December 2013, Nucor commissioned its first DRI facility in U.S. with a capacity of 2 million tpy in Louisiana. |
| | | | | | | DR | x 1 | Hyl | n/a | 2500 | n/a | plan | n/a | ●The company is considering to build the second DRI plant. |
| NAFTA | United States | P | Republic Steel | Industrias CH SA de CV | Lorain, Ohio | EAF | x 1 | 136 t | SMS Concast | 1000 | 85 | operating | 2013 | ●Republic Steel has been granted tax and utility incentives worth about USD 5.9m for its EAF project. |
| | | | | | Jv with US Steel | DR | n/a | n/a | n/a | n/a | n/a | plan | n/a | ●Republic Steel and US Steel are studying a potential DRI joint venture at Republic's EAF mill. |
| NAFTA | United States | P | Tianjin Pipe Group (TPCO) | Tianjin TEDA Investment | San Patricio | EAF | x 1 | n/a | n/a | 500 | 1100 | underway | 2016 | ●TPCO is building a 500,000 tpy greenfield EAF and a seamless pipe project in San Patricio County, east of Gregory in Texas. |
| NAFTA | United States | P | US Steel | Public | Fairfield, Alabama | EAF | n/a | n/a | n/a | 982 | n/a | plan | 2017 | ●US Steel has received the board's approval for the project. ●The EAF will replace the site's blast furnace. |

PP ON STEEL EXCESS CAPACITY & INVESTMENT

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| NAFTA | United States | P | Voestalpine | voestalpine AG | Texas | DR | x 1 | HBI | Siemens Midrex | 2000 | 740 | underway | 2015 | ●Voestalpine is investing USD 740 million in the construction of the 2 million tpy HBI plant and the high-capacity pier. |
| Latin America | Argentina | P | Sipar Gerdau | Gerdau SA | Perez | EAF | x 1 | n/a | n/a | 650 | 190 | underway | 2016 | ●Gerdau's plant will have a capacity of 650,000 tpy, which will cover the demand for billets at its long plant. |
| Latin America | Bolivia | S | Empresa Siderurgica del | | El Mutún | Steelmkg | n/a | n/a | n/a | 150 | 405 | plan | n/a | ●The Bolivian government plans to build a USD 405 million plant to transform the Mutun iron ore into steel. |
| Latin America | Brazil | P | Aços Laminados do Pará (ALPA) | | Pará | Steelmkg | n/a | n/a | n/a | 2500 | 3200 | plan | n/a | ●Brazilian president has signed a decree to improve navigation facilities on the Tocantins River. |
| Latin America | Brazil | P | ArcelorMittal Acos Longos | | Juiz de Fora | EAF | n/a | n/a | n/a | 200 | 100 | underway | 2015 | ●ArcelorMittal is adding 200,000 tpy of crude steel to its Juiz de Fora unit to boost billet production. |
| Latin America | Brazil | P | Companhia Siderúrgica do Pecém (CSP) | Vale (50%) Dongkuk (30%) POSCO (20%) | Ceara | BF | x 1 | 3800 m3 | POSCO E&C | 3000 | 4860 | underway | 2015 | ●Brazilian development bank BNDES and the government invested Real 212 million in ore conveyor belt in Pecém. |
| | | | | | | BOF | x 1 | 300 (T) | POSCO E&C | 3000 | | underway | 2015 | ●Ceará state special export zone (ZPE) will grant advantages on shipments abroad for the CSP among others. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 3000 | n/a | plan | n/a | ●Dongkuk is considering doubling the new slab plant in Brazil. |
| Latin America | Brazil | P | CSN - Companhia Siderugica | Vicunha Siderugia (47.86%) | Volta Redonda, Rio de Janeiro | EAF | n/a | n/a | n/a | 500 | 539 | operating | 2014 | ●CSN has finally kicked off commercial operations at its first long steel plant with a capacity of 500,000 tpy. |
| Latin America | Brazil | | Companhia Siderúrgica Ubu (CSU) | Vale | Espírito Santo | Steelmkg | n/a | n/a | n/a | 5000 | 5000 | plan | n/a | ●This project has been hampered by unfavorable economic outlook. |
| Latin America | Brazil | | Ferroeste Group | | Acailandia, Maranhão | BOF | x 1 | n/a | n/a | 600 | 269 | underway | 2014 | ●Ferroeste Group's new steelmaking complex will have a capacity of 600,000 tpy to produce billets. |
| Latin America | Brazil | P | Gerdau Aços Longos | Gerdau SA (100.00%) | Riograndense | EAF | x 1 | n/a | n/a | 700 | 198 | underway | 2015 | ●Gerdau's new electric arc furnace will have a capacity of 700,000 tpy replacing an old furnace of 450,000 tpy. |
| Latin America | Brazil | P | Gv Do Brasil (simec) | | Pindamonhangaba, São Paulo | EAF | x 1 | 65 t | n/a | 520 | n/a | underway | 2015 | ●GV do Brasil's plant that is under construction in Brazil will be capable of producing 520,000 tpy of long products. |
| Latin America | Brazil | | Siderúrgica Latino Americana (Silat) | Grupo Hierros Anon | Primavera, Ceará | EAF | x 1 | n/a | n/a | 700 | 426 | plan | 2018 | ●Siderúrgica Latino Americana (Silat) plans to build a meltshop by 2018. |
| Latin America | Brazil | P | Vallourec & Sumitomo Tubos Do Brazil (VSB) | Vallourec (56%) NSSMC (40.4%) | Jeceaba, Mg | BF | x 2 | 350 m3 | Paul Wurth | 1000 | n/a | operating | 2014 | ●VSB commissioned blast furnaces at its Jeceaba seamless mill in 2014. |
| Latin America | Ecuador | | Adelca | | Milagros | EAF | n/a | n/a | n/a | 400 | 138 | plan | n/a | ●Adelca has asked the Inter-American Development Bank to finance USD 40 million for building a new steel plant. |
| Latin America | Ecuador | S | State-owned flat steel mill | | Jv with Sinosteel | n/a | n/a | n/a | n/a | n/a | n/a | plan | n/a | ●Ecuador and China's Sinosteel Corp have signed a MoU to build the country's first flats plant to reduce imports. |
| Latin America | Peru | | Aceros Arequipa | Comercial del Acero (33.65%) | Pisco | EAF | n/a | n/a | n/a | 300 | n/a | plan | 2016 | ●Aceros Arequipa is considering to install an additional EAF to supply its recently expanded rolling capacity. |
| Latin America | Venezuela | S | Siderurgica Nacional | State-owned | Ciudad Piar, Bolivar | EAF | x 1 | 200 t | SMS Siemag | 1550 | 3800 | underway | 2015 | ●Spanish bank BBVA will grant a great part of a EUR 162 million loan for the new mill machinery. |
| Africa | Algeria | S | Algerian Qatari Solb Company | Sider (51%) Qatar Steel (49%) | Bellara, Jijel (phase 1) | DR | n/a | n/a | n/a | 2000 | n/a | plan | 2018 | ●The governments of Qatar and Algeria have decided to have a joint venture for the construction of a steel complex in the industrial Area of Bellara, Jijel in Algeria. ●This steelworks will have the ultimate capacity of 4 million tpy of crude steel to produce flat and long products. |
| | | | | | | EAF | n/a | n/a | n/a | 2000 | n/a | plan | 2018 | |
| | | | | | Bellara, Jijel (phase 2) | Steelmkg | n/a | n/a | n/a | 2000 | n/a | plan | n/a | |
| Africa | Algeria | S/P | ArcelorMittal Annaba | *Sider (51.00%) ArcelorMittal (49.00%)* | El Hadjar, Annaba | EAF | x 1 | n/a | n/a | 1000 | 763 | underway | 2015 | ●This investment plan will be funded by equity contributions from shareholders and bank financing. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Africa | Algeria | P | Tosyali | Private | Oran | EAF | x 1 | 100 t | CVS | 1200 | 750 | operating | 2013 | ●This is the first foreign investment by Tosyali Holding and the biggest private investment in Algeria. |
| Africa | Egypt | S | Egyptian Iron & Steel (Hadisolb) | Metallurgical Industries Co | El-Tebbin, Helwan | EAF | x 1 | n/a | n/a | 1800 | n/a | plan | n/a | ●State-owned Egyptian Iron & Steel plans to increase its crude steel capacity to 3 million tpy by adding an EAF. |
| Africa | Egypt | | Egyptian Steel Group | Industrial Investment Co | Beni Suef | EAF | x 1 | n/a | n/a | 850 | 573 | underway | 2015 | ●Egyptian Steel's steelworks in Beni Suef and Sokhna will each have a capacity of 850,000 tpy of square billet. |
| | | | | | Al Ain Al Sokhna | EAF | x 1 | n/a | n/a | 850 | | underway | 2015 | ●The company has secured electricity supply for the two steelworks under the contract with Electric Transmission. |
| Africa | Egypt | P | El Marakby Steel | | Gizeh | EAF | x 1 | 45 t | SMS Concast | 350 | 112 | underway | 2015 | ●According to the Middle Eastern bank, ElMarakby Steel has negotiated for bank loans to finance its EAF. |
| Africa | Egypt | P | E.s.i.s.co (Beshay Steel) | Family-owned (100%) | Sadat | DR | x 1 | Midrex | Midrex | 1760 | n/a | operating | 2014 | ●Beshay Steel has invested in a new direct reduced iron plant located in the company's Sadat City site. |
| | | | | | | EAF | x 1 | 165 t | Siemens-VAI | 1300 | n/a | underway | 2014 | ●The investment involves a 1.3 million tpy melt shop, a 1.3 million tpy billet caster, 400,000 tpy bar and a section mill. |
| Africa | Egypt | P | Ezz Steel | Member of Ezz Industries | Sokhna, Suez | DR | x 1 | Hyl | Danieli Tenova | 1800 | 506 | underway | 2014 | ●Ezz Steel, the largest steel producer in Egypt, is expected to inaugurate its DRI plant and EAF by the end of 2014. |
| | | | | | | EAF | x 1 | 115 t | n/a | 850 | | underway | 2014 | ●Ezz Steel requested EGP 624 million for the new plant from Ezz Rolling Mills (ERM). |
| Africa | Egypt | P | Suez Steel Co | | Adabiya, Suez | DR | x 1 | Hyl | Danieli | 1950 | n/a | operating | 2013 | ●Suez steel has commissioned 1.95 million tpy direct reduced iron plant and an electric arc furnace meltshop. |
| | | | | | | EAF | x 1 | 160 t | Danieli | 1280 | n/a | operating | 2013 | ●Egyptian re-roller Misr National Steel Ataq has approved debt payments for Suez DRI plant. |
| Africa | Egypt | P | Taybah Steel | | Al Mansoura, Dakahlia | EAF | x 1 | 60 t | n/a | 450 | n/a | underway | 2014 | ●Taybah Steel's plant under construction in Egypt will be capable of producing 450,000 tpy of billet. |
| Africa | Ethiopia | S | Metal & Engineering Corp | | Addis Ababa | EAF | x 1 | 45 t | Danieli | 300 | n/a | underway | 2014 | ●Metal & Engineering Corp is building a 300,000 tpy EAF in Addis Ababa. |
| Africa | Ethiopia | P | Toussa Steel mill | | Addis Ababa | EAF | x 1 | 130 t | Danieli | 1300 | 500 | plan | 2016 | ●Danieli has been awarded a contract to build a steelworks.<br>●This plant is expected to be the largest steel mill in Ethiopia. |
| Africa | Libya | S | Libyan Iron and Steel (Lisco) | State-owned | Misurata | DR | x 1 | n/a | n/a | 1800 | 800 | plan | n/a | ●Libyan Iron & Steel Co (Lisco) intends to install a new melting shop with a capacity of 1.3 million tpy of billet. |
| | | | | | | EAF | x 1 | 150 t | n/a | 1300 | | plan | n/a | ●The company also plans to add a new DRI module of 1.8 million tpy. |
| Africa | Nigeria | S | Government expansion project | State-owned | Jv with Sinosteel | Steelmkg | n/a | n/a | n/a | 4300 | n/a | plan | n/a | ●The Government is seeking a partnership with Sinosteel in order to expand one of the domestic mill's capacity. |
| Africa | Senegal | S | The Senegalese government | | Faleme | BF | n/a | n/a | n/a | 2000 | n/a | plan | n/a | ●The Senegalese government is investigating the possible construction of blast furnaces based on iron ore deposits. |
| Africa | South Africa | S | Hebei Iron & Steel (Hegang) | State-owned | | Steelmkg | n/a | Long products | n/a | 3000 | n/a | plan | 2017 | ●On 10 September 2014, China's Hebei Iron & Steel (Hegang) signed a MoU with China-Africa Development Fund and the South African government's Industrial Development Corp, regarding a 5 million tpy integrated steelworks project. |
| | | | | | | Steelmkg | n/a | Flat/ Section | n/a | 2000 | n/a | plan | 2019 | |
| Africa | Tunisia | S | El-Fouladh | State-owned | Menzel Bourguiba | EAF | n/a | n/a | n/a | 400 | n/a | plan | n/a | ●The Tunisian Government has accepted El-Fouladh's expansion plan. |
| Middle East | Afghanistan | S/P | Afghan Iron & Steel Consortium (Afisco) | | Hajigak | Steelmkg | n/a | n/a | n/a | 1200 | n/a | plan | n/a | ●Afisco, a consortium of Indian iron and steel companies, has proposed a revised project of 1.2 million tpy of finished steel. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| **Middle East** | **Bahrain** | **P** | United Steel Co (sulb) | Foulath (51%) Yamato Kogyo (49%) | Hidd | DR | x 1 | Midrex | Midrex | 1500 | 1000 | operating | 2013 | ●United Steel Company (SULB)'s steelworks comprises a 1.5 million tpy capacity DRI plant, a 970,000 tpy electric arc furnace melt shop and a 600,000 tpy medium and heavy sections mill. |
| | | | | | | EAF | x 1 | 120 t | SMS Concast | 970 | | operating | 2013 | |
| **Middle East** | **Iran** | **S** | Arfa Iron & Steel Co | Chadormalu Mining and Industrial Co | Ardakan, Yazd | DR | x 1 | Midrex | Midrex | 800 | n/a | operating | 2013 | ●The state-owned Arfa Iron & Steel Company has begun to produce billet in Yazd province for domestic customers. |
| | | | | | | EAF | x 1 | 140 t | n/a | 800 | n/a | operating | 2013 | ●This project was financed by China Metallurgical Group Corporation (MCC). |
| **Middle East** | **Iran** | **P** | Butia Steel Company (BISCO) | Middle East Mines Industries Development Holding Company (MIDHCO) | | DR | x 1 | n/a | n/a | 2000 | 713 | underway | 2017 | ●Middle East Mines Industrial Development Holding Company (MIDHCO) is building a steel plant under the name of Butia Iranian Steel Company. |
| | | | | | | EAF | x 1 | n/a | n/a | 1500 | | underway | 2017 | ●Chinese banks would finance the project. |
| **Middle East** | **Iran** | **P** | Eghlid Steel | | Fars | DR | n/a | n/a | n/a | 1500 | 500 | plan | 2014 | ●This project will be funded by private investors. |
| | | | | | | EAF | n/a | n/a | n/a | 1500 | | plan | 2014 | ●The government will support the project financially and allocate them a share of domestic iron ore production. |
| **Middle East** | **Iran** | **S** | Esfahan Steel | IMIDRO (100.00%) | Esfahan | BF | x 1 | n/a | n/a | 1800 | n/a | plan | 2015 | ●Iranian parliament investigates the delay of the expansion projects. |
| | | | | | | BOF | n/a | n/a | n/a | 1800 | n/a | plan | 2015 | ●About 85% of the investment required for the expansion project would be financed by Chinese companies. |
| **Middle East** | **Iran** | **P** | Fasa Steel Complex Co (Fasco) | | Shiraz | DR | n/a | n/a | n/a | 1700 | 727 | underway | 2016 | ●On 22 February 2010, the constriction of Iran's Fasa Steel Complex was officially inaugurated. |
| | | | | | | EAF | n/a | n/a | n/a | 1500 | | underway | 2016 | |
| **Middle East** | **Iran** | **S** | *Iranian Mines and Mining Industries Development and Renovation Organization (IMIDRO)* | | Qheshm island, the Persian Gulf | DR | x 2 | n/a | n/a | 3400 | 1850 | plan | n/a | ●IMIDRO has signed an agreement on the investment project in the free trade zone in Qeshm. |
| | | | | | | EAF | n/a | n/a | n/a | 3000 | | plan | n/a | ●This project involves two 1.7million tpy DRI making modules and a 3 million tpy steel making plant. |
| **Middle East** | **Iran** | **S** | Bafgh Steel | | Yazd, IMIDRO's eight new steelworks | DR | x 1 | n/a | Iran Itok | 800 | 220 | underway | n/a | ●In 2006, IMIDRO initiated the construction of eight new steelmaking complexes. |
| | | | | | | EAF | x 1 | n/a | Iran Itok | 800 | | underway | n/a | ●Bafgh Steel is one of the eight state-owned provincial steel plants that are under construction. |
| | | | Baft Steel | | Kerman, IMIDRO's eight new steelworks | DR | n/a | n/a | Barsoo | 800 | 100 | underway | n/a | ●China Metallurgical Group Corporation (MCC) has involved in completing seven steelworks in Iran. Baft Steel in Kerman province is one of them. |
| | | | | | | EAF | n/a | n/a | Barsoo | 800 | n/a | underway | n/a | |
| | | | Ghaenat Steel | | Ghaenat, IMIDRO's eight new steelworks | DR | n/a | n/a | n/a | 800 | n/a | underway | n/a | ●Ghaenat steel is constructing a steelworks, which consists of a DRI module and a meltshop with billet caster, with a capacity of 800,000 tpy of crude steel. |
| | | | | | | EAF | n/a | n/a | n/a | 800 | n/a | underway | n/a | |
| | | | Miyane Steel | | Azarbayjan, IMIDRO's eight new steelworks | DR | x 1 | n/a | Local | 800 | n/a | underway | n/a | ●Miyane Steel is one of the eight state-owned provincial steel plants that are under construction. |
| | | | | | | EAF | x 1 | n/a | Local | 800 | n/a | underway | n/a | |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Middle East | Iran | | Neyriz Steel | | Neyriz, IMIDRO's eight new steelworks | DR | x 1 | n/a | n/a | 800 | 330 | underway | n/a | ●Neyriz Steel project is unlikely to be completed by 2016 owing to insufficient financial support. |
| | | | | | | EAF | x 1 | n/a | n/a | 800 | | underway | n/a | ●This project costs over USD 330 million, with some of the financing being provided by an unnamed Chinese investor. |
| | | | Sabzevar Steel | | Khorasan, IMIDRO's eight new steelworks | DR | x 1 | n/a | n/a | 800 | n/a | underway | n/a | ●Sabzevar Steel project in Khorasan province is expected to be financed by China's Metallurgical Group Corporation (MCC). |
| | | | | | | EAF | x 1 | n/a | n/a | 800 | n/a | underway | n/a | |
| | | | Sepid Dasht Steel | | Chaharmahal and Bakhtiari, IMIDRO's eight new steelworks | DR | x 1 | n/a | Local | 800 | 347 | underway | n/a | ●China's Metallurgical Group Corporation (MCC) will invest USD 347 million to build the Sepid Dasht Steel project in the province of Chaharmahal-Bakhtiari. |
| | | | | | | EAF | x 1 | n/a | Local | 800 | | underway | n/a | |
| | | | Shadegan Steel | | Khozestan, IMIDRO's eight new steelworks | DR | n/a | n/a | n/a | 800 | n/a | underway | n/a | ●Shadegan Steel is one of the eight state-owned provincial steel plants that are under construction. |
| | | | | | | EAF | n/a | n/a | n/a | 800 | n/a | underway | n/a | |
| Middle East | Iran | | Khazar Steel | | Rasht | EAF | n/a | n/a | n/a | 700 | n/a | operating | 2013 | ●The 700,000 tpy Khazar Steel plant in Rasht Industrial City was commissioned in July 2013. |
| Middle East | Iran | S | Khorasan Steel Complex | National Iranian Steel Co (NISCO) | Khorasan | EAF | x 1 | 120 t | n/a | 800 | n/a | underway | 2014 | ●Khorasan steel is building a new EAF and a continuous caster. |
| Middle East | Iran | S | Khouzestan Steel Company (KSC) | *Payandegan Investment (50.50%) State-owned (49.50%)* | Ahwaz | Steelmkg | n/a | n/a | n/a | 1100 | n/a | plan | n/a | ●KSC had been pursuing an expansion project to raise capacity to 5 million tpy before economic sanctions. |
| Middle East | Iran | | Kish South Kaveh Steel | | Bandar Abbas | DR | x 1 | Midrex | Midrex | 930 | n/a | operating | 2013 | ●In 2013, Kish South Kaveh Steel inaugurated a second DRI module in Kish. |
| | | | | | | EAF | x 1 | 170 t | MME Energy Goster | 2400 | n/a | underway | 2015 | ●The company is building a new 2.4 million tpy electric arc furnace-based billet plant. |
| Middle East | Iran | | Natanz Steel Industries | | Esfahan | EAF | x 1 | 75 t | n/a | 1000 | n/a | operating | 2013 | ●Natanz Steel commissioned its second electric steelmaking complex in 2013. |
| Middle East | Iran | P | Pasargad Steel | | Shiraz | EAF | x 1 | 170 t | n/a | 1500 | n/a | Operating | 2013 | ●Pasargad Steel commissioned its EAF based billet plant, located near the southwestern city of Shiraz in June 2013. |
| Middle East | Iran | S | Saba Steel | Mobarakeh Steel | | EAF | x 1 | n/a | n/a | 700 | n/a | underway | 2016 | ●The expansion project involves the installation of a new electric arc furnace and a thin slab caster. |
| Middle East | Iran | P | Sirjan Iranian Steel Company | Middle East Mines Industries Development Holding Company (MIDHCO) | | DR | x 1 | n/a | n/a | 1000 | 150 | underway | 2015 | ●Middle East Mines Industrial Development Holding Company (MIDHCO) is building a steel plant at Sirjan Iron and Steel Complex (SISCO). ●The project was inaugurated in September 2010. |
| | | | | | | EAF | x 1 | n/a | n/a | 1000 | 170 | underway | 2015 | |
| Middle East | Iran | P | Zarand Iron & Steel Company | Middle East Mines Industries Development Holding Company (MIDHCO) | | BF | x 1 | n/a | n/a | 1700 | n/a | underway | 2016 | ●Middle East Mines Industrial Development Holding Company (MIDHCO) is building a steel plant under the name of Zarand Iron and Steel Company (ZISCO). |
| | | | | | | BOF | x 1 | n/a | n/a | 1500 | n/a | underway | 2016 | |
| Middle East | Iraq | | Al Anmaa Co | | Khor Al-Zubair, Basra | EAF | x 1 | 60 t | n/a | 450 | n/a | operating | 2013 | ●Al Anmaa Steel commissioned a 450,000 tpy electric arc furnace in March 2013. |
| Middle East | Iraq | | Al Moussawi Trading | | Basra | EAF | n/a | n/a | n/a | 500 | n/a | plan | n/a | ●Lebanon's Al Moussawi Trading plans to build an electric arc furnace melting shop. |
| Middle East | Iraq | S | Al-Sumood Company for Steel Industries | | Taji | EAF | x 2 | 45 t | n/a | 150 | n/a | plan | n/a | ●Al Sumood Company for Steel Industries is seeking an investor to install a meltshop. |

PP ON STEEL EXCESS CAPACITY & INVESTMENT

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Middle East | Iraq | P | Al Tanmiya for Steel Industries | | Basra | EAF | n/a | n/a | n/a | 450 | n/a | operating | 2013 | ●Al Tanmiya for Steel Industries is planning to commission an EAF-based billet plant. |
| Middle East | Iraq | | F&F Steel | | Erbil | EAF | x 1 | n/a | CVS | 580 | n/a | operating | 2013 | ●Iraq's newest steelmaker, F&F Steel commissioned a 580,000 tpy electric arc furnace-based billet plant in December 2013. |
| Middle East | Iraq | P | Mass Group Holding | | Sulaymaniyah, Kurdistan | EAF | x 1 | 120 t | Danieli | 1250 | 400 | underway | 2014 | ●Jordan's Mass Group Holding aims to start cold commissioning its new Iraq-based rebar steelworks in 2014. |
| | | | | | | DR | n/a | n/a | n/a | 2000 | n/a | plan | n/a | ●The comapny is carrying out studies to install a 2 million tpy DRI plant in the later stage of expansion. |
| Middle East | Iraq | S | State Company for Iron & Steel | | Basra | EAF | n/a | n/a | n/a | 520 | 700 | underway | 2016 | ●Turkish United Brothers Holding (UB) will finance to revamp and upgrade Iraq's State Company for Iron & Steel (SCIS). |
| | | | | | | DR | n/a | n/a | n/a | 1200 | n/a | plan | n/a | ●In the final stage, the company intends to build a new 1.2 million tpy DRI plant. |
| Middle East | Oman | P | Jindal Shadeed Iron and Steel | Jindal Steel & Power (100.00%) | Sohar | EAF | x 1 | 200 t | Danieli | 2000 | 800 | operating | 2014 | ●JSPL received a USD 725 million financing from a syndicate of 11 financial institutions led by Bank Muscat to support further expansion. |
| | | | | | | DR | n/a | n/a | n/a | 1800 | n/a | plan | n/a | ●The company plans to increase its DRI capacity. |
| Middle East | Oman | | Moon Iron & Steel (MISCO) | | Sohar | EAF | x 1 | n/a | SMS Meer | 1200 | 270 | underway | 2015 | ●Oman Development Fund plans to invest in Moon Iron & Steel Company. |
| Middle East | Oman | | Muscat Steel | | | EAF | x 1 | 35 t | n/a | 200 | n/a | underway | 2014 | ●Muscat Steel Industries aims to start hot trials at its new electric arc furnace-based billet plant in 2014. |
| Middle East | Oman | P | Sharq Sohar Steel Rolling Mills | Middle East Traders Oman | Sohar | EAF | x 1 | 72 t | n/a | 500 | n/a | operating | 2014 | ●Sharq Sohar Steel Rolling Mills commissioned an electric steelmaking complex in Q2, 2014. |
| Middle East | Oman | S | Steel Authority of India Ltd (SAIL) | State-owned (86.00%) | Jv with Oman Oil Co, Sohar | Steelmkg | n/a | n/a | n/a | 3000 | 2800 | plan | n/a | ●Indian state-owned SAIL has signed an initial pact with Oman Oil Co to jointly set up a gas-based steel plant in Oman. |
| Middle East | Oman | | Sun Metals | | Sur | EAF | x 2 | n/a | n/a | 2500 | n/a | plan | 2017 | ●Sun Metals decided to build two EAFs with a capacity of 2.5 million tpy instead of a 1.2 million tpy of the initial plan. |
| Middle East | Qatar | S | Qatar Steel Co | State-owned (100.00%) | Mesaieed | EAF | x 1 | 110 t | Siemens-VAI | 1100 | 329 | operating | 2014 | ●International Bank of Qatar will provide USD 150m of loan. ●Qatar Steel's two EAFs are expected to be decommissioned. |
| Middle East | Saudi Arabia | P | Al-Atoun Steel Industries | | Yanbu, Medina | EAF | x 1 | 100 t | Siemens-VAI | 910 | n/a | underway | 2017 | ●This EAF-based plant will be capable of producing 910,000 tpy of billet. |
| | | | | | | DR | x 1 | n/a | n/a | 1200 | n/a | plan | n/a | ●In the second phase of expansion, Al Atoun Steel Industries plans to install its own 1.2 million tpy DRI plant. |
| Middle East | Saudi Arabia | P | Al-Ittefaq Steel | Al Tuwairqi Holdings | Dammam | EAF | x 2 | 130 t | POSCO | 2000 | n/a | operating | 2013 | ●Al-Tuwairqi Group signed a SAR 7.5 billion debt restructuring deal with a consortium of local and international banks. |
| Middle East | Saudi Arabia | | Al-Oula Steel | | Al-Kharj | EAF | n/a | IF/EF | n/a | 300 | n/a | underway | 2014 | ●Al-Oula Steel is building a 300,000 tpy billet plant in Al-Kharj Industrial City, south of Riyadh. |
| Middle East | Saudi Arabia | P | Al-Qaryan Steel Company | | Dammam | EAF | n/a | IF | n/a | 300 | n/a | underway | 2015 | ●Al-Qaryan Group's 300,000 tpy induction furnace is expected to be commissioned in the first quarter of 2015. |
| Middle East | Saudi Arabia | | Al-Raki for Trading & Industry | | | EAF | x 1 | n/a | n/a | 400 | n/a | underway | 2015 | ●Al-Raki for Trading & Industry aims to start square billet production at the new 400,000 tpy melt shop. |
| Middle East | Saudi Arabia | P | Al-Yamamah Co | Private | Jizan | EAF | x 1 | 100 t | Danieli | 1200 | 400 | plan | 2014 | ●Al Yamamah Steel Industries plans to add an EAF plant, though this project has been delayed due to power unavailability. |
| Middle East | Saudi Arabia | P | Arkan Steel | Al-Watania Group | Jeddah | EAF | x 1 | n/a | n/a | 1000 | n/a | underway | 2014 | ●Al Watania Steel's projects, under the name of Arkan Steel, is expected to be completed in 2014. |
| Middle East | Saudi Arabia | | Gulf Tubing Co | | Ras Al-Khair | EAF | n/a | n/a | n/a | 600 | 1000 | plan | 2017 | ●Gulf Tubing plans to build a plant for high-end seamless pipe. ●Some plant makers have agreed to finance the project. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Middle East | Saudi Arabia | P | Kalliyath Group | | Jizan | EAF | n/a | n/a | n/a | 750 | n/a | plan | 2016 | ●Kalliyath Group plans to build a 750,000 tpy EAF-based billet plant. |
| | | | | | | DR | n/a | n/a | n/a | 750 | n/a | plan | n/a | ●In the later expansion phase, the company intends to add a captive direct reduced iron plant. |
| Middle East | Saudi Arabia | S | Rashtriya Ispat Nigam Ltd (RINL) | State-owned (100.00%) | Jv with Rajhi Steel, Jubail | EAF | n/a | n/a | n/a | 3000 | 8000 | plan | n/a | ●India's state-owned Rashtriya Ispat Nigam Ltd (RINL) is looking to set up a 3 million tpy steel plant in Saudi Arabia. |
| Middle East | Saudi Arabia | S/P | Saudi Iron & Steel Co (Hadeed) | Saudi Basic Industries Corp (100%) | Al-Jubail | EAF | x 1 | 150 t | Danieli | 1000 | n/a | operating | 2014 | ●The Italian credit guarantee agency SACE has secured a USD 435m loan provided by HSBC to SABIC. |
| | | | | | | DR | n/a | n/a | n/a | 2000 | n/a | plan | n/a | ●Hadeed's Jubail plant will have a new 2 million tpy DRI plant. |
| Middle East | Saudi Arabia | | South Steel Co | Pan Kingdom Investment (38%) | Jizan | EAF | x 1 | 140 t | SMS Meer | 1000 | 750 | operating | 2013 | ●South Steel has signed a SAR 912.5m deal with Banque Saudi Fransi to finance the construction of the new steel plant. |
| Middle East | Saudi Arabia | | Sulb National Co | | Rabigh | EAF | x 1 | IF | ABP | 300 | n/a | underway | 2014 | ●SULB National Company has received funding for the project from the Saudi Industrial Development Fund. |
| Middle East | Saudi Arabia | | Taybah Steel | | Al-Rajhi Metals, Riyadh | DR | x 1 | n/a | n/a | 300 | n/a | underway | 2014 | ●Taybah Steel's new DRI plant is awaiting power connection and is expected to be commissioned in 2014. |
| | | | | | Watani Steel A, Riyadh | EAF | x 1 | IF | CVS | 500 | n/a | underway | 2014 | ●The induction furnace-based plant, under the name of Watani Steel A, will be able to produce 500,000 tpy of reber. |
| | | | | | Watani Steel B, Riyadh | EAF | x 1 | IF or EF | n/a | 1500 | n/a | underway | 2017 | ●Watani Steel B has broken ground. This project is scheduled for completion in mid-2017. |
| Middle East | Syria | | Hmisho Steel | Himisho Economic Group | Homs | BF | x 2 | n/a | n/a | 300 | n/a | operating | 2013 | ●In 2013, Hmisho Steel inaugurated its new 800,000 tpy meltshop in Hassia industrial area, near Homs. |
| | | | | | | EOF | x 1 | n/a | n/a | 800 | n/a | operating | 2013 | ●This project involves two blast furnaces, an energy-optimising furnace and a continuous billet caster. |
| Middle East | United Arab Emirates | S | Emirates Steel Industries (ESI) | General Holding Corporation | Musaffah, Abu Dhabi | DR | n/a | n/a | n/a | 2500 | n/a | plan | 2017 | ●Emirates Steel (ESI) plans to construct a 2.5 million tpy DRI plant, a 2.3 million tpy steel meltshop and a 2.1 million tpy hot strip mill in phase 3. |
| | | | | | | EAF | n/a | n/a | n/a | 2300 | n/a | plan | 2017 | |
| Asia | Bangladesh | P | Abul Khair Steel | | Chittagong | EAF | x 2 | 85 t | Danieli | 1400 | n/a | underway | 2014 | ●Abul Khair Steel Mills aims to commission two 85-mt electric arc furnaces by the end of December 2014. |
| | | | | | | BF | x 1 | 1600 m3 | n/a | n/a | n/a | plan | 2017 | ●The company's core of the expansion involves a 1,600 m3 blast furnace, a thin slab caster and a hot strip mill. |
| Asia | Bangladesh | | Bangladesh Steel Re-Rolling Mills | | Chittagong | EAF | x 1 | IF | Inductotherm | 1000 | n/a | underway | 2015 | ●BSRM has been granted a USD 115 million syndicated loan to finance the construction of a 1 million tpy billet plant. |
| Asia | China | S | Angang Iron & Steel Group | State-owned | Ningde, Fujian | Steelmkg | n/a | n/a | n/a | 10000 | n/a | plan | n/a | ●Angang had planned a 10 million tpy greenfield project in Ningde city in the southeastern Chinese province of Fujian. |
| Asia | China | S | Anhui Changjiang Iron & Steel | Magang Group | Maanshan, Anhui | BF | x 1 | 1080 m3 | n/a | 900 | n/a | plan | n/a | ●On 27 January 2013, Anhui Changjiang Iron & Steel commissioned its second oxygen converter in Anhui province. |
| | | | | | | BOF | x 1 | 120 t | n/a | 1200 | n/a | operating | 2013 | ●In the second phase, the company plans to install a 1,080 m3 blast furnace, a sinter plant and a new stockyard. |
| Asia | China | S | Baotou Iron & Steel Corp | *Inner Mongolia government (73.21%) China Orient Asset Management Corp (22.40%)* | Baotou, Inn-Mongolia | BF | x 2 | 4000 m3 | n/a | 6000 | n/a | n/a | 2014 | ●Baotou Iron & Steel plans to build two blast furnaces at a new integrated flat steel works in 2014. |
| | | | | | | BOF | x 2 | 250 t | n/a | 5000 | n/a | operating | 2014 | ●Baotou Steel's crude steel capacity could reach some 17-18 million tpy. |
| Asia | China | S | Beiying Iron & Steel | Benxi Iron & Steel Group | Benxi, Liaoning | BF | x 2 | 2850 m3 | n/a | 4500 | n/a | underway | 2013 | ●Beiying Iron & Steel is building blast furnaces. |

PP ON STEEL EXCESS CAPACITY & INVESTMENT

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | China | S/P | Chongqing Iron & Steel & POSCO | *Chongqing Iron & Steel (50%) POSCO (50%)* | Chongqing | DR | x 2 | Finex | n/a | 3000 | 3300 | plan | n/a | ●In July 2014, a MoU for a total investment of USD 3.3 billion was signed between Chongqing Iron & Steel and POSCO. |
| Asia | China | S | Echeng Iron & Steel | Wuhan Iron & Steel Group | Hubei | BF | x 1 | 1800 m3 | n/a | 1400 | n/a | operating | 2013 | ●Echeng Iron & Steel commissioned its No. 6 blast furnace. |
| Asia | China | S | Fujian Fuxin Special Steel | | Zhangzhou, Fujian | EAF | x 1 | 130 t | n/a | 720 | n/a | underway | 2013 | ●Fujian Fuxin Special Steel planned to begin trial production at its 720,000 tpy stainless steel plant in 2013. |
| Asia | China | S | Guangdong Steel Group Corp | Baosteel (80%) Guangdong and Guangzhou SASACs (20%) | Zhanjiang, Guangdong | BF | x 2 | 5050 m3 | n/a | 8230 | 6800 | underway | 2015-2016 | ●In April 2014, the signing ceremony of the strategic cooperation agreement and financing agreement between Baosteel and the Agricultural Bank of China (ABC) took place. ●The company will invest Yuan 41.5 billion in the project. |
| | | | | | | BOF | x 3 | 350 t | n/a | 8928 | | underway | 2015-2016 | |
| Asia | China | S | Guangxi Steel Group Co | Wuhan Iron & Steel (80%) Liuzhou Iron & Steel (20%) | Fangchenggang, Guangxi | BF | x 2 | 5200 m3 | n/a | 8400 | 10120 | underway | 2017-2018 | ●The RMB 63.99bn steelworks will mainly target high-end flat products for southern China's auto and white goods. ●Financing will be available from the sales of Wugang's domestic and overseas iron ore assets. |
| | | | | | | BOF | x 3 | 300 t | n/a | 9200 | | underway | 2017-2018 | |
| Asia | China | | Inner Mongolia Menghang Casting | | Wulateqianqi | EAF | x 1 | n/a | n/a | 500 | n/a | operating | 2013 | ●Inner Mongolia Menghang Casting started trial production at a 500,000 tpy EAF steelworks in October 2013. |
| Asia | China | P | Jiangsu Shagang Group | | Zhangjiagang, Jiangsu | BOF | x 2 | 120 t | MCC | 3000 | n/a | underway | 2014 | ●Shagang Group is constructing two converters with a combined crude steel capacity of 3 million tpy. |
| Asia | China | P | Jiangsu Yonggang Group | | | EAF | x 1 | 110 t | n/a | 1000 | n/a | operating | 2013 | ●Jiangsu Yonggang Group commissioned a 110-mt electric arc furnace in 2013. |
| | | | | | Lianfeng Steel | BF | x 1 | 1080 m3 | MCC | 1200 | n/a | operating | 2013 | ●Lianfeng Steel commissioned its 1080 m3 blast furnace on 19 October 2013. |
| Asia | China | P | Lianyungang Yaxin Steel | Henan Yaxin Steel Group | | BOF | x 2 | 150 t | n/a | 3000 | n/a | operating | 2013 | ●Lianyungang Yaxin Steel commissioned new converters in 2013. |
| Asia | China | | Lianyuan Iron & Steel (Liangang) | Hunan Valin Iron & Steel Group | Hunan | BF | x 1 | 2800 m3 | MCC | n/a | n/a | operating | 2013 | ●In March 2013, Liangang blew-in a new 2,800 m3 blast furnace, replacing five smaller blast furnaces. |
| Asia | China | S | Minmetals Yingkou Medium Plate | China Minmetals Corp (100.00%) | Liaoning | BOF | x 1 | 120 t | n/a | 1600 | n/a | underway | 2014 | ●Minmetals Yingkou Medium Plate will boost its crude steel capacity to 5 million tpy. |
| Asia | China | P | Nanjing Iron & Steel | Public | Nanjing, Jiangsu | BF | x 2 | 1800 m3 | n/a | 2900 | 1200 | operating | 2013 | ●This is part of its integrated 3.5 million tpy steelmaking project to replace some old facilities. |
| | | | | | | BOF | x 3 | 120 t | MCC | 3600 | | operating | 2013 | |
| Asia | China | S | Panzhihua Iron & Steel Group | Angang Steel Group | Sichuan | BF | x 1 | 1780 m3 | n/a | 1350 | n/a | underway | 2014 | ●Panzhihua Iron & Steel (Pangang) plans to commission its new 1,780 m3 blast furnace in 2014. |
| Asia | China | S | Qingdao Iron & Steel | | Shandong | BF | x 2 | 2500 m3 | n/a | 4170 | 2600 | underway | 2015 | ●Qingdao Iron & Steel had sought partners to finance this project. |
| | | | | | | BOF | x 4 | 120 t | n/a | 4170 | | underway | 2015 | ●This relocation project would keep the company's overall crude steel capacity at about 4 million tpy. |
| Asia | China | P | Shaanxi Longmen Iron & Steel | | Shaanxi | Steelmkg | n/a | n/a | n/a | 3000 | n/a | plan | 2015 | ●Several years ago, Shaanxi Longmen Iron & Steel was considering to boost its crude steel capacity to 10 million tpy. |
| Asia | China | | Shandong Chuanyang Group | | Zouping | BOF | n/a | 120 t | n/a | 1200 | n/a | operating | 2013 | ●Shandong Chuanyang Group commissioned a 120-mt converter in 2013. |
| Asia | China | S | Shandong Iron & Steel Group | State-owned | Rizhao, Shandong | BF | x 2 | 5100 m3 | n/a | 8100 | 9150 | underway | 2016 | ●The Bank of China is lending Shandong Iron & Steel RMB 50bn to build a new integrated steelworks in Rizhao city. |
| | | | | | | BOF | x 4 | 200 t x 2 250 t x 2 | n/a | 8500 | | underway | 2016 | ●Shandong Iron and Steel Group (Shangang) plans to launch a steelworks in Rizhao city by the end of 2016. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | China | S | Shandong Iron & Steel Group | State-owned | Xinjiang (phase 1) | BF | x 1 | 1000 m3 | n/a | 1000 | n/a | operating | 2013 | ●Shandong Iron and Steel completed the first phase of Xinjiang-based Kashi iron and steel project. This project involves a 1000 m3 blast furnace and a 100 mt converter. ●This project is expected to have a capacity of 3 million tpy after completion. |
| | | | | | | BOF | x 1 | 100 t | n/a | 1000 | n/a | operating | 2013 | |
| | | | | | Xinjiang (phase 2) | Steelmkg | n/a | n/a | n/a | 2000 | n/a | plan | n/a | |
| Asia | China | | Shandong Molong Petroleum Machinery | | Shouguang | EAF | x 1 | 90 t | n/a | 500 | n/a | operating | 2013 | ●Shandong Molong Petroleum Machinery inaugurated a new 90-mt EAF in December 2013. |
| Asia | China | P | Shanxi Hongda Iron & Steel | | Shanxi | BF | x 1 | 1380 m3 | n/a | 2000 | 295 | underway | 2013 | ●Shanxi Hongda Iron & Steel Co aimed to commission a 1,380 m3 blast furnace at its new greenfield steel works in 2013. ●A 120-ton converter has already been built at its new greenfield steel works. |
| | | | | | | BOF | x 1 | 120 t | n/a | n/a | | operating | 2013 | |
| Asia | China | S | Shanxi Zhongyang Iron & Steel | | Shanxi | BOF | x 2 | 120 t | n/a | 1500 | n/a | operating | 2013 | ●Shanxi Zhongyang Iron & Steel commissioned two converters in 2013. |
| Asia | China | | Shougang Guiyang Special Steel | | Guizhou | BF | x 1 | 1580 m3 | n/a | 1270 | n/a | operating | 2013 | ●Shougang Guiyang Special Steel commissioned a new blast furnace with an inner volume of 1580 m3. |
| Asia | China | S | Shougang Yili Iron & Steel | Shougang Group | Xinjiang | Steelmkg | n/a | n/a | n/a | 3000 | n/a | plan | 2015 | ●Shougang Yili Iron & Steel plans to increase its capacity from 2 million tpy to 5 million tpy in the second phase. |
| Asia | China | S | Taiyuan Iron & Steel | State-owned | Taiyuan, Shanxi | EAF | x 1 | 80 t | n/a | 800 | n/a | underway | 2014 | ●According to WSD's Plantfacts Capacity Database, Taiyuan Iron & Steel is building an EAF with a capacity of 800,000 tpy. |
| Asia | China | | *Tianjin Metallurgical No. 3 Steel & Youfa Iron and Steel Corp* | | | BF | x 1 | 1260 m3 | n/a | 1200 | n/a | operating | 2013 | ●Tianjin Metallurgical No. 3 Steel & Youfa Iron and Steel Corp commissioned its No. 2 blast furnace in 2013. |
| Asia | China | S | Tonghua Iron & Steel Group | Shougang Group (77.59%) | Tonghua | BF | x 1 | 2680 m3 | n/a | 2200 | n/a | operating | 2014 | ●On 13 June 2014, Tonggang blew-in a new blast furnace to replace its small furnaces. |
| Asia | China | S | Xinjiang Bagang Nanjiang Steel Baicheng | Baosteel Group | Nanjing | BF | x 2 | 1800 m3 | n/a | 3000 | 1400 | operating | 2013 | ●This project involves two 1,800 m3 blast furnaces, two 120 mt converters, two bar mills of 850,000 tpy capacity each, a 600,000 tpy high-speed rod mill and a 500,000 tpy strip facility. |
| | | | | | | BOF | x 2 | 120 t | n/a | 3000 | | operating | 2013 | |
| Asia | China | | Xinjiang Da'an Special Steel | | Xinjiang Uyghur | BF | x 1 | 1080 m3 | n/a | n/a | n/a | operating | 2013 | ●In August 2013, Da'an Special Steel commissioned its new greenfield integrated steelworks in Hami city in China's Xinjiang Uyghur autonomous region. ●The company planned to complete a combined 2 million tpy of finished steel capacity by the end of 2015. |
| | | | | | | BOF | x 1 | 120 t | n/a | 1000 | n/a | operating | 2013 | |
| | | | | | | Steelmkg | n/a | n/a | n/a | 1000 | n/a | plan | 2015 | |
| Asia | China | | Xinjiang Kunlun Iron & Steel | | Xinjiang | BF | x 1 | 630 m3 | n/a | 800 | n/a | operating | 2013 | ●In May 2013, Xinjiang Kunlun Iron & Steel commissioned a new rebar mill in 2013. |
| | | | | | | BOF | x 2 | 60 t | n/a | 1000 | n/a | operating | 2013 | ●A 630 cubic meter blast furnace and two 60 mt converters had been installed. |
| Asia | China | P | Xinjiang Kunyu Iron & Steel | | Xinjiang | BF | x 3 | 450 m3 | n/a | 1500 | n/a | operating | 2013 | ●Xinjiang Kunyu is part of Shandong Shiheng Special Steel Group. |
| | | | | | | BOF | x 2 | 50 t | n/a | 1500 | n/a | operating | 2013 | ●In June 2013, Xinjiang Kunyu Iron & Steel commissioned a new integrated longs mill comprising three blast furnaces. |
| Asia | China | | Xiwang Special Steel | | Shandong | BF | x 2 | 1080 m3 | n/a | 1700 | n/a | underway | 2013 | ●Xiwang Special Steel is building two blast furnaces in Shandong Province. |
| | | | | | | BOF | x 2 | 100 t | n/a | 2600 | n/a | underway | 2013 | |

PP ON STEEL EXCESS CAPACITY & INVESTMENT

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | China | S | Xinxing Ductile Iron Pipes | China Group Co (50.01%) | Xinjiang Uyghur | BF | x 5 | *308 m3, 429 m3, 460 m3, 560 m3* | n/a | 1740 | n/a | underway | 2014 | ●Xinxing Ductile Iron Pipes has begun the second phase of its 3 million tpy integrated steel project. |
| | | | | | | BOF | x 2 | 80 t | n/a | 2100 | n/a | underway | 2014 | ●In November 2013, Xinxing Ductile Iron Pipes launched a share placement to fund the second phase project. |
| Asia | China | P | Xuzhou Huahong Special Steel | | Jiangsu (phase 1) | BF | x 2 | 1080 m3 | n/a | n/a | 401 | operating | 2013 | ●On 18 January 2013, Xuzhou Huahong Special Steel blew-in its first of two 1,080 m3 blast furnaces. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 1500 | | operating | 2013 | ●In the second phase, the company plans to add further 1.5 million tpy. |
| | | | | | Jiangsu (phase 2) | BF | x 2 | 1080 m3 | n/a | n/a | 449 | plan | 2014 | ●The company plans to install two more blast furnaces with the same inner volume. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 1500 | | plan | 2014 | |
| Asia | China | | Yongchang Iron & Steel | | Anning, Yunnan | BF | x 1 | 1080 m3 | CFMCC | 950 | n/a | operating | 2013 | ●On 20 August 2013, Yongchang Iron and Steel commissioned its largest blast furnace with an inner volume of 1,080 m3 in Yunnan province. |
| | | | | | | BOF | x 1 | 100 t | n/a | 1000 | n/a | operating | 2013 | |
| Asia | China | P | Zenith Iron & Steel Group | | Changzhou, Jiangsu | BF | x 2 | 1580 m3 | n/a | 2480 | n/a | operating | 2012/2013 | ●Zenith Iron & Steel Group blew-in two 1,580 m3 blast furnaces which will feed downstream steelmaking capacity. |
| Asia | China | | Zhongyuan Special Steel | | Henan | EAF | x 1 | 60 t | n/a | 300 | n/a | plan | 2015 | ●Zhongyuan Special Steel plans to commission a 300,000 tpy steelmaking project in 2015. |
| Asia | Chinese Taipei | | Dragon Steel Corp | China Steel Corp (100.00%) | Taichung | BF | x 1 | 3274 m3 | Siemens-VAI | 2550 | n/a | Operating | 2013 | ●Dragon Steel Corp blew-in a 2.5 million tpy No. 2 blast furnace at its Taichung works on 5 March 2013. |
| | | | | | | BOF | x 1 | 210 t | SMS Siemag | 2000 | n/a | Operating | 2013 | ●The second blast furnace is part of a TWD 20 billion second stage expansion. |
| Asia | India | P | ArcelorMittal | Other public share holders (55.93%) Significant Shareholder (40.83%) | Jharkhand | Steelmkg | n/a | n/a | n/a | 3000 | n/a | plan | n/a | ●ArcelorMittal is still requesting for a land from the state government for a 3 million tpy plant in Jharkhand state. |
| | | | | | Karnataka | Steelmkg | n/a | n/a | n/a | 6000 | 6500 | plan | n/a | ●ArcelorMittal aims to complete the acquisition of a land for its proposed greenfield steelworks in Karnataka in 2014. |
| Asia | India | P | Bhushan Steel | Private | Meramandali, Odisha | BF | x 1 | 3814 m3 | Paul Wurth | 2550 | 2770 | operating | 2014 | ●Bhushan Steel's second blast furnace has started the operations since February 2014. |
| | | | | | | BOF | x 2 | 180 t | n/a | 3000 | | operating | 2014 | |
| Asia | India | P | BMM Ispat | BMM Group | Hospet, Karnataka | EAF | x 1 | 110 t | Siemens-VAI | 1100 | n/a | underway | 2014 | ●BMM Ispat is building an EAF at its Danapur steelworks in Hospet district of Karnataka state. |
| Asia | India | P | Jindal Steel and Power Limited (JSPL) | O.P. Jindal Group | Angul, Odisha | DR | x 1 | Midrex | Midrex | 1800 | n/a | underway | 2014 | ●JSPL is installing a 1.8 million tpy DRI plant using Midrex Technologies. |
| | | | | | | DR | x 1 | n/a | Tenova Danieli | 2750 | n/a | underway | 2015 | ●In August 2013, the company commissioned a 250-metric ton EAF at Angul (the biggest EAF in India). |
| | | | | | | BF | x 1 | 4019 m3 | Siemens VAI | 3000 | n/a | underway | n/a | ●JSPL's second DRI plant supplied by a consortium of Tenova and Danieli is expected to be commissioned by 2015. |
| | | | | | | BOF | x 2 | 250 t | SMS Siemag | 3800 | n/a | underway | 2015 | ●The company has ordered SMS Siemag to supply two 250-mt converters with production capacity of 3.8 million tpy in total. |
| | | | | | | EAF | x 1 | 250 t | SMS Siemag | 2500 | n/a | operating | 2013 | ●JSPL's Angul works will eventually have a second EAF of similar capacity and a 3 million tpy blast furnace. |
| | | | | | | EAF | x 1 | n/a | n/a | 2500 | n/a | plan | n/a | |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | India | P | Jindal Steel and Power Limited (JSPL) | O.P. Jindal Group | Raigarh, Chhattisgarh | DR | x 1 | Hyl | Tenova | 2750 | n/a | underway | 2015 | ●JSPL's new DRI plant at Raigarh will be supplied by Tenova and Danieli as a consortium. |
| | | | | | Patratu, Jharkhand | BF | x 1 | 4019 m3 | Siemens-VAI | 2700 | 10000 | underway | 2014 | ●This project involves a 4,109 m3 blast furnace from Siemens VAI and a converter shop from China Metallurgical Group Corp. |
| | | | | | | BOF | x 2 | 200 t | MCC | 3200 | | underway | 2014 | |
| Asia | India | P | JSW Steel | JFE Steel Corp (16.17%) Jindal South West Holdings (7.75%) | Vijayanagar, Karnataka | DR | x 1 | Midrex | Siemens-VAI | 1200 | n/a | operating | 2013 | ●According to WSD's Plantfacts Capacity Database, JSW steel has commissioned a 1.2 million tpy DRI plant. |
| | | | | | | BOF | n/a | n/a | n/a | 3500 | n/a | operating | 2014 | ●According to Ministry of Steel, Government of India, JSW Steel's steelmaking capacity was increased to 14.3 million tpy. |
| | | | | | Salboni, West Bengal | BF | x 1 | 4020 m3 | n/a | 3000 | 7000 | plan | n/a | ●JSW Steel planed to build the greenfield project in West Bengal state, although the project is currently on hold. ●In the first phase, the company plans to install a 4,020 m3 blast furnace. In the second and the final phase, the company plans to have additional two 4,020 m3 blast furnaces. |
| | | | | | | BOF | x 2 | 180 t | n/a | 3000 | | plan | n/a | |
| | | | | | | Steelmkg | n/a | n/a | n/a | 7000 | | plan | n/a | |
| | | | | | Dolvi, Maharashtra | BF | n/a | →4323 m3 | *Nippon Steel & Sumikin Engineering* | 1700 | 559 | plan | 2015 | ●JSW Steel plans to expand Dolvi plant capacity from 3.3 million tpy to 5 million tpy by early 2015. |
| Asia | India | P | Kalyani Gerdau Steels | | Tadipatri, Andhra | BF | x 1 | n/a | n/a | 275 | n/a | operating | 2013 | ●Kalyani Gerdau Steels, the Indian special and long steels subsidiary of the Brazilian steel company Gerdau, has begun commercial production at its integrated steel plant with a capacity of 275,000 tpy. |
| | | | | | | BOF | x 2 | n/a | n/a | 275 | n/a | operating | 2013 | |
| Asia | India | P | Mideast Integrated Steel (Mesco Steel) | | Kalinganagar | BF | x 1 | 3200 m3 | n/a | n/a | n/a | plan | n/a | ●In the second phase, Mesco Steel intends to install a blast furnace and two BOF converters. |
| | | | | | | BOF | x 2 | 100 t | n/a | 2300 | n/a | plan | n/a | ●The company has planned to raise external commercial borrowing to the tune of USD 500 million to fund the project. |
| Asia | India | | Monnet Ispat & Energy | Monnet Group | Raigarh, Chhattisgarh | BF | x 1 | 550 m3 | n/a | 500 | n/a | operating | 2013 | ●Monnet Ispat & Energy commissioned a blast furnace in 2013. ●In November 2013, Monnet Ispat & Energy commissioned its first EAF at Raigarh. The company aims to start up a second EAF in 2014. ●The company will have a total capacity of 1.5 million tpy. |
| | | | | | | EAF | x 1 | 100 t | n/a | 750 | n/a | operating | 2013 | |
| | | | | | | EAF | x 1 | 100t | n/a | 750 | n/a | underway | 2014 | |
| Asia | India | S | National Mineral Development Corp (NMDC) | State-owned | Nagarnar, Chhattisgarh | BF | x 1 | 4506 m3 | Danieli Corus | 3000 | n/a | underway | 2016 | ●NMDC has delayed commissioning of its integrated steel plant currently under construction in Chhattisgarh. ●Commissioning has been delayed to early 2016 from the initial plan of mid-2015. |
| | | | | | | BOF | x 2 | 175 t | Siemens-VAI | 3000 | 400 | underway | 2016 | |
| Asia | India | S | Neelachal Ispat Nigam (NINL) | | Duburi, Odisha | BOF | x 1 | 110 t | SMS Siemag | 1000 | n/a | operating | 2013 | ●On 30 March 2013, a state-owned pig iron producer Neelachal Ispat Nigam Ltd (NINL) commissioned a melt shop. |
| Asia | India | P | POSCO India Limited | | Odisha | Steelmkg | n/a | n/a | n/a | 12000 | 12000 | plan | 2018 | ●POSCO has received a conditional approval from the Environment Ministry to build an integrated steelworks. |
| Asia | India | S | Rashtriya Ispat Nigam Ltd (RINL) | State-owned (100.00%) | Visakhapatnam, Andhra-Pradesh | BF | x 1 | 3200 →3800 m3 | Siemens | 500 | n/a | operating | 2014 | ●State-owned Rashtriya Ispat Nigam Ltd (RINL) restarted the revamped No.1 furnace in July 2014 and aimed to finish the expansion of No. 2 unit by 2016. ●On 30 October 2013, RINL's new oxygen steelmaking shop tapped its first heat. |
| | | | | | | BF | x 1 | 3200 →3820 m3 | Siemens | 800 | n/a | underway | 2016 | |
| | | | | | | BOF | x 2 | 150 t | SMS Siemag | 2800 | n/a | operating | 2013 | |

PP ON STEEL EXCESS CAPACITY & INVESTMENT

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | India | S | Steel Authority of India Ltd (SAIL) | State-owned (86.00%) | Rourkela, Odisha | BF | x 1 | 4060 m3 | Danieli Tata Projects | 2500 | 2003 | operating | 2013 | ●On 10 August 2013, SAIL blew-in a new blast furnace ("Durga") at its Rourkela Steel Plant (RSP) in Odisha State. |
| | | | | | | BOF | x 1 | 150 t | SMS Siemag | 2300 | | operating | 2014 | ●On June 5 2014, SAIL commissioned a new basic oxygen furnace at the Rourkela Steel Plant (RSP) in Odisha. |
| | | | | | Bhilai, Chhattisgarh | BF | x 1 | 4060 m3 | Paul Wurth Larsen & Toubro | 2800 | 2800 | underway | 2015 | ●SAIL's Bhilai works will install a 4060 m3 blast furnace capable of producing 2.8 million tpy of steel and three 180-t converters. |
| | | | | | | BOF | x 3 | 180 t | Siemens-VAI | 4000 | | underway | 2015 | |
| | | | | | Burpur, West Bengal (IISCO) | BF | x 1 | 4060 m3 | POSCO E&C | 2750 | 2840 | underway | 2014 | ●On 24 September 2014, SAIL began trials on the first of its three new BOF at its IISCO Steel Plant (ISP) at Burnpur in the eastern state of West Bengal. |
| | | | | | | BOF | x 3 | 150 t | SMS Siemag | 2900 | | operating | 2014 | |
| | | | | | Durgapur Alloy, West Bengal | DR | x 1 | Itmk3 | Kobe Steel | 500 | n/a | plan | n/a | ●SAIL-Kobe Iron India envisages a 500,000 tpy iron nuggets plant incorporating Kobe's ITmk3 technology in West Bengal. |
| Asia | India | P | Tata Steel | Public (68.29%) | Kalinganagar, Odisha (Phase 1) | BF | x 1 | 4300 m3 | n/a | 3000 | n/a | underway | 2015 | ●In January 2011, Tata Steel began the construction of Kalinganagar works in Odisha. ●In the first phase, the company will have a 3 million tpy crude steel capacity feeding hot and cold rolling mills. ●The steelworks will be built in two phases of 3 million tpy each. |
| | | | | | | BOF | x 1 | 310 t | SMS Siemag | 3000 | 2200 | underway | 2015 | |
| | | | | | Kalinganagar, Odisha (Phase 2) | BF | x 1 | 4300 m3 | n/a | 3000 | n/a | plan | n/a | |
| | | | | | | BOF | x 1 | 310 t | n/a | 3000 | n/a | plan | n/a | |
| | | | | | Jharkhand | Steelmkg | n/a | n/a | n/a | 12000 | n/a | plan | n/a | ●Tata Steel plans to construct two additional greenfield steel plants in India: a 12 million tpy plant in Jharkhand and a 5 million tpy plant in Chhattisgarh. |
| | | | | | Jagdalpur, Chhattisgarh | Steelmkg | n/a | n/a | n/a | 5000 | n/a | plan | n/a | |
| | | | | | Jamshedpur, Jharkhand | Steelmkg | n/a | n/a | n/a | 1300 | n/a | plan | n/a | ●Tata Steel plans to expand its Jamshedpur crude steel capacity to 11 million tpy from 9.7 million tpy at present. |
| Asia | Indonesia | S/P | Fuhai Group & Ansteel Group | | Ujung Jabung, Jambi, Sumatra | Steelmkg | n/a | n/a | n/a | 1750 | 1200 | plan | 2016 | ●China's Fuhai Group and Ansteel Group plan to build a 1.75 million tpy steel plant in Ujung Jabung, Jambi, Sumatra. |
| Asia | Indonesia | P | Gunung Gahapi Sakti (GGS) | | Jv with Nanjing Iron & Steel, North Sumatra | BF/BOF | n/a | n/a | n/a | 500 | 100 | underway | 2015 | ●Nanjing Iron & Steel (Nangang) in east China's Jiangsu province, plans to set up a 1 million tpy steelworks focused on long products in a joint venture with PT Gunung Gahapi Sakti (GGS) in Indonesia. |
| | | | | | | BF/BOF | n/a | n/a | n/a | 500 | 100 | underway | 2017 | |
| Asia | Indonesia | P | Gunung Raja Paksi | | Cikarang Barat, West Java | BF | x 1 | 2500 m3 | Paul Wurth | 1500 | n/a | underway | 2015 | ●Gunung Raja Paksi is building a blast furnace in Cikarang Barat, West Java, along with a sinter plant and a coke battery. |
| | | | | | | EAF | x 1 | 120 t | SMS Siemag | 1200 | n/a | underway | 2015 | |
| Asia | Indonesia | P | Indoferro | | | BF | x 1 | 450 m3 | n/a | 250 | n/a | underway | 2014 | ●PT Indoferro plans to increase its capacity to 500,000 tpy in the second phase. |
| Asia | Indonesia | S/P | Krakatau POSCO | POSCO (70%) Krakatau Steel (30%) | Cilegon, West Java | BF | x 1 | 3950 m3 | POSCO E&C | 3000 | 6000 | operating | 2013 | ●The new integrated steelworks, a joint venture between Korea's POSCO and Indonesia's state-owned PT Krakatau Steel, officially blew-in the first blast furnace on 23 December 2013. ●The company had already secured USD 567 million from Export-Import Bank of Korea for this project. |
| | | | | | | BOF | x 1 | 300 t | POSCO E&C | 3000 | | operating | 2013 | |
| | | | | | | Steelmkg | n/a | n/a | n/a | 3000 | | plan | n/a | |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | Indonesia | S | Krakatau Steel | State-owned | Cilegon, West Java | BF | x 1 | 2300 m3 | MCC-CERI | 1400 | 600 | underway | 2015 | ●Krakatau Steel has withdrawn the USD 200 million loan secured two years ago to finance the project. |
| Asia | Indonesia | S | Wuhan Iron & Steel (Wugang) | State-owned | East Java | Steelmkg | n/a | n/a | n/a | 5000 | 5000 | plan | n/a | ●Wugang launched a USD 5 billion plant. It had financial supports from the Chinese government on the investment. |
| Asia | Japan | P | Topy Industries | *Nippon Steel & Sumitomo Metal (20.1%)* | Toyohashi | EAF | x 1 | 200 t | Steel Plantech | 1000 | n/a | underway | 2015 | ●Topy Industries will install a new EAF at Toyohashi plant to replace its old furnace. |
| Asia | Korea | | Husco Co | | Yeonggwang, Jeolla | EAF | x 4 | IF (65 t) | n/a | 800 | 124 | plan | 2015 | ●Husco Co aims to start building a new steelworks on a greenfield site in south Jeolla province in 2014. |
| Asia | Korea | p | Hyundai Steel | Kia Motors (21.39%) Foreign investors (14.63%) | Dangjin C | BF | x 1 | 5250 m3 | Paul Wurth | 4000 | n/a | operating | 2013 | ●Hyundai Steel finally completed its KRW 9.9 trillion investment in a 12 million tpy integrated mill in Dangjin by blowing-in the No. 3 blast furnace on 12 September 2013. |
| | | | | | | BOF | x 2 | 300 t | Steel Plantech | 4750 | n/a | operating | 2013 | |
| | | | | | Dangjin | Steelmkg | n/a | Specialty steel | n/a | 1000 | 783 | underway | 2016 | ●Hyundai Steel is building a new 1 million tpy specialty steel facility for producing bars and wire rods. |
| Asia | Korea | | Korea Steel Tech Co | | Yeonggwang, Jeolla | Steelmkg | n/a | Long products | n/a | 300 | n/a | underway | 2016 | ●Korea Steel Tech held a groundbreaking ceremony in August 2014. Its new steelworks will have a 300,000 tpy capacity. |
| Asia | Korea | P | POSCO | Others (81.16%) National Pension Service (5.08%) | Gwangyang | BF | x 1 | →6000 m3 | POSCO E&C | →5470 | n/a | operating | 2013 | ●POSCO completed a relining project in 2013 to enlarge its No. 1 blast furnace (the biggest blast furnace in the world). |
| | | | | | Pohang | DR | x 1 | Finex | POSCO E&C | 2000 | n/a | operating | 2014 | ●The No. 3 Finex plant started the hot trials in January 2014 and should be officially commissioned in the first half of 2014. |
| Asia | Korea | | Taewoong Corp | | Busan | EAF | x 1 | 120 t | n/a | 700 | 273 | underway | 2015 | ●On 9 December 2013, Taewoong Co began constructing a new meltshop in Busan. |
| Asia | Malaysia | | Eastern Steel Sdn Bhd | Hiap Teck Venture (55%) Orient Steel Investment (40%) Chinaco Investment (5%) | Kemaman,Terengganu (phase 1) | BF | x 1 | 600 m3 | n/a | 700 | 551 | underway | 2014 | ●Eastern Steel is a joint venture company between Hiap Teck Venture Berhad of Malaysia and Shougang Group of China. ●China's Shougang Group will provide mini blast furnaces and technical assistances. ●Malaysia's Terengganu State government has granted Eastern Steel mining concessions covering 600 hectares. ●The construction includes three phases. |
| | | | | | | BOF | x 1 | n/a | Shougang | 700 | | underway | 2014 | |
| | | | | | Kemaman,Terengganu (phase 2) | Steelmkg | n/a | n/a | n/a | 800 | 551 | plan | 2015-2016 | |
| | | | | | Kemaman,Terengganu (phase 3) | Steelmkg | n/a | n/a | n/a | 2000 | | plan | n/a | |
| Asia | Malaysia | S | Guangxi Beibu Gulf Iron & Steel | | Kuantan Industrial Park | Steelmkg | n/a | H-shape steel | n/a | 3500 | n/a | plan | 2016 | ●This is the first Malaysia-China project to build an integrated steel mill for high-carbon steel and H-shape steel. |
| Asia | Malaysia | P | The Lion Group | Private | Banting, Selangor | Steelmkg | n/a | BF/BOF | n/a | 2250 | n/a | plan | n/a | ●Several years ago, the Lion Group planned to establish an integrated blast furnace project. |
| Asia | Mongolia | S | DRI plant and steelworks project | | Sainshand | DR | n/a | HBI | n/a | 4500 | n/a | plan | n/a | ●Mongolia plans to construct an industrial complex that includes iron ore processing and reduction plants, a coke plant and a steelworks in Sainshand. ●The project will be privately funded. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 3500 | n/a | plan | n/a | |
| Asia | Pakistan | P | Abbas Steel Group | | Karach | EAF | n/a | EAF/IF | n/a | 120 | n/a | operating | 2014 | ●Pakistani re-roller Abbas Steel's billet plant involves EAF, induction furnace and ladle furnace. |
| Asia | Pakistan | P | Tuwairqi Steel Mills | Al Tuwairqi Holding | Bin Qasim Port, Karachi | DR | x 1 | Midrex | Midrex | 1280 | 342 | operating | 2013 | ●POSCO has signed a joint venture agreement with Saudi Arabia's Al Tuwairqi Holding to acquire a 15% equity stake in the Pakistani project, which is costing some USD 300 million including working capital. |
| | | | | | | EAF | x 1 | 120 t | POSCO | 1500 | 300 | plan | 2015 | |
| Asia | Philippines | p | SteelAsia Manufacturing | NatSteel Holdings | Bulacan | EAF | x 2 | n/a | n/a | 1200 | n/a | underway | 2015-2016 | ●SteelAsia Manufacturing is constructing a 1.2 million tpy mini-mill in Bulacan province. |

| Geography | | Ownership | Producer | | | Equipment | | | | Capacity | Capex | Project | Start Date | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region | Economy | Type | Company | Shareholding | Location/project | Equipment | Unit | Details | Supplier | ('000 tpy) | USD m | Status | Year | |
| Asia | Philippines | | TKC Steel Corp | Star Equities Inc (70.96%) | Iligan, Mindanao | BF | x 2 | 128 m3 | n/a | 400 | n/a | underway | 2013 | ●Treasure Steelworks Corp plans to operate two mini blast furnaces to boost its billet capacity. |
| Asia | Thailand | | Tycoons Worldwide Group | | Rayong | EAF | x 2 | 50 t | n/a | 500 | n/a | underway | 2014 | ●Tycoons Worldwide Group is constructing a 500,000 tpy EAF-based meltshop at its Rayong works. |
| Asia | Viet Nam | P | Dongbu Vietnam Steel | Dongbu Steel | Hai Phong | BF | x 1 | n/a | n/a | 250 | n/a | underway | 2014 | ●Dongbu Vietnam Steel, Korean Dongbu Steel's overseas corporation, is building a blast furnace. |
| Asia | Viet Nam | P | E United Group | | Dung Quat, Quang Ngai | BF | x 1 | n/a | n/a | 3500 | n/a | plan | n/a | ●Chinese Taipei's E United Group will conduct a feasibility study on its integrated steelworks project following the talks with Vietnamese authorities over the project. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 3500 | n/a | plan | n/a | |
| Asia | Viet Nam | P | Formosa Ha Tinh Steel Corp | Formosa Plastics Group (95%) China Steel Corp (5%) | Vung Ang, Ha Tinh (Phase 1) | BF | x 3 | 4350 m3 | n/a | 10350 | 10000 | underway | 2015-2017 | ●The Government of Vietnam has agreed to offer import tax incentives to create the most favourable conditions. |
| | | | | | | BOF | x 3 | 300 t | Steel Plantech | 8400 | | underway | 2015 | ●The Government has also agreed to exempt import taxes on heat-resistant bricks and electric cable lines for the project. |
| | | | | | Vung Ang, Ha Tinh (Phase 2) | Steelmkg | n/a | n/a | n/a | 12000 | n/a | plan | 2020 | ●In the second phase, the company plans to build additional three blast furnaces with a total capacity of 12 million tpy. |
| Asia | Viet Nam | P | Hoa Phat Group | | Hai Duong | BF | x 1 | 450 m3 | n/a | 500 | 161 | operating | 2013 | ●In September 2013, Hoa Phat Group commissioned a new integrated steelworks with a 450m3 BF and a 450,000 tpy rolling capacity to produce rebar and wire rod. |
| | | | | | | BOF | x 1 | n/a | n/a | 500 | | operating | 2013 | |
| Asia | Viet Nam | P | Kyoei Steel Vietnam Company | | Ninh Binh | EAF | x 1 | 90 t | n/a | 300 | n/a | plan | 2016 | ●This investment is planned, but currently suspended and yet to be determined. |
| Asia | Viet Nam | | Nghi Son Iron & Steel Corp | | Thanh Hoa | EAF | x 1 | 100 t | Tenova | 1000 | 142 | underway | 2013 | ●Nghi Son Iron & Steel Corporation (NSI) has ordered an EAF capable of producing 1 million tpy. |
| Asia | Viet Nam | P | POSCO Specialty Steel | POSCO (100.00%) | Phu My, Ba Ria-Vung Tau | EAF | x 1 | 120 t | Danieli | 1000 | 594 | underway | 2014 | ●POSCO Specialty Steel (Posco SS) aims to inaugurate a new longs plant in southern Vietnam in December 2014. |
| Asia | Viet Nam | S | *Thai Nguyen Iron & Steel Corporation (TISCO)* | State-owned | Thai Nguyen (phase 2) | BF/BOF | x 1 | 530 m3 | n/a | 500 | 48 | underway | 2014 | ●This project aims to increase its steelmaking capacity to 1 million tpy. |
| Asia | Viet Nam | S | Vietnam Steel Corporation (VSC) | VSC (45%) Kungang (45%) Lao Cai Mining (10%) | Lao Cai | BF | x 1 | 500 m3 | n/a | 500 | n/a | operating | 2014 | ●Vietnam Steel Corporation (VSC) commissioned a new Lao Cai Cast Iron and Steel Plant, under a joint venture between China's Kunming Iron & Steel Holding Co (KISC) and Vietnam's Lao Cai Mineral JSC steel plant in Lao Cai province. |
| | | | | | | BOF | x 1 | 50 t | n/a | 500 | n/a | operating | 2014 | |
| Asia | Viet Nam | | Viet Trung Steel | | Lao Cai | BF | x 1 | 550 m3 | n/a | 550 | 337 | underway | 2014 | ●Viet Trung Steel is building a 550 m3 blast furnace and a 550,000 tpy meltshop to produce billet. |
| | | | | | | Steelmkg | n/a | n/a | n/a | 550 | | underway | 2014 | |
| Asia | Viet Nam | S/P | Vina Kyoei Steel | Kyoei Steel (45.00%) VSC (40.00%) | Phu My, Ba Ria-Vung Tau | EAF | x 1 | 90 t | Steel Plantech | 500 | 200 | underway | 2014 | ●In June 2012, Japanese-invested rebar maker Vina Kyoei Steel broke ground on its long-planned upstream expansion. |
| Oceania | Australia | | Euroa Steel Plant Project (formerly Boulder Steel) | Euroa Steel Plant Project (50%) Gladstone Steel (50%) | Queensland (Phase 1) | BF | n/a | n/a | n/a | 2500 | n/a | Plan | n/a | ●This project aims to build an integrated steelworks producing slab to export to Asia. In September 2014, Boulder Steel moved out of administration after key resolutions. |
| | | | | | | BOF | n/a | n/a | n/a | 2500 | n/a | Plan | n/a | ●It seeks financial backing of an estimated USD 5 million to complete the environmental impact proposal and cover the costs. |
| | | | | | Queensland (Phase 2) | Steelmkg | n/a | n/a | n/a | 2500 | n/a | Plan | n/a | |