GRAFTECH INTERNATIONAL LTD
Form S-1
March 04, 2019

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As filed with the Securities and Exchange Commission on March 4, 2019.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

GRAFTECH INTERNATIONAL LTD.

(Exact name of registrant as specified in its charter)

Delaware	**3620**	**27-2496053**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

982 Keynote Circle
Brooklyn Heights, OH 44131
(216) 676-2000
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Gina K. Gunning
Chief Legal Officer
GrafTech International Ltd.
982 Keynote Circle
Brooklyn Heights, OH 44131
(216) 676-2000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

(Copies of all communications, including communications sent to agent for service)

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer o	Non-accelerated filer ý	Smaller reporting company o
			Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. o

CALCULATION OF REGISTRATION FEE

Title of each class of securities being registered	Amount to be registered(1)	Proposed maximum offering per unit(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common stock, $0.01 par value per share	20,125,000	$14.36	$288,995,000.00	$35,026.19

(1) Includes 2,625,000 shares of common stock that the underwriters have the option to purchase from the selling stockholder.

(2) Estimated solely for the purpose of calculating the amount of registration fee in accordance with Rule 457(c) under the Securities Act of 1933, as amended, based upon the average of the high and low sales prices of the registrant's common stock as reported by the New York Stock Exchange on March 1, 2019.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated March 4, 2019

Preliminary Prospectus

17,500,000 shares

Common stock

The selling stockholder identified in this prospectus is selling 17,500,000 shares of our common stock. We will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholder.

Our common stock is listed on the New York Stock Exchange (NYSE) under the symbol "EAF." On March 1, 2019, the last reported sale price of our common stock on the NYSE was $14.23 per share.

Investing in our common stock involves risks. See "Risk factors" beginning on page 15.

	Per share	Total
Public offering price	$	$
Underwriting discount(1)	$	$
Proceeds to the selling stockholder	$	$

(1) See "Underwriting" beginning on page 134 of the prospectus for additional information regarding total underwriting compensation.

The selling stockholder has granted the underwriters the right to purchase up to 2,625,000 additional shares of common stock at the public offering price less underwriting discounts and commissions, for 30 days after the date of this prospectus.

The underwriters expect to deliver the shares of common stock to investors on or about , 2019.

Neither the Securities and Exchange Commission (or SEC) nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

J.P. Morgan **Credit Suisse**

Citigroup **HSBC**

RBC Capital Markets **BMO Capital Markets**

The date of this prospectus is , 2019.

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We are responsible for the information contained in this prospectus and in any related free-writing prospectus we may prepare or authorize to be delivered to you. We have not authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. We and the selling stockholder are not, and the underwriters are not, making an offer of these securities in any jurisdiction where the offer is not permitted. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front of this prospectus.

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Market and industry data and forecasts

Certain market and industry data included in this prospectus has been obtained from third party sources that we believe to be reliable. Market estimates are calculated by using independent industry publications, government publications and third party forecasts in conjunction with our assumptions about our markets. We have not independently verified such third party information. While we are not aware of any misstatements regarding any market, industry or similar data presented herein, such data involves risks and uncertainties and is subject to change based on various factors, including those discussed under the headings "Special note regarding forward-looking statements" and "Risk factors" in this prospectus.

Trademarks

We own or otherwise have rights to the trademarks, service marks, copyrights and trade names, including those mentioned in this prospectus, used in conjunction with the marketing and sale of our products and services. This prospectus includes trademarks, which are protected under applicable intellectual property laws and are our property and/or the property of our subsidiaries. This prospectus may also contain trademarks, service marks, copyrights and trade names of other companies, which are the property of their respective owners. We do not intend our use or display of other companies' trademarks, service marks, copyrights or trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies. Solely for convenience, our trademarks, service marks and trade names referred to in this prospectus may appear without the ®, , or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, service marks and trade names.

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Prospectus summary

This summary highlights information contained elsewhere in this prospectus. It may not contain all the information that may be important to you. You should read the entire prospectus carefully, including the section entitled "Risk factors" and our financial statements and the related notes included elsewhere in this prospectus, before making an investment decision to purchase shares of our common stock.

Unless the context suggests otherwise, references in this prospectus to "GrafTech," the "Company," "we," "us," and "our" refer to GrafTech International Ltd., a Delaware corporation, and its consolidated subsidiaries. See "Our company" below for more information. References in this prospectus to the "selling stockholder" refer to BCP IV GrafTech Holdings LP, an affiliate of Brookfield Asset Management Inc. and Brookfield Business Partners L.P., and the direct majority owner of GrafTech. References in this prospectus to "Brookfield" refer to Brookfield Asset Management Inc. and its affiliates. All dollar amounts in this prospectus are in U.S. dollars and are expressed in thousands unless specified otherwise. The financial statements have been prepared in accordance with generally accepted accounting principles in the United States (or GAAP).

Our company

We are a leading manufacturer of high quality graphite electrode products essential to the production of electric arc furnace (or EAF) steel and other ferrous and non-ferrous metals. We believe that we have the most competitive portfolio of low-cost graphite electrode manufacturing facilities in the industry, including three of the five highest capacity facilities in the world (excluding China). We are the only large scale graphite electrode producer that is substantially vertically integrated into petroleum needle coke, the primary raw material for graphite electrode manufacturing, which is currently in limited supply. This unique position provides us with competitive advantages in product quality and cost. Founded in 1886, we have over 130 years of experience in the research and development (or R&D) of graphite- and carbon-based solutions, and our intellectual property portfolio is extensive. We currently have graphite electrode manufacturing facilities in Calais, France, Pamplona, Spain, Monterrey, Mexico and St. Marys, Pennsylvania. Our customers include major steel producers and other ferrous and non-ferrous metal producers in Europe, the Middle East and Africa (or EMEA), the Americas and Asia-Pacific (or APAC), which sell their products into the automotive, construction, appliance, machinery, equipment and transportation industries. Our vision is to provide highly engineered graphite electrode services, solutions and products to EAF operators. Based on the high quality of our graphite electrodes, reliability of our petroleum needle coke supply and our excellent customer service, we believe that we are viewed as a preferred supplier to the global EAF steel producer market.

Graphite electrodes are an industrial consumable product used primarily in EAF steel production, one of the two primary methods of steel production and the steelmaking technology used by all "mini-mills." Electrodes act as conductors of electricity in the furnace, generating sufficient heat to melt scrap metal, iron ore or other raw materials used to produce steel or other metals. We estimate that, on average, the cost of graphite electrodes represents only approximately 1% to 5% of the total production cost of steel in a typical EAF, but they are essential to EAF steel production. Graphite electrodes are currently the only known commercially available products that have the high levels of electrical conductivity and the capability to sustain the high levels of heat generated in EAF steel production. As a result, EAF steel manufacturers have been willing to pay a premium for a reliable supply of high quality graphite electrodes, and, in some cases, to pass on this premium to their customers in the form of surcharges. Graphite electrodes are also used in steel refining in ladle furnaces and in other processes, such as the production of titanium dioxide, stainless steel, aluminum, silicon metals and other ferrous and non-ferrous metals.

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Petroleum needle coke, a crystalline form of carbon derived from decant oil, is the primary raw material used in the production of graphite electrodes. We achieved substantial vertical integration with this critical raw material source through our acquisition of Seadrift Coke LP (or Seadrift) in November 2010, significantly reducing our reliance on other suppliers. The petroleum needle coke industry is highly concentrated. We believe Seadrift is the second largest petroleum needle coke producer in the world. We also believe that the quality of Seadrift's petroleum needle coke is superior for graphite electrode production compared to most of the petroleum needle coke available to our peers on the open market, allowing us to produce higher quality electrodes in a cost-efficient manner. Additionally, we believe that this vertical integration provides a significant cost advantage relative to our competitors in periods of tight petroleum needle coke supply, such as the current market environment. We believe this cost advantage will grow as demand for petroleum needle coke increases for use in lithium-ion batteries in electric vehicles. The demand for petroleum needle coke in lithium-ion batteries is growing rapidly, with usage going from approximately 1,000 MT in 2014 to 60,000 MT in 2017. This rapidly growing alternative source of demand is a significant development for the petroleum needle coke industry and is contributing to the global shortage in petroleum needle coke. Going forward, we expect to purchase approximately one third of our needle coke requirements from external sources, given the increase in our graphite electrode capacity from our debottlenecking initiative. As a result, we continue to experience higher third party petroleum needle coke costs, including in the first quarter of 2019, which will affect our cost of sales in 2019.

According to the World Steel Association (or WSA), EAFs accounted for 46%, or 394 million metric tons (or MT), of global crude steel production (excluding China) in 2017, which represented an increase of 8% over 2016. Between 1984 and 2011, EAF steelmaking was the fastest-growing segment of the steel sector, with production increasing at an average rate of 3.5% per year, based on WSA data. Historically, EAF steel production has grown faster than the overall steel market due to the greater resilience, more variable cost structure, lower capital intensity and more environmentally friendly nature of EAF steelmaking. This trend was partially reversed between 2011 and 2015 due to global steel production overcapacity driven largely by Chinese blast furnace (or BOF) steel production. Beginning in 2016, efforts by the Chinese government to restructure China's domestic steel industry have led to limits on Chinese BOF steel production and lower export levels. In addition, developed economies, which typically have much larger EAF steel industries, have instituted a number of trade policies in support of domestic steel producers. As a result, since 2016, the EAF steel market has rebounded strongly and resumed its long-term growth trajectory. This revival in EAF steel production has resulted in increased demand for our graphite electrodes.

At the same time, two supply-side structural changes have contributed to record high prices of graphite electrodes in 2018. First, ongoing consolidation and rationalization of graphite electrode production capacity have limited the ability of graphite electrode producers to meet demand. We estimate that approximately 20% of graphite electrode industry production capacity (excluding China) was closed or repurposed from 2014-2016, and we believe the majority of these closures represent permanent reductions. Second, demand for petroleum needle coke has outpaced supply due to increasing demand for petroleum needle coke for lithium-ion batteries used in electric vehicles. As a result, graphite electrode prices have reached record high prices in 2018. Historically, between 2008 and 2017, our weighted average realized price of graphite electrodes was approximately $4,500 per MT (on an inflation-adjusted basis using constant 2018 dollars) and fell to a historic low of approximately $2,500 per MT in 2016. With the renewed demand for, and constrained supply of, graphite electrodes, industry spot prices have reached record highs in 2018. In the fourth quarter of 2018, our weighted average realized price of graphite electrodes was $9,950 per MT, representing an increase of 2% from the prior quarter and 141% from the prior year. In light of improved market conditions, the long lead time required to produce our products, our position as one of the market's largest producers and our ability, through our substantial vertical integration with Seadrift, to provide customers with a reliable long-term supply of graphite electrodes despite the market shortage of petroleum needle coke, we have implemented a commercial strategy to sell graphite electrodes through three- to five-year take-or-pay contracts.

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GrafTech historical weighted average realized prices and signed three- to five-year weighted average contract prices for graphite electrodes

(1) Weighted average realized price for a period reflects the total revenues from sales of graphite electrodes for the period divided by the graphite electrode sales volume for that period. The weighted average realized prices in this chart are shown in constant 2018 dollars for comparability. See "Management's discussion and analysis of financial condition and results of operations Key Operating Metrics."

(2) Weighted average contract price for a period reflects the volume-weighted average price for graphite electrodes to be delivered under the three- to five-year take-or-pay contracts we have entered into in 2018 and 2019. All of these contracts have fixed prices and either fixed volumes (83% of the portfolio) or a specified volume range (17% of the portfolio). For those contracts with a specified volume range, weighted average contract prices are computed using the volume midpoint. The aggregate difference between the volume midpoint and the minimum or maximum volumes across our cumulative portfolio of take-or-pay contracts with specified volume ranges is approximately 5,000 MT per year in 2019-2022. See "Business Contracts and customers."

As a leading producer of graphite electrodes, we believe we are well-positioned to benefit from this industry transformation. In 2017, based on our three primary operating facilities, we had the capability, depending on product demand and mix, to manufacture approximately 167,000 MT of graphite electrodes per year. In 2018, we completed an operational improvement and debottlenecking initiative to increase production capacity at these facilities by approximately 20% to approximately 202,000 MT. Currently, our warm idled St. Marys facility is finishing some electrodes sourced from other facilities to provide flexibility to our overall manufacturing footprint. We could ramp up production at St. Marys if required to support our customers. If restarted, St. Marys would add approximately 28,000 MT of annual capacity. This overall total production capacity would be comparable to our largest competitor, which we estimate currently has a total of approximately 230,000 MT of production capacity (excluding China). We believe the total worldwide graphite electrode production capacity was approximately 800,000 MT (excluding China) in 2018, with a capacity utilization of approximately 90% (excluding China). We believe worldwide graphite electrode production capacity, excluding China, has now increased to approximately 850,000 MT. Electrode production globally (excluding China) is focused on the manufacture of ultra-high power (or UHP) electrodes for EAFs, while the majority of Chinese production is of ladle electrodes for BOFs. The

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production of UHP electrodes requires an extensive proprietary manufacturing process and material science knowledge, including the use of superior needle coke blends. As a result, graphite electrode producers inside and outside of China are generally not in direct competition with each other for major product lines.

On August 15, 2015, we became an indirect wholly owned subsidiary of Brookfield through a tender offer to shareholders and subsequent merger transaction. Brookfield is an experienced operator of industrial, natural resource and other tangible asset businesses. This transaction has provided us with a stable equity partner with experience in industrial sectors.

On April 23, 2018, we completed our initial public offering (or IPO) of 35,000,000 shares of our common stock held by the selling stockholder at a price of $15.00 per share. On April 26, 2018, we closed the sale of an additional 3,097,525 shares of common stock held by the selling stockholder at a price to the public of $15.00 per share, as a result of the partial exercise by the underwriters in our IPO of their overallotment option. We did not receive any proceeds related to the IPO. Our common stock is listed on the NYSE under the symbol "EAF."

On August 13, 2018, we repurchased 11,688,311 shares directly from the selling stockholder. These shares were retired upon repurchase. The price per share paid by us was equal to the price at which the underwriters purchased the shares from the selling stockholder's August 2018 public secondary offering of 23,000,000 shares of our common stock, net of underwriting commissions and discounts. We funded the share repurchase from cash on hand. After giving effect to the offerings by the selling stockholder and our repurchase of shares, the selling stockholder currently owns approximately 79% of our common stock.

Our executive offices are located at 982 Keynote Circle, Brooklyn Heights, Ohio 44131 and our telephone number is (216) 676-2000. Our Internet website address is www.graftech.com. Information on, or accessible through, our website is not part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

Competitive strengths

We are one of the two largest producers of graphite electrodes outside of China, accounting for approximately 24% of global production capacity (excluding China), and we believe our strategically positioned global footprint provides us with competitive advantages

We believe our facilities are among the most strategically located and lowest cost large-scale graphite electrode manufacturing plants in the world. Of the graphite electrode manufacturing facilities currently operating outside of China, we estimate that our three operating manufacturing facilities represent approximately 24% of estimated production capacity for graphite electrodes, making us a critical supplier to global EAF steel manufacturers. Our manufacturing facilities are located in the Americas and EMEA, providing us with access to low-cost and reliable energy sources, logistical and freight advantages in sourcing raw materials and shipping our graphite electrodes to our customers compared to our competitors, and excellent visibility into the large North American and European EAF steelmaking markets. Our experience in producing graphite electrodes for a varied global customer base positions us to meet customer requirements across a range of product types and quality levels, including support and technical services, further distinguishing us from our competitors.

We are a pure-play provider of an essential consumable for EAF steel producers, the fastest-growing sector of the steel industry

According to WSA, EAF steelmaking grew at an annual pace of approximately 14% in 2017, compared with 4% for steelmaking overall. As a result of the increasing global availability of steel scrap and the more resilient, high-variable cost and environmentally friendly EAF model, we expect EAF

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producers to continue to grow at a faster rate than BOF producers globally. Additionally, EAF producers are increasingly able to utilize higher quality scrap and iron units, their two primary raw materials, to produce higher quality steel grades and capture market share from BOF producers, while maintaining a favorable cost structure. According to the WSA, in EMEA and the Americas, which together made up 93% of our 2018 net sales, EAF producers have increased market share from approximately 37% in 2000 to 49% in 2017, reflecting growth from 190 million MT to 257 million MT. In APAC, which made up approximately 7% of our 2018 net sales, government initiatives in China are expected to result in a greater use of the EAF method in steelmaking despite the historical dominance of BOF producers. These initiatives are the result of efforts to eliminate excess steelmaking production capacity and to improve environmental conditions. The EAF method produces approximately 25% of the carbon dioxide (or CO_2) emissions of a BOF facility and does not require the smelting of virgin iron ore or the burning of coal. Additionally, as a result of significantly increased steel production in China since 2000, the supply of Chinese scrap is expected to increase substantially, which may result in lower scrap prices and provide the Chinese steel manufacturing industry with local scrap feedstock that was not historically available. We believe these trends will allow EAF steel producers to increase their market share and grow at a faster rate than BOF steel producers, resulting in increasing demand for graphite electrodes.

We have capital-efficient growth opportunities available to us

The graphite electrode industry responded to oversupplied markets from 2011 to 2015 with production capacity rationalization and consolidation, and after the normalization of the market for EAF steel in 2017. We believe the lead time from initial permitting to full production of a greenfield graphite electrode manufacturing facility would be approximately three to five years and cost approximately $10,000 per MT. Similarly, brownfield development is complicated by significant capital costs and space and process constraints. Only one new greenfield graphite electrode facility outside of China has been built since the 1980s and only one significant brownfield expansion has occurred, reflecting the historical difficulty of adding further graphite electrode production capacity. As a result of this long and uncertain time horizon to build new plants, we believe only a few companies have the necessary technology and expertise to meet the rising demand for graphite electrodes.

Our current facilities are modern, strategically located and well-maintained, providing us with ample operational optimization capabilities. In 2018, we completed the expansion of our production capacity by approximately 20%, to 202,000 MT, through strategic capital investments and operational improvements. As a result of our prior operational improvement activities, we are able to achieve this large capacity increase with specific, highly targeted capital investments. These expansions will provide additional fixed cost absorption and drive further efficiencies of scale across our manufacturing base. We also have our currently warm idled St. Marys facility, which remains a viable long-term option. Currently, St. Marys is graphitizing and machining some semi-finished electrodes sourced from Monterrey in order to leverage existing infrastructure.

We believe we have the industry's most efficient production platform of high production capacity assets with substantial vertical integration

Based on our experience, high capacity manufacturing facilities can have operating costs of more than $1,000 per MT lower than low capacity manufacturing facilities. Our previous restructuring activities included the closures of our lower capacity manufacturing facilities in South Africa and Brazil and the idling of our St. Marys facility, which together accounted for approximately 35% of our previous production capacity. Our restructuring actions have eliminated a significant amount of annual fixed manufacturing costs and maintenance capital expenditure requirements since 2012. These actions allow us to run our Calais, Pamplona and Monterrey plants at a high level of capacity utilization. Since 2014, we have also improved our manufacturing processes and made strategic investments across our

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plant network, which have improved productivity while also reducing our energy and raw material consumption. Following our footprint optimization, we are producing a greater quantity of graphite electrodes from our three primary operating facilities than we did from our six operating facilities in 2012. In 2017, the Calais and Pamplona plants exceeded previous annual record production levels by 15% and 12%, respectively, and production at the Monterrey plant was 12% higher than the highest annual production level during the past 10 years. Our recently completed debottlenecking initiative added approximately 20% to our capacity at a very low cost per MT. We believe that the optimization of our plant network will continue to drive improved fixed cost absorption.

Moreover, our Seadrift, Calais, Pamplona, Monterrey and St. Marys facilities each provide unique advantages for us. Seadrift provides a substantial portion of our petroleum needle coke supply needs internally and at a competitive cost and allows us to maximize capacity utilization more efficiently than competitors, who may be more constrained by petroleum needle coke supply. Seadrift is one of only five petroleum needle coke facilities in the world outside of China, and we believe it is the second largest petroleum needle coke producer in the world. We also believe that Calais, Pamplona and Monterrey are three of the five highest capacity graphite electrode facilities in the world (excluding China), allowing for significant operating leverage. We believe our facilities have significant cost advantages given their scale and access to low cost, reliable energy sources. While much of the production capacity rationalized during the downturn was permanently shut down, we temporarily idled our St. Marys facility and retain the option to restart it.

We are the only petroleum needle coke producer in the world specifically focused on the production of graphite electrodes

Our production of petroleum needle coke specifically for graphite electrodes provides us the opportunity to produce super premium petroleum needle coke of the highest quality and allows us to tailor graphite electrodes for customer requirements. Seadrift has 140,000 MT of petroleum needle coke production capacity, which we believe makes it the second largest petroleum needle coke producer in the world. We produced approximately 110,000 MT of needle coke in 2018. We expect to produce approximately 125,000 MT in 2019 as we do not have a planned maintenance outage in 2019 and we expect a modest productivity enhancement related to our efficiency improvement project. We believe that no petroleum needle coke production capacity has been added outside of China for at least 10 years, given high capital costs and technological barriers. Additionally, the growing petroleum needle coke demand from manufacturers of lithium-ion batteries for electric vehicles has led to a limited supply of petroleum needle coke available to graphite electrode manufacturers. Sourcing the majority of our petroleum needle coke internally allows us to offer our customers certainty of supply, further enhancing our competitive position and supporting our three- to five-year, take-or-pay contracts strategy. To align with our three- to five-year contract profile, we have hedged the decant oil required to produce all of the graphite electrodes sold under these contracts, providing us with substantial visibility into our future raw material costs. We believe our use of petroleum needle coke is a further competitive advantage, as the use of pitch needle coke, an alternative raw material, results in longer bake times during graphite electrode production, significantly affecting graphite electrode production rates and cost.

Our graphite electrodes and petroleum needle coke are among the highest quality in the industry

After the divestiture of our non-core legacy Engineered Solutions businesses in 2016 and 2017, we focused on our core competency of graphite electrode production and generated approximately $60 million in cash proceeds and release of working capital from these divestitures. Our restructured and simplified business model has reduced our annual overhead expenses significantly since 2012, allowing us to redeploy the savings into our graphite electrode business. We have identified and implemented mechanical and chemical improvements to our electrodes, invested in the capability to

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produce super premium petroleum needle coke needed for high-margin UHP graphite electrodes, and optimized our production of pins at our Monterrey plant, which are a critical component used to connect and fasten graphite electrodes together in a furnace. By producing pins at our Monterrey plant, we are able to realize meaningful fixed-cost synergies with our graphite electrode production on site. As a result, we believe the quality and the consistency of our electrodes is unrivaled in North America and EMEA and on par with that of any producer globally. We have seen customer satisfaction rise to ten-year highs at a time when the industry has been focused on production capacity rationalization rather than quality. We believe the durability and infrequent breakage of our graphite electrodes create operating efficiencies and value opportunities for our customers. We also believe we have a competitive advantage in offering customers our ArchiTech Furnace Productivity System (or ArchiTech), which we believe is the most advanced support and technical service platform in the graphite electrode industry. ArchiTech, which has been installed in customer furnaces around the world, enables our engineers to work with our customers seamlessly to maximize the performance of their furnaces and provide real-time diagnostics and troubleshooting. We believe our customers value our high quality products and customer service, and have provided us with opportunities to expand our business with them as a result.

Our experienced executive leadership and general managers and flexible workforce have positioned us for future earnings growth

Our seasoned leadership is committed to earnings growth. We have undertaken strategic investments to increase our production capacity in a capital-efficient manner while reducing our cost position. Our executive and manufacturing leadership have led manufacturing companies through many cycles and are focused on positioning us for profitable growth in any environment. Our operational improvement and debottlenecking initiative is completed and increased capacity by approximately 20%, or 35,000 MT. Currently, our warm idled St. Marys facility is finishing some electrodes sourced from other facilities to provide flexibility to our overall manufacturing footprint. We could ramp up production at St. Marys if required to support our customers. If restarted, St. Marys would add approximately 28,000 MT of annual capacity.

Additionally, since our acquisition by Brookfield, we have reorganized our manufacturing facilities as profit centers. We use LEAN manufacturing techniques, which focus on the constant elimination of waste from the manufacturing process. We also rely on Six Sigma methods, a set of management techniques intended to improve quality by significantly reducing the probability that an error or defect will occur. We believe the LEAN and Six Sigma initiatives have increased overall utilization by optimizing our plant production capacity and controlled costs while also improving quality. We also redesigned general manager incentive plans to reward efficiency gains. Similarly, our labor force is incentivized to drive efficiencies through country-specific labor incentive plans.

Risk factors

Our business is subject to numerous risks. See "Risk factors" beginning on page 15. In particular, our business may be adversely affected by, among other factors:

- the possibility that the cyclical nature of our business and the selling prices of our products may lead to periods of reduced profitability and net losses in the future;
- the possibility that we may be unable to implement our business strategies, including our initiative to secure and maintain longer-term take-or-pay customer contracts, in an effective manner;
- the fact that pricing for graphite electrodes has historically been cyclical and, although current prices are relatively high, the price of graphite electrodes may decline in the future;

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the sensitivity of our business and operating results to economic conditions;

our dependence on the global steel industry generally and the EAF steel industry in particular;

the possibility that global graphite electrode overcapacity may adversely affect graphite electrode prices;

the competitiveness of the graphite electrode industry;

our dependence on the supply of petroleum needle coke;

our dependence on supplies of raw materials (in addition to petroleum needle coke) and energy; and

the possibility that our manufacturing operations are subject to hazards.

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The offering

Common stock offered by the selling stockholder	17,500,000 shares, assuming no exercise by the underwriters of their options to purchase an additional 2,625,000 shares of common stock from the selling stockholder.
Common stock to be issued and outstanding after this offering	290,537,612 shares.
Use of proceeds	We will not receive any proceeds from the sale of our common stock by the selling stockholder named in this prospectus.
Dividend policy	We currently pay a quarterly cash dividend of $0.085 per share, or an aggregate of $0.34 per share on an annualized basis. See "Dividend policy." We cannot assure you, however, that we will pay dividends in the future in these amounts or at all. Our board of directors may change the timing and amount of any future dividend payments or eliminate the payment of future dividends in its sole discretion, without any prior notice to our stockholders. Our ability to pay dividends will depend upon many factors, including our financial position and liquidity, results of operations, legal requirements, restrictions that may be imposed by the terms of our current and future credit facilities and other debt obligations and other factors deemed relevant by our board of directors. For further discussion of the factors that may affect our business and our ability to pay dividends, see "Risk factors Risks related to our business and industry" and "Risk factors Risks related to our common stock We may not pay cash dividends on our common stock."
Risk factors	Please read the section entitled "Risk factors" beginning on page 15 for a discussion of some of the factors you should carefully consider before deciding to invest in our common stock.
NYSE listing and symbol	Our common stock is listed on the NYSE under the symbol "EAF."

The number of shares of common stock to be issued and outstanding after the completion of this offering is based on 290,537,612 shares of common stock issued and outstanding as of February 15, 2019, and excludes an additional 15,000,000 shares reserved for future issuance under our Omnibus Equity Incentive Plan.

Except as otherwise indicated, all information in this prospectus assumes no exercise by the underwriters of their option to purchase up to an additional 2,625,000 shares of common stock from the selling stockholder.

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Summary historical consolidated financial and other data

The following tables present selected consolidated financial information of the Company. You should read these tables along with "Management's discussion and analysis of financial condition and results of operations," "Business" and our audited consolidated financial statements and the related notes included elsewhere in this prospectus.

The summary consolidated statement of operations data for the years ended December 31, 2018, 2017 and 2016 and the summary consolidated balance sheet data at December 31, 2018 and 2017 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future.

	For the year ended December 31,		
	2018	2017	2016
	(in thousands, except per share amounts)		
Statement of operations data:			
Net sales	$ 1,895,910	$ 550,771	$ 437,963
Income (loss) from continuing operations	853,888	14,212	(108,869)
Net income (loss)	854,219	7,983	(235,843)
Basic and diluted earnings (loss) per common share(a):			
Income (loss) from continuing operations per share(a)	$ 2.87	$ 0.05	$ (0.36)
Weighted average common shares outstanding(a)	297,748	302,226	302,226
Dividends per common share(b)	$ 0.77	$	$
Balance sheet data (at period end):			
Total assets	$ 1,505,491	$ 1,199,103	$ 1,172,276
Other long-term obligations(c)	72,519	68,907	82,148
Total long-term debt	2,050,311	322,900	356,580
Other financial data:			
Net cash provided by operating activities	$ 836,603	$ 36,573	$ 22,815
Net cash used in investing activities	(67,295)	(2,199)	(10,471)
Net cash (used in) provided by financing activities	(731,044)	(32,995)	(8,317)

(a) Data gives effect to the 3,022,259.23-for-1 stock split on our common stock effected on April 12, 2018.

(b) Calculated by total dividends paid of $2,294,265 divided by weighted average shares outstanding. $2,022,000 of these dividends were declared and paid to Brookfield prior to our IPO. All other dividends were declared and paid to all common stockholders.

(c) Represents pension and post-retirement benefits and related costs and miscellaneous other long-term obligations.

	For the year ended December 31,		
Key financial measures	**2018**	**2017**	**2016**
	(in thousands)		
EBITDA from continuing operations(1)	$ 1,102,625	$ 97,884	$ (12,251)