

CHICAGO BRIDGE & IRON CO N V

Form 424B2

August 18, 2009

Table of Contents

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered | Proposed Maximum Offering Price per Unit(1) | Proposed Maximum Offering Price(1) | Amount of Registration Fee(2) |
|---|--------------------------------|--|---|--------------------------------------|
| Common Stock, Euro 0.01 par value | 10,000,000 shares | 13.91 | 139,100,000 | 7,761.78 |

(1) Pursuant to Rule 457(c) of the Securities Act of 1933, as amended, these prices are estimated solely for the purpose of calculating the registration fee and are based upon the average of the high and low sales prices of the Registrant's common stock on the New York Stock Exchange on August 17, 2009.

(2) Calculated in accordance with Rule 457(r) of the Securities Act of 1933, as amended.

**Filed Pursuant to Rule 424(b)(2)
Registration No. 333-160852**

**PROSPECTUS SUPPLEMENT
(To Prospectus Dated July 28, 2009)**

**Up to 10,000,000 Shares
of Common Stock, par value Euro 0.01 per share**

CHICAGO BRIDGE & IRON COMPANY N.V.

This prospectus supplement and the accompanying prospectus relate to the offer and sale from time to time through July 28, 2011, of up to 10,000,000 shares of our common stock, par value Euro 0.01 per share, through Calyon Securities (USA) Inc. (Calyon), as our sales agent, for resale in accordance with a sales agency agreement with Calyon.

Our common stock is listed on the New York Stock Exchange (the NYSE) under the symbol CBI. The last reported sale price of our common stock on the NYSE on August 17, 2009 was \$13.99 per share.

In accordance with the terms of the sales agency agreement, we may offer and sell shares of our common stock from time to time over a period of time in transactions through the sales agent. Sales of the shares, if any, will be made in any method permitted by law deemed to be an at the market offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended (the Securities Act), at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on the NYSE, or sales made through a market maker other than on an exchange. Calyon will make all sales using commercially reasonable efforts consistent with its normal sales and trading practices on mutually agreed upon terms between Calyon and us.

The compensation to Calyon for sales of common stock will be 1.85% of the gross offering proceeds of such sales. The net proceeds from any sales under this prospectus supplement will be used as described under Use of Proceeds

herein. In connection with the sale of common stock on our behalf, Calyon may be deemed an underwriter within the meaning of the Securities Act, and the compensation of the sales agent constitutes underwriting commissions. We have agreed to provide indemnification and contribution to Calyon against certain liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the sales agency agreement will terminate upon the earlier of (1) the sale of all shares of our common stock subject to the sales agency agreement, (2) July 29, 2011 or (3) the termination of the sales agency agreement pursuant to its terms.

Investing in our securities involves risks. Please carefully review the information under the heading Risk Factors on page S-2 of this prospectus supplement, page 8 of the accompanying prospectus, as well as the documents we file with the Securities and Exchange Commission that are incorporated by reference therein for more information.

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

Calyon Securities (USA) Inc.

This prospectus supplement is dated August 18, 2009

TABLE OF CONTENTS

Prospectus Supplement

| | Page |
|--|-------------|
| <u>About This Prospectus Supplement</u> | S-ii |
| <u>Summary</u> | S-1 |
| <u>Risk Factors</u> | S-2 |
| <u>Information Regarding Forward-Looking Statements</u> | S-3 |
| <u>Use of Proceeds</u> | S-4 |
| <u>Price Range of Common Stock and Dividends</u> | S-4 |
| <u>Description of Common Stock</u> | S-5 |
| <u>Plan of Distribution</u> | S-5 |
| <u>Legal Matters</u> | S-6 |
| <u>Experts</u> | S-6 |
| <u>Where You Can Find More Information</u> | S-6 |
| <u>Incorporation of Certain Information By Reference</u> | S-7 |

Prospectus

| | |
|---|----|
| About This Prospectus | 3 |
| Available Information | 3 |
| Incorporation of Certain Information by Reference | 3 |
| Information Regarding Forward-Looking Statements | 4 |
| Chicago Bridge & Iron Company N.V. | 5 |
| Risk Factors | 6 |
| Use of Proceeds | 6 |
| Description of Our Capital Stock | 6 |
| Description of Warrants | 10 |
| Selling Restrictions | 10 |
| Selling Security Holders | 11 |
| Legal Matters | 11 |
| Experts | 11 |

You should rely only on the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We have not, and Calyon has not, authorized anyone to provide you with different information, and you should not rely on any information not contained in or incorporated by reference into this prospectus supplement or the accompanying prospectus. If anyone provides you with different or inconsistent information, you should not rely on it.

We are not, and Calyon is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information appearing in this prospectus supplement or any document incorporated by reference is accurate as of any date other than the date of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date. Neither this prospectus supplement nor the accompanying prospectus constitutes an offer, or an invitation on

our behalf or on behalf of Calyon, to subscribe for and purchase, any of the securities and may not be used for or in connection with an offer or solicitation by anyone, in any jurisdiction in which such an offer or solicitation is not authorized or to any person to whom it is unlawful to make such an offer or solicitation. In case there are any differences or inconsistencies between this prospectus supplement, the accompanying prospectus and the information incorporated by reference in them, you should rely on the information in the document with the most recent date.

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document consists of two parts. The first part consists of this prospectus supplement, which provides specific information about the shares that we are selling in this offering and other matters related to us. The second part, the accompanying prospectus, provides you with a general description of our common stock. Both this prospectus supplement and the accompanying prospectus include important information about us, our common stock and other information you should know before investing. This prospectus supplement also adds, updates and changes information contained in the accompanying prospectus. We encourage you to carefully read both this prospectus supplement and the accompanying prospectus as well as additional information described under *Where You Can Find More Information* on page S-8 of this prospectus supplement before investing in our common stock.

As used in this prospectus supplement, we, us, our, and CB&I means Chicago Bridge & Iron Company N.V. and, where the context requires, includes our operating subsidiaries.

You should not consider any information in this prospectus supplement or the prospectus to be investment, legal or tax advice. You should consult your own counsel, accountant and other advisors for legal, tax, business, financial and related advice regarding the purchase of our shares. We are not making any representation to you regarding the legality of an investment in our shares by you under applicable investment or similar laws.

Table of Contents

SUMMARY

This summary highlights selected information about us but does not contain all the information that may be important to you. This prospectus supplement and the accompanying prospectus includes specific terms of the offering and information about our business and financial data. You should read carefully this entire prospectus supplement and the accompanying prospectus, including the matters set forth under the caption Risk Factors, and the information incorporated by reference in this prospectus supplement and the accompanying prospectus before making an investment decision.

Our Company

Founded in 1889, Chicago Bridge & Iron Company N.V., and its subsidiaries, is one of the world's leading engineering, procurement and construction (EPC) companies. Our common stock currently trades on the NYSE under the ticker symbol CBI. CB&I is a major integrated EPC service provider and process technology licensor, delivering comprehensive solutions to customers in the energy and natural resource industries. With more than 80 locations and approximately 17,000 employees worldwide, we capitalize on our global expertise and local knowledge to safely and reliably deliver projects virtually anywhere. During 2008, we executed approximately 600 projects in over 70 countries for customers in a variety of industries.

Our principal executive offices are located at Oostduinlaan 75, 2596 JJ The Hague, The Netherlands and our telephone number is 31-70-373-2722. We maintain a website at <http://www.cbi.com>. Information contained on this website does not constitute part of this prospectus or any prospectus supplement.

The Offering

| | |
|----------------------|--|
| Issuer | Chicago Bridge & Iron Company N.V. |
| Common stock offered | Up to 10,000,000 shares of common stock, par value Euro 0.01 per share. |
| Use of Proceeds | We intend to use the net proceeds for general corporate purposes. See Use of Proceeds. |
| NYSE Symbol | CBI |
| Risk Factors | Before making an investment decision, investors should carefully consider the Risk Factors beginning on page S-3 of this prospectus supplement, and page 8 of the accompanying prospectus, as well as the other risks and uncertainties described in the documents that we file with the Securities and Exchange Commission (the SEC) that are incorporated herein by reference. |

Table of Contents

RISK FACTORS

Your investment in our common stock involves risks. This prospectus supplement does not describe all of those risks. The following is a list of certain risks specific to our shares of common stock. Before purchasing any shares of our common stock, you should consider carefully these risks and the more detailed explanation of risks described in our Annual Report on Form 10-K for the year ended December 31, 2008 under the caption Item 1A. Risk Factors, as well as those risks discussed in our subsequent filings that are incorporated by reference into this prospectus supplement, as well as other information included or incorporated by reference into this prospectus supplement or the accompanying prospectus.

The market price of our common stock is, and is likely to continue to be, volatile and subject to wide fluctuations.

The market price of our common stock is likely to continue to be volatile and could be subject to wide fluctuations in response to a number of factors, some of which are beyond our control, including:

- operating results that vary from the expectations of management, securities analysts, and investors; and
- developments in our business or in the engineering, procurement and construction sector generally.

Stock markets, in general, have experienced over the past 12 months, and continue to experience, significant price and volume volatility, and the market price of our common stock may continue to be subject to similar market fluctuations that may be unrelated to our operating performance or prospects. Increased volatility could result in a decline in the market price of our common stock.

There may be future sales or other dilution of our equity, which may adversely affect the market price of our common stock.

We are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The issuance of additional shares of common stock or convertible securities will dilute the ownership interest of our existing common stockholders. The market price of our common stock could decline as a result of this offering as well as other sales of shares of our common stock or similar securities in the market after this offering, or the perception that such sales could occur.

Our operating results may fluctuate significantly, and these fluctuations may cause the price of our common stock to decline.

Our operating results will likely vary in the future primarily as the result of fluctuations in our revenues and operating expenses. If our results of operations do not meet the expectations of current or potential investors, the price of our common stock may decline.

We have suspended payment of dividends effective in the first fiscal quarter of 2009.

We have declared and paid in the past regular quarterly interim cash dividends or distributions on our common shares; however, we have suspended payment of dividends effective in the first fiscal quarter of 2009. The payment of dividends or distributions in the future will be subject to the discretion of our shareholders (in the case of annual dividends), our Management Board and our Supervisory Board and will depend upon general business conditions,

legal and contractual restriction on the payment of dividends or distributions, and other factors. Therefore, investors may not receive any funds unless they sell their common stock, and stockholders may be unable to sell their shares on favorable terms or at all. Investors cannot be assured of a positive return on investment or that they will not lose the entire amount of their investment in our common stock.

The common stock is equity and is subordinate to our existing and future indebtedness.

Shares of the common stock are equity interests in us and do not constitute indebtedness. As such, shares of the common stock will rank junior to all of our indebtedness and to other non-equity claims against us and our assets available to satisfy claims against us, including in our liquidation.

S-2

Table of Contents

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents incorporated in this prospectus supplement by reference contain forward-looking information regarding Chicago Bridge & Iron Company N.V. and represent our expectations and beliefs concerning future events. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995 as set forth in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). The forward-looking statements included herein or incorporated herein by reference include or may include, but are not limited to, (and you should read carefully) any statements that are predictive in nature, depend upon or refer to future events or conditions, or use or contain words, terms, phrases, or expressions such as achieve, forecast, plan, propose, strategy, envision, hope, will, continue, potential, expect, project, estimate, predict, intend, should, could, may, might, or similar words, terms, phrases, or expressions negative of any of these terms. Any statements in this prospectus supplement that are not based on historical fact are forward-looking statements and represent our best judgment as to what may occur in the future.

Forward-looking statements involve known and unknown risks and uncertainties. In addition to the material risks listed under Item 1A. Risk Factors, as set forth in our Form 10-K filed with the SEC for the year ended December 31, 2008, and any updates to those risk factors included in our Quarterly Reports on Form 10-Q, that may cause business conditions or our actual results, performance or achievements to be materially different from those expressed or implied by any forward-looking statements, the following are some, but not all, of the factors that may cause business conditions or our actual results, performance or achievements to be materially different from those expressed or implied by any forward-looking statements or contribute to such differences: the impact (and potential worsening) of the current turmoil or weakness in worldwide financial, credit, and economic markets on us or our backlog, prospects, clients, vendors or subcontractors, credit facilities, or compliance with lending covenants; our ability to realize cost savings from our expected performance of contracts, whether as a result of improper estimates, performance, or otherwise; uncertain timing and funding of new contract awards, as well as project cancellations; cost overruns on fixed price or similar contracts, whether as a result of improper estimates, performance, or otherwise; risks associated with labor productivity; risks associated with percentage-of-completion accounting; our ability to settle or negotiate unapproved change orders and claims; changes in the costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; adverse impacts from weather affecting our performance and timeliness of completion, which could lead to increased costs and affect the quality, costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; operating risks, which could lead to increased costs and affect the quality, costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; increased competition; fluctuating revenue resulting from a number of factors, including a decline in energy prices and the cyclical nature of the individual markets in which our customers operate; delayed or lower than expected activity in the hydrocarbon industry, demand from which is the largest component of our revenue; lower than expected growth in our primary end markets, including but not limited to liquefied natural gas and energy processes; risks inherent in acquisitions and our ability to complete or obtain financing for proposed acquisitions; our ability to integrate and successfully operate and manage acquired businesses and the risks associated with those businesses; the non-competitiveness or unavailability of, or lack of demand or loss of legal protection for, our intellectual property rights; failure to keep pace with technological changes; failure of our patents or licensed technologies to perform as expected or to remain competitive, current, in demand, profitable or enforceable; adverse outcomes of pending claims or litigation or the possibility of new claims or litigation, and the potential effect of such claims or litigation on our business, financial condition, or results of operations; lack of necessary liquidity to provide bid, performance, advance payment and retention bonds, guarantees, or letters of credit securing our obligations under our bids and contracts or to finance expenditures prior to the receipt of payment for the performance of contracts; proposed and actual revisions to U.S. and non-U.S. tax laws, and interpretation of said laws, Dutch tax treaties with

foreign countries and U.S. tax treaties with non-U.S. countries (including, but not limited to The Netherlands), which would seek to increase income taxes payable; political and economic conditions including, but not limited to, war, conflict or civil or

S-3

Table of Contents

economic unrest in countries in which we operate; compliance with applicable laws and regulations in any one or more of the countries in which we operate including without limitation the Foreign Corrupt Practices Act and those concerning the environment, export controls and sanctions program; our inability to properly manage or hedge currency or similar risks; and a downturn, disruption, or stagnation in the economy in general.

Although we believe the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee future performance or results. You should not unduly rely on any forward-looking statements. Each forward-looking statement is made and applies only as of the date of the particular statement, and we are not obligated to update, withdraw, or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You should consider these risks when reading any forward-looking statements. All forward-looking statements attributed or attributable to us or to persons acting on our behalf are expressly qualified in their entirety by this section entitled Information Regarding Forward-Looking Statements.

USE OF PROCEEDS

We expect to use net proceeds for general corporate purposes, which may include capital expenditures, working capital, acquisitions, repayment or refinancing of indebtedness, investments in our subsidiaries, or repurchasing, converting or redeeming our securities. We may invest funds not required immediately for such purposes in marketable securities and short-term investments.

PRICE RANGE OF COMMON STOCK AND DIVIDENDS

Our common stock is listed on the NYSE under the symbol CBI. The following table sets forth the high and low closing sales prices by quarter as reported by the NYSE for the periods indicated, as well as the amount of cash dividends paid per share for the periods indicated. As of August 13, 2009, we had approximately 97,587,634 shares of common stock outstanding. On August 17, 2009, the last sale price for our common stock as reported by the NYSE was \$13.99 per share.

| | High | Low | Dividends per Share |
|--|-------------|------------|--------------------------------|
| Fiscal Year Ended December 31, 2007 | | | |
| First Quarter | \$ 31.50 | \$ 25.79 | \$ 0.04 |
| Second Quarter | 40.19 | 30.10 | 0.04 |
| Third Quarter | 44.84 | 30.00 | 0.04 |
| Fourth Quarter | 63.22 | 41.49 | 0.04 |
| Fiscal Year Ended December 31, 2008 | | | |
| First Quarter | \$ 63.50 | \$ 35.21 | \$ 0.04 |
| Second Quarter | 49.82 | 37.50 | 0.04 |
| Third Quarter | 40.20 | 15.90 | 0.04 |
| Fourth Quarter | 19.32 | 5.12 | 0.04 |
| Fiscal Year Ended December 31, 2009 | | | |
| First Quarter | \$ 13.88 | \$ 4.64 | \$ 0.00 |
| Second Quarter | 13.87 | 5.95 | 0.00 |
| Third Quarter (through August 17, 2009) | 15.19 | 9.07 | 0.00 |

The payment of dividends or distributions in the future will be subject to the discretion of our shareholders (in the case of annual dividends), our Management Board and our Supervisory Board and will depend upon general business

conditions, legal and contractual restriction on the payment of dividends or distributions, and other factors.

S-4

Table of Contents

DESCRIPTION OF COMMON STOCK

See Description of Our Capital Stock in the accompanying prospectus for a summary description of the common stock of CB&I. While under the law of The Netherlands and our Articles of Association, our common shares may be issued with a preemptive right to subscribe to any issue of common shares (as such preemptive right is described in the accompanying prospectus) our shareholders have empowered our Supervisory Board to exclude pre-emptive rights with respect to any issuances of shares common stock. The common stock issued pursuant to the sales agency agreement will exclude any preemptive rights.

The transfer agent and registrar for the common stock is The Bank of New York.

PLAN OF DISTRIBUTION

We have entered into a sales agency agreement with Calyon Securities (USA) Inc. as our sales agent under which we may offer and sell from time to time through July 28, 2011, up to 10,000,000 shares of our common stock through the sales agent. Sales of the shares, if any, will be made in (i) ordinary brokers transactions on the New York Stock Exchange or otherwise at market prices prevailing at the time of sale, or (ii) by any other method or payment permitted by law deemed to be an at the market offering as defined in Rule 415 of the Securities Act. As our sales agent, Calyon will not engage in any transactions that stabilize our common stock.

Calyon will offer shares of our common stock subject to the terms and conditions of the sales agency agreement. We will designate the minimum price per share at which the shares may be sold and the maximum amount of shares of common stock to be sold through the sales agent during any selling period or otherwise determine such maximum amount together with the sales agent. Subject to the terms and conditions of the sales agency agreement, Calyon has agreed to use its commercially reasonable efforts to execute our orders to sell, as our sales agent and on our behalf, shares of our common stock submitted to Calyon from time to time pursuant to and subject to the terms of the sales agency agreement. We or Calyon may suspend the offering of shares of common stock under the sales agency agreement by proper notice to the other party.

Calyon will receive from us a commission equal to 1.85% of the gross offering proceeds of sales of our common stock as our sales agent under the sales agency agreement. We estimate that the total remaining expenses of the offering payable by us, other than such commissions, will be approximately \$125,000. The remaining sales proceeds, after deducting transaction fees, will equal our net proceeds for the sale of such shares.

Settlement for sales of common stock will occur, unless the parties agree otherwise, on the third trading day following the date on which any sales were made against payment of the net proceeds to us. A trading day is any trading day on the NYSE, other than a day on which the NYSE is scheduled to close prior to its regular weekday closing time.

In connection with the sale of the common stock on our behalf, the sales agent may be deemed to be an underwriter within the meaning of the Securities Act, and the compensation paid to the sales agent may be deemed to be underwriting commissions or discounts. We have agreed in the sales agency agreement to provide indemnification and contribution to the sales agent against certain civil liabilities, including liabilities under the Securities Act.

The sales agent and its affiliates have performed investment banking, commercial banking and advisory services for us from time to time for which they have received customary fees and expenses. An affiliate of the sales agent is a lender under our various lending agreements, including our revolving credit facility, term loan, and uncommitted lending facilities. This affiliate of the sales agent will receive a portion of the proceeds from the sale of our common

stock under the sales agency agreement to the extent such proceeds are used to repay borrowings under these various facilities. The sales agent may, from time to time in the future, engage in transactions with and perform services for us in the ordinary course of business.

S-5

Table of Contents

The offering of common stock pursuant to the sales agency agreement will terminate upon the earlier of (1) the sale of all of the shares of common stock subject to the sales agency agreement, (2) July 29, 2011 and (3) termination of the sales agency agreement, pursuant to its terms.

LEGAL MATTERS

The validity of the issuance of the common stock and certain other legal matters in connection with the issuance of the common stock may be passed upon for us by Baker & McKenzie Amsterdam N.V. Certain legal matters in connection with this offering may be passed upon for the sales agent by Proskauer Rose LLP, New York, New York.

EXPERTS

The consolidated financial statements of Chicago Bridge & Iron Company N.V. and subsidiaries appearing in Chicago Bridge & Iron Company N.V.'s Annual Report (Form 10-K) for the year ended December 31, 2008 (including schedule appearing therein), and the effectiveness of Chicago Bridge & Iron Company N.V.'s internal control over financial reporting as of December 31, 2008, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon included therein, and incorporated herein by reference.

WHERE YOU CAN FIND MORE INFORMATION

We are required to comply with the informational requirements of the Exchange Act, and accordingly we file annual, quarterly and other reports and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-732-0330 for information on the public reference room. You can also find our filings on the SEC's website at <http://www.sec.gov> and on our website at <http://www.cbi.com>. Information contained on our website is not part of this prospectus supplement, unless specifically so designated and filed with the SEC. In addition, our reports and other information about us can be inspected at the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act to register the shares offered by this prospectus supplement. The term "registration statement" means the original registration statement and any and all amendments thereto, including the schedules and exhibits to the original registration statement or any amendment. As permitted by the rules and regulations of the SEC, this prospectus supplement and the accompanying prospectus, which forms a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits to the registration statement. For further information with respect to us and the shares we are offering pursuant to this prospectus supplement, you should refer to the registration statement, the prospectus included therein, and its exhibits. Statements contained in this prospectus supplement as to the contents of any contract, agreement or other document referred to are not necessarily complete, and you should refer to the copy of that contract or other documents filed as an exhibit to the registration statement and each statement is qualified in all respects by this reference, including the exhibits and schedules filed therewith. You should rely only on the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We have not, and Calyon has not, authorized anyone to provide you with different information, and you should not rely on any information not contained in or incorporated by reference into this prospectus supplement or the accompanying prospectus. You should not assume that the information appearing in this prospectus supplement or any document incorporated by reference is accurate as of any date other than the date of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date. You may read or obtain a copy of the registration statement at the SEC's public reference facilities and Internet site referred to above.

Table of Contents

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them into this prospectus supplement and the accompanying prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act until our offering is complete:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008, filed with the SEC on February 25, 2009, as amended by Amendment No. 1 on Form 10-K/A filed with the SEC on March 31, 2009;

Our Quarterly Reports on Form 10-Q for the quarterly periods ended (i) March 31, 2009, filed with the SEC on April 29, 2009 and (ii) June 30, 2009, filed with the SEC on July 28, 2009;

Our Current Reports on Form 8-K filed with the SEC on February 12, 2009 and May 13, 2009; and

The description of our common stock, par value EUR 0.01 per share, contained in Amendment No. 4 to our Registration Statement on Form 8-A, filed with the SEC on January 8, 2004, including any amendment or report filed for the purpose of updating such description.

We will provide without charge to each person, including any beneficial owner to whom this prospectus supplement and the accompanying prospectus is delivered, upon written or oral request, a copy of any document incorporated by reference in this prospectus supplement and the accompanying prospectus, other than exhibits to any such document not specifically described above. Requests for such documents should be directed to:

Investor Relations
Chicago Bridge & Iron Company N.V.
c/o CB&I
One CB&I Plaza
2103 Research Forest Drive
The Woodlands, TX 77380
(832) 513-1200

S-7

Table of Contents

Chicago Bridge & Iron Company N.V.

**Common Stock
Warrants**

We may offer and sell from time to time in one or more offerings:

(1) common stock, Euro 0.01 par value; and

(2) warrants to purchase our common stock, which may be convertible into or exchangeable for common stock or other securities.

We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. This prospectus describes the general terms of these securities. The specific terms of any securities and the specific manner in which we will offer them will be included in a supplement to this prospectus relating to that offering. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The applicable prospectus supplement, any related free writing prospectus, as well as any documents incorporated by reference, may also add, update or change the information contained in this prospectus.

You should read carefully this prospectus and any prospectus supplement before you invest in our securities. You also should read the documents we have referred you to in the Available Information section of this prospectus for information on us and for our financial statements.

This prospectus may not be used to consummate sales of securities unless accompanied by a prospectus supplement.

Our common stock is listed for trading on the New York Stock Exchange under the ticker symbol CBI.

Investing in our securities involves risks. You should carefully consider the risk factors beginning on page 6 of this prospectus and in the applicable prospectus supplement before you make an investment in our securities.

None of the Securities and Exchange Commission, any state securities commission, or any other regulatory body 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.

The date of this prospectus is July 28, 2009.

TABLE OF CONTENTS

| | Page |
|--|-------------|
| <u>About This Prospectus</u> | 3 |
| <u>Available Information</u> | 3 |
| <u>Incorporation of Certain Information by Reference</u> | 3 |
| <u>Information Regarding Forward-Looking Statements</u> | 4 |
| <u>Chicago Bridge & Iron Company N.V.</u> | 5 |
| <u>Risk Factors</u> | 6 |
| <u>Use of Proceeds</u> | 6 |
| <u>Description of Our Capital Stock</u> | 6 |
| <u>Description of Warrants</u> | 10 |
| <u>Selling Restrictions</u> | 10 |
| <u>Selling Security Holders</u> | 11 |
| <u>Legal Matters</u> | 11 |
| <u>Experts</u> | 11 |

You should rely only on the information contained in this prospectus, any prospectus supplement and the documents we have incorporated by reference. We have not authorized anyone else to provide you different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of these documents.

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process. Under this shelf process, we may sell the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) may also add, update or change information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus. You should read the prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the additional information described under the heading Available Information before investing in any of the securities being offered. **THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.**

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by reference to the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading Available Information.

As used in this prospectus, we, us, our, and CB&I means Chicago Bridge & Iron Company N.V. and, where the context requires, includes our operating subsidiaries.

AVAILABLE INFORMATION

We file annual, quarterly and other reports and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-732-0330 for information on the public reference room. You can also find our filings on the SEC's website at <http://www.sec.gov> and on our website at <http://www.cbi.com>. Information contained on our website is not part of this prospectus, unless specifically so designated and filed with the SEC. In addition, our reports and other information about us can be inspected at the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

We have filed with the SEC a registration statement on Form S-3 relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all the information in the registration statement. You may review a copy of the registration statement at the SEC's public reference room in Washington, D.C., as well as through the SEC's website.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus the information we have filed with the SEC, which means that we can disclose important information to you without actually including the specific information in this prospectus by referring you to those documents. The information incorporated by reference is an important part of this prospectus and information that we file later with the SEC will automatically update and supersede this information. Therefore, before you decide to invest in a particular offering under this shelf registration, you should always check for reports we may have filed with the SEC after the date of this prospectus. We incorporate by reference into this prospectus the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14,

or 15(d) of the Securities Exchange Act of 1934, as amended, until the applicable offering under this prospectus and any prospectus supplement is terminated, in each case other than information furnished to the SEC under Item 2.02 or 7.01 of

Table of Contents

Form 8-K and which is not deemed filed under the Securities Exchange Act of 1934 and is not incorporated in this prospectus:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008, filed with the SEC on February 25, 2009, as amended by Amendment No. 1 on Form 10-K/A filed with the SEC on March 31, 2009;

Our Quarterly Reports on Form 10-Q for the quarterly periods ended (i) March 31, 2009, filed with the SEC on April 29, 2009 and (ii) June 30, 2009, filed with the SEC on July 28, 2009;

Our Current Reports on Form 8-K filed with the SEC on February 12, 2009 and May 13, 2009; and

The description of our common stock, par value EUR 0.01 per share, contained in Amendment No. 4 to our Registration Statement on Form 8-A, filed with the SEC on January 8, 2004, including any amendment or report filed for the purpose of updating such description.

We will provide without charge to each person, including any beneficial owner to whom this prospectus is delivered, upon written or oral request, a copy of any document incorporated by reference in this prospectus, other than exhibits to any such document not specifically described above. Requests for such documents should be directed to:

Investor Relations
Chicago Bridge & Iron Company N.V.
c/o CB&I
One CB&I Plaza
2103 Research Forest Drive
The Woodlands, TX 77380
(832) 513-1200

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated in this prospectus by reference contain forward-looking information regarding Chicago Bridge & Iron Company N.V. and represent our expectations and beliefs concerning future events. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995 as set forth in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). The forward-looking statements included herein or incorporated herein by reference include or may include, but are not limited to, (and you should read carefully) any statements that are predictive in nature, depend upon or refer to future events or conditions, or use or contain words, terms, phrases, or expressions such as achieve, forecast, plan, propose, strategy, envision, hope, will, continue, potential, expect, believe, anticipate, project, estimate, could, may, might, or similar words, terms, phrases, or expressions or the negative of any of these terms. Any statements in this prospectus that are not based on historical fact are forward-looking statements and represent our best judgment as to what may occur in the future.

Forward-looking statements involve known and unknown risks and uncertainties. In addition to the material risks listed under Item 1A. Risk Factors, as set forth in our Form 10-K filed with the SEC for the year ended December 31, 2008, and any updates to those risk factors included in our Quarterly Reports on Form 10-Q, that may cause business conditions or our actual results, performance or achievements to be materially different from those expressed or implied by any forward-looking statements, the following are some, but not all, of the factors that may cause business conditions or our actual results, performance or achievements to be materially different from those expressed or implied by any forward-looking statements or contribute to such differences: the impact (and potential worsening) of

the current turmoil or weakness in worldwide financial, credit, and economic markets on us or our backlog, prospects, clients, vendors or subcontractors, credit facilities, or compliance with lending covenants; our ability to realize cost savings from our expected performance of contracts, whether as a result of improper estimates, performance, or otherwise;

Table of Contents

uncertain timing and funding of new contract awards, as well as project cancellations; cost overruns on fixed price or similar contracts, whether as a result of improper estimates, performance, or otherwise; risks associated with labor productivity; risks associated with percentage-of-completion accounting; our ability to settle or negotiate unapproved change orders and claims; changes in the costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; adverse impacts from weather affecting our performance and timeliness of completion, which could lead to increased costs and affect the quality, costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; operating risks, which could lead to increased costs and affect the quality, costs or availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; increased competition; fluctuating revenue resulting from a number of factors, including a decline in energy prices and the cyclical nature of the individual markets in which our customers operate; delayed or lower than expected activity in the hydrocarbon industry, demand from which is the largest component of our revenue; lower than expected growth in our primary end markets, including but not limited to LNG and energy processes; risks inherent in acquisitions and our ability to complete or obtain financing for proposed acquisitions; our ability to integrate and successfully operate and manage acquired businesses and the risks associated with those businesses; the non-competitiveness or unavailability of, or lack of demand or loss of legal protection for, our intellectual property rights; failure to keep pace with technological changes; failure of our patents or licensed technologies to perform as expected or to remain competitive, current, in demand, profitable or enforceable; adverse outcomes of pending claims or litigation or the possibility of new claims or litigation, and the potential effect of such claims or litigation on our business, financial condition, or results of operations; lack of necessary liquidity to provide bid, performance, advance payment and retention bonds, guarantees, or letters of credit securing our obligations under our bids and contracts or to finance expenditures prior to the receipt of payment for the performance of contracts; proposed and actual revisions to U.S. and non-U.S. tax laws, and interpretation of said laws, Dutch tax treaties with foreign countries and U.S. tax treaties with non-U.S. countries (including, but not limited to The Netherlands), which would seek to increase income taxes payable; political and economic conditions including, but not limited to, war, conflict or civil or economic unrest in countries in which we operate; compliance with applicable laws and regulations in any one or more of the countries in which we operate including without limitation the Foreign Corrupt Practices Act and those concerning the environment, export controls and sanctions program; our inability to properly manage or hedge currency or similar risks; and a downturn, disruption, or stagnation in the economy in general.

Although we believe the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee future performance or results. You should not unduly rely on any forward-looking statements. Each forward-looking statement is made and applies only as of the date of the particular statement, and we are not obligated to update, withdraw, or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You should consider these risks when reading any forward-looking statements. All forward-looking statements attributed or attributable to us or to persons acting on our behalf are expressly qualified in their entirety by this paragraph entitled Information Regarding Forward-Looking Statements .

CHICAGO BRIDGE & IRON COMPANY N.V.

Founded in 1889, Chicago Bridge & Iron Company N.V., and its subsidiaries, is one of the world's leading engineering, procurement and construction (EPC) companies. Our common stock currently trades on the New York Stock Exchange (NYSE) under the ticker symbol CBI. CB&I is a major integrated EPC service provider and process technology licensor, delivering comprehensive solutions to customers in the energy and natural resource industries. With more than 80 locations and approximately 19,000 employees worldwide, we capitalize on our global expertise and local knowledge to safely and reliably deliver projects virtually anywhere. During 2008, we executed approximately 600 projects in over 70 countries for customers in a variety of industries.

Our principal executive offices are located at Oostduinlaan 75, 2596 JJ The Hague, The Netherlands and our telephone number is 31-70-373-2722. We maintain a website at <http://www.cbi.com>. Information contained on this

website does not constitute part of this prospectus or any prospectus supplement.

Table of Contents

RISK FACTORS

An investment in our securities involves risks. You should carefully consider all of the information contained in or incorporated by reference into this prospectus and other information that may be incorporated by reference into this prospectus or any prospectus supplement as provided under Incorporation of Certain Information by Reference, including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q and our applicable Current Reports on Form 8-K. This prospectus also contains forward-looking statements that involve risks and uncertainties. Please read Information Regarding Forward-Looking Statements. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors, including the risks described elsewhere in this prospectus or any prospectus supplement and in the documents incorporated by reference into this prospectus or any prospectus supplement. New risk factors emerge from time to time, and it is not possible for us to predict all risk factors. If any of these risks occur, our business, financial condition or results of operation could be adversely affected.

USE OF PROCEEDS

Unless we inform you otherwise in an applicable prospectus supplement or free writing prospectus, we intend to use the net proceeds from the sales of the securities for general corporate purposes, which may include capital expenditures, working capital, acquisitions, repayment or refinancing of indebtedness, investments in our subsidiaries, or repurchasing, converting or redeeming our securities. We may invest funds not required immediately for such purposes in marketable securities and short-term investments.

DESCRIPTION OF OUR CAPITAL STOCK

General

CB&I was incorporated under the law of The Netherlands as a public company with limited liability (naamloze vennootschap) by Deed of Incorporation dated November 22, 1996. Set forth below is a summary of certain provisions relating to our shares of common stock, par value Euro 0.01 per share (common shares), contained in our Articles of Association, as amended (our Articles of Association), and the law of The Netherlands. Such summary does not purport to be a complete summary of our Articles of Association and the law of The Netherlands and is qualified in its entirety by reference to our Articles of Association.

Our authorized share capital is Euro 2,500,000 consisting of 250,000,000 common shares, each with a par value of Euro .01. Common shares are issued in registered form only. Our common shares are listed on The New York Stock Exchange. Shareholders may hold common shares registered in the New York registry (New York Shares) directly (evidenced by an entry/registration in the New York Registry and, if applicable, certificates received for those Shares) or through The Depository Trust Company (either as participant in such system or indirectly through organizations that are participants in such system). To the extent not registered in the New York Registry, common shares will be registered in the shareholders' register kept in The Hague, The Netherlands. The common shares covered by this Prospectus are New York Shares.

Voting Rights

Generally, each shareholder is entitled to one vote for each common share held on every matter submitted to a vote of shareholders. Our Articles of Association make no provision for cumulative voting and, as a result, the holders of a majority of our voting power will have the power, subject to the Supervisory Board's right to make binding

nominations (see Election and Tenure of Managing and Supervisory Directors below), to elect all members of the Supervisory Board and the Management Board who are standing for election.

Unless otherwise required by our Articles of Association or the law of The Netherlands, resolutions of a general meeting of shareholders require the approval of a majority of the votes cast at a meeting. Our Articles of Association require that, at a time when there are one or more holders of more than 15% of our outstanding voting securities (each an affiliated holder), certain business combination transactions, recapitalization transactions or transactions involving a person who is or has been an affiliated holder, as well as dissolution or

Table of Contents

liquidation of the Company, the payment of stock dividends and the repurchase of our shares, in each case in so far as any of such transactions otherwise require a shareholder vote for adoption, will require the approval of a supermajority percentage (at least 80%) of our voting securities issued and outstanding. While this provision may limit the ability of an affiliated holder to control or influence a decision to effect a change of control of the Company and also make it more difficult to consummate certain types of business combination transactions requiring a shareholder vote (e.g., certain statutory mergers under Dutch law), this requirement does not affect shareholders' ability to sell their shares to a bidder in a tender offer or the ability to engage in other types of business combination transactions not requiring a shareholder vote.

There are no laws currently in effect in The Netherlands or provisions in our Articles of Association limiting the rights of non-resident investors to hold or vote common shares.

Dividends

Pursuant to our Articles of Association, the Management Board, with the approval of the Supervisory Board, may determine that an amount shall be reserved out of our annual profits. The portion of our annual profits that remains after such reservation is at the disposal of the general meeting of shareholders. Out of our share premium reserve and other reserves available for shareholder distributions under the law of The Netherlands, the general meeting of shareholders may declare distributions upon the proposal of the Management Board (after approval by the Supervisory Board). We may not pay dividends if the payment would reduce shareholders' equity below the aggregate par value of our outstanding common shares, plus reserves (if any) required to be maintained by law. Although under Dutch law dividends (when and if declared and paid) are generally paid annually, the Management Board, with the approval of the Supervisory Board, may, subject to certain statutory provisions, distribute one or more interim dividends or other interim distributions before the accounts for any year have been approved and adopted at a general meeting of shareholders, in anticipation of the final dividend or final distribution. Rights to dividends and distributions that have not been collected within five years after the date on which they first became due and payable revert to the Company.

We have suspended payment of dividends effective in the first fiscal quarter of 2009. Our Management Board and Supervisory Board will periodically evaluate dividends in the future based upon general business conditions, legal and contractual restrictions on the payment of dividends and other factors.

We have declared and paid in the past regular quarterly interim cash dividends or distributions on our common shares; however, there can be no assurance that any such dividends or distributions will be declared or paid. The payment of dividends or distributions in the future will be subject to the discretion of our shareholders (in the case of annual dividends), our Management Board and our Supervisory Board and will depend upon general business conditions, legal and contractual restriction on the payment of dividends or distributions, and other factors. We will pay any cash dividends or distributions in U.S. dollars. Any cash dividends or distributions payable to holders of New York Shares will be paid to The Bank of New York as New York Transfer Agent and Registrar.

Shareholder Meetings

Each shareholder has the right to attend general meetings of shareholders, either in person or represented by a person holding a written proxy, to address shareholder meetings, and to exercise voting rights, subject to certain provisions of our Articles of Association. Our ordinary general meetings of shareholders are held in The Netherlands at least annually, within six months after the close of each financial year. Extraordinary general meetings of shareholders may be held as often as the Management Board deems necessary, or as otherwise provided for pursuant to the law of The Netherlands. Shareholders representing 10% or more of our issued shares may request that the Management Board convene an extraordinary general meeting with an agenda to be set by the shareholders requesting such meeting. If such meeting is not held within 6 weeks of our receipt of such request, the shareholders requesting a meeting may

petition a court in The Netherlands for an order directing the holding of such meeting; the court may order the holding of such a meeting if the

Table of Contents

persons requesting the meeting can demonstrate that they have a sufficient interest in holding a meeting with the agenda requested by them.

We provide notice by mail to registered holders of common shares of each general meeting of shareholders. Such notice will be given no later than the 15th day prior to the day of the meeting and will include a statement of the business to be conducted at the meeting. The New York Transfer Agent and Registrar will provide notice of general meetings of shareholders to, and compile voting instructions from, holders of New York Shares. Registered shareholders must notify the Management Board in writing of their intention to attend a shareholder meeting.

Election and Tenure of Managing Directors and Supervisory Directors

Our Management Board is entrusted with the management of the Company under the supervision of our Supervisory Board. The Management Board may have one or more members and the Supervisory Board may have at least six and no more than 12 members. Supervisory Board and Management Board vacancies are filled by a vote of shareholders at the first general meeting after such vacancy occurs or is created. The Supervisory Board and the Management Board members are elected from binding nominations made by the Supervisory Board. At least two persons must be nominated for each vacancy. Under the law of The Netherlands and our Articles of Association, the shareholders may deprive a nomination of its binding effect by a resolution passed by a vote of two-thirds of the votes cast at the meeting if such two-thirds vote represents more than one-half of our issued share capital.

The general meeting of shareholders may dismiss, or suspend for a period of up to 3 months, a member of the Management or Supervisory Board. However, if the Supervisory Board does not propose such dismissal or suspension, the general meeting of shareholders must pass the resolution for dismissal or suspension of a member of the Management or Supervisory Board by a two-thirds majority of the votes cast at the meeting, representing more than half of our issued share capital. The Supervisory Board may suspend a member of the Management Board at any time for a period of up to 3 months. The general meeting of shareholders may discontinue such suspension at any time. The Supervisory Board determines the remuneration (if any) of the Management Board.

Members of the Supervisory Board are appointed to serve three-year terms with approximately one-third of such members' terms expiring each year. Supervisory directors serve until the expiration of their respective terms of office or their resignation, death or removal by shareholders. The term of office of a supervisory director expires automatically on the day on which the annual meeting is held in the financial year following the year during which such Supervisory Director reaches the age of 72.

Since our incorporation our wholly-owned subsidiary Chicago Bridge & Iron Company B.V. has been the sole member of our Management Board. At our general meeting of shareholders held in 2006 Chicago Bridge & Iron Company B.V. was re-elected as our sole managing director for a four-year term expiring at the end of our annual general meeting of shareholders to be held in the year 2010.

Subject to our Articles of Association, the Supervisory Board may adopt rules and regulations governing its internal proceedings, including rules relating to voting on nominations of Supervisory Directors, Supervisory Board composition and governance.

Approval of Annual Accounts and Discharge of Directors

Each year, the Management Board is responsible for the preparation of annual accounts within five months after the end of our financial year, unless the general meeting of shareholders has extended this period due to special circumstances. The annual accounts must be approved and signed by all members of the Supervisory Board and Management Board and then submitted to a general meeting of shareholders for adoption.

The adoption of the Company's annual accounts by the general meeting of shareholders does not automatically discharge the members of the Management Board and the Supervisory Board from liability in

Table of Contents

respect of the exercise of their duties during the financial year concerned. However, we generally expect to propose such discharge as a separate agenda item at each annual general meeting of shareholders.

Liquidation Rights

In the event of the dissolution and liquidation of the Company, the assets remaining after payment of all debts and liquidation expenses will be distributed among holders of common shares on a *pro rata* basis.

Issuance of Common Shares; Preemptive Rights

Under the law of The Netherlands and our Articles of Association, the Supervisory Board may issue common shares, or grant options, warrants or other rights to acquire common shares, when the Supervisory Board is so empowered by the general meeting of shareholders. Such authorization can be granted for a maximum period of up to five years, subject to one or more extensions for further periods of up to five years. On May 8, 2009 our general meeting of shareholders empowered our Supervisory Board to issue shares, and to grant options, warrants or other rights to acquire shares, within the limits of our authorized and unissued share capital from time to time, for a five-year period ending May 8, 2013.

Under the law of The Netherlands and our Articles of Association, each holder of common shares has in principle a preemptive right to subscribe with regard to any issue of common shares *pro rata* to the aggregate nominal value of such shareholder's existing holdings of common shares, except for certain issuances to employees, issuances for non-cash consideration, issuances to persons who exercise a previously acquired right to subscribe for common shares, and issuances limited or excluded from such requirement by the Supervisory Board when the Supervisory Board is so empowered by the general meeting of shareholders. Under the law of The Netherlands, such authorization to limit or exclude preemptive rights can be granted for a maximum period of five years, subject to one or more extensions for further periods of up to five years. On May 8, 2009 our general meeting of shareholders empowered our Supervisory Board to exclude pre-emptive rights with respect to all issuances of shares, and all grants of options, warrants or other rights to acquire shares, for a five-year period ending May 8, 2013.

Repurchase of Common Shares

The shareholders may delegate to the Management Board the authority, subject to certain restrictions contained in the law of The Netherlands and our Articles of Association, to cause the Company to acquire, for consideration, the Company's own fully paid common shares in an amount not to exceed 10% of the issued shares in the aggregate. Such authorization may not be granted for more than 18 months.

On May 8, 2009 our general meeting of shareholders granted the authority to our Management Board, acting with the approval of our Supervisory Board, to repurchase up to 10% of our issued shares during the period beginning May 8, 2009 and ending November 8, 2010, for a price not exceeding 110% of the most recent trading price of our common shares on the date of repurchase.

Capital Reduction

Upon proposal by the Management Board (after approval by the Supervisory Board), the general meeting of shareholders may reduce our issued share capital by cancellation of common shares held by the Company, subject to certain statutory provisions.

Amendment of Our Articles of Association

Our Articles of Association may be amended by a majority of the votes cast at a general meeting of shareholders if the proposal is stated in the convocation notice for the general meeting and a complete copy of the proposed amendment is filed at our office so that it may be inspected prior to and during the meeting. Proposals to amend our Articles of Association, to merge the Company with or into any other entity, or to dissolve the Company, require prior approval by our Supervisory Board.

Table of Contents

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of our common stock. Warrants may be issued independently or together with common stock offered by a prospectus supplement, and may be attached to or separate from those offered securities. Each series of warrants will be issued under separate warrant agreements to be entered into between us and a bank or trust company, as warrant agent (the "Warrant Agent"), all as further set forth in the prospectus supplement relating to the particular issue of warrants. The Warrant Agent will act solely as our agent in connection with the warrant certificates and will not assume any obligation or relationship of agency or trust for or with any holders of warrant certificates or beneficial owners of warrants. A copy of the form of warrant agreement, including the form of warrant certificate representing a series of warrants, will be filed with the SEC in connection with the offering of a particular series of warrants.

The prospectus supplement relating to a particular issue of warrants to purchase common stock will describe the terms of those warrants, which may include (without limitation) the following:

the title of the warrants;

the aggregate number of the warrants;

the offering price for the warrants, if any, and the currency or currency units in which the offering price and the exercise price are payable;

the dates on which the right to exercise the warrants commences and expires;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

if applicable, the designation and terms of the common stock with which the warrants are issued and the number of warrants issued with each security;

if applicable, the date from and after which the warrants and any common stock issued with the warrants will be separately transferable;

the number of shares of common stock that may be purchased upon exercise of a warrant and the price at which the shares of common stock may be purchased upon exercise;

anti-dilution provisions of the warrants, if any;

redemption or call provisions, if any, applicable to the warrants; and

any additional terms of the warrants.

SELLING RESTRICTIONS

In relation to The Netherlands and other member states of the European Economic Area which have implemented Directive 2003/71/EC of the European Parliament and the Council of the European Union (the "Prospectus Directive") (each, a "Relevant Member State"), an offer to the public of any securities offered pursuant to this prospectus or any prospectus supplement may not be made in that Relevant Member State except pursuant to the following exemptions

under the Prospectus Directive, if they have been implemented in that Relevant Member State:

to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

to any legal entity which has two or more of (i) an average of at least 250 employees during the last financial year; (ii) a total balance sheet of more than EUR 43,000,000 and (iii) an annual net turnover of more than EUR 50,000,000, as shown in its last annual or consolidated accounts;

to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) within such Relevant Member State;

in any circumstances falling within Article 3(2) of the Prospectus Directive;

Table of Contents

provided that no such offer of Shares shall result in a requirement for the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Directive or any relevant implementing measure in any Relevant Member State.

For the purposes of this provision, the expression an offer to the public in relation to securities in any Relevant Member State means the communication in any form and by any means of information on the terms of an offering of securities and any of the securities to be offered thereby.

SELLING SECURITY HOLDERS

To the extent that this prospectus is used by any selling security holder to resell any common stock or other securities, information with respect to the selling security holder and the plan of distribution will be contained in a supplement to this prospectus, in a post-effective amendment or in filings we make with the SEC under the Exchange Act which are incorporated by reference.

LEGAL MATTERS

In connection with particular offerings of the securities in the future, and if stated in the applicable prospectus supplement, the validity of those securities may be passed upon for us by Fulbright & Jaworski L.L.P. or (in respect of matters of Dutch law) Baker & McKenzie Amsterdam N.V. and for any underwriters or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of Chicago Bridge & Iron Company N.V. and subsidiaries appearing in Chicago Bridge & Iron Company N.V.'s Annual Report (Form 10-K) for the year ended December 31, 2008 (including schedule appearing therein), and the effectiveness of Chicago Bridge & Iron Company N.V.'s internal control over financial reporting as of December 31, 2008, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon included therein, and incorporated herein by reference. Such financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the reports of Ernst & Young LLP pertaining to such financial statements and the effectiveness of our internal control over financial reporting as of the respective dates (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.

Table of Contents

Up to 10,000,000 Shares

CHICAGO BRIDGE & IRON COMPANY N.V.

Common Stock

PROSPECTUS SUPPLEMENT

Calyon Securities (USA) Inc.

August 18, 2009