MERCER INTERNATIONAL INC.
Form 10-K
February 26, 2010

Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2009

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission File No.: 000-51826

MERCER INTERNATIONAL INC.
Exact name of Registrant as specified in its charter

Washington	**47-0956945**
State or other jurisdiction of incorporation or organization	*IRS Employer Identification No.*

Suite 2840, 650 West Georgia Street, Vancouver, British Columbia, Canada, V6B 4N8
Address of Office

Registrant s telephone number including area code: **(604) 684-1099**
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $1.00	**NASDAQ Global Market**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. o Yes þ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Act. o Yes þ No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the *Securities Exchange Act of 1934* during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No o

Indicate by check mark whether registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes o No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

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

Large accelerated filer o Accelerated filer o Non-accelerated filer þ Smaller reporting company o
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). o Yes þ No

The aggregate market value of the Registrant s voting and non-voting common equity held by non-affiliates of the Registrant as of June 30, 2009, the last business day of the Registrant s most recently completed second fiscal quarter, based on the closing price of the voting stock on the NASDAQ Global Market on such date, was approximately $19,510,235.

As of February 24, 2010, the Registrant had 36,451,161 shares of common stock, $1.00 par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information that will be contained in the definitive proxy statement for the Registrant s annual meeting to be held in 2010 is incorporated by reference into Part III of this Form 10-K.

Table of Contents

TABLE OF CONTENTS

Table of Contents

Table of Contents

EXCHANGE RATES

Our reporting currency and financial statements included in this report are in Euros, as a significant majority of our business transactions are originally denominated in Euros. We translate non-Euro denominated assets and liabilities at the rate of exchange on the balance sheet date. Revenues and expenses are translated at the average rate of exchange prevailing during the period.

The following table sets out exchange rates, based on the noon buying rates in New York City for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Bank of New York (the Noon Buying Rate) for the conversion of Euros and Canadian dollars to U.S. dollars in effect at the end of the following periods, the average exchange rates during these periods (based on daily Noon Buying Rates) and the range of high and low exchange rates for these periods:

	Years Ended December 31,				
	2009	**2008**	**2007**	**2006**	**2005**
			(/$)		
End of period	0.6977	0.7184	0.6848	0.7577	0.8445
High for period	0.6623	0.6246	0.6729	0.7504	0.7421
Low for period	0.7970	0.8035	0.7750	0.8432	0.8571
Average for period	0.7176	0.6801	0.7294	0.7962	0.8033
			(C$/$)		
End of period	1.0461	1.2240	0.9881	1.1653	1.1659
High for period	1.0289	0.9717	0.9168	1.0989	1.1507
Low for period	1.2995	1.2971	1.1852	1.1726	1.2704
Average for period	1.1412	1.0669	1.0740	1.1344	1.2116

Effective January 2009, the Noon Buying Rate is published on a weekly basis by the Federal Reserve Board. On February 19, 2010, the date of the most recent weekly publication of the Daily Noon Buying Rate before the filing of this annual report on Form 10-K, the Noon Buying Rate for the conversion of Euros and Canadian dollars to U.S. dollars was 0.7387 per U.S. dollar and C$1.0419 per U.S. dollar.

In addition, certain financial information relating to our Celgar mill included in this annual report on Form 10-K is stated in Canadian dollars while we report our financial results in Euros. The following table sets out exchange rates, based on the noon rate provided by the Bank of Canada (the Daily Noon Rate), for the conversion of Canadian dollars to Euros in effect at the end of the following periods, the average exchange rates during these periods (based on Daily Noon Rates) and the range of high and low exchange rates for these periods:

	Years Ended December 31,				
	2009	**2008**	**2007**	**2006**	**2005**
			(C$/)		
End of period	1.5000	1.7046	1.4428	1.5377	1.3805
High for period	1.4936	1.4489	1.3448	1.3523	1.3576
Low for period	1.6920	1.7316	1.5628	1.5377	1.6400
Average for period	1.5851	1.5603	1.4690	1.4244	1.5095

On February 25, 2010, the Daily Noon Rate for the conversion of Canadian dollars to Euros was C$1.4384 per Euro.

Table of Contents

PART I

ITEM 1. BUSINESS

In this document, please note the following:

references to we , our , us , the Company or Mercer mean Mercer International Inc. and its subsidiaries, u the context clearly suggests otherwise, and references to Mercer Inc. mean Mercer International Inc. excluding its subsidiaries;

references to ADMTs mean air-dried metric tonnes;

information is provided as of December 31, 2009, unless otherwise stated or the context clearly suggests otherwise;

all references to monetary amounts are to Euros , the lawful currency adopted by most members of the European Union, unless otherwise stated; and

refers to Euros; $ refers to U.S. dollars; and C$ refers to Canadian dollars.

The Company

General

Mercer Inc. is a Washington corporation and our shares of common stock are quoted and listed for trading on the NASDAQ Global Market (MERC) and the Toronto Stock Exchange (MRI.U).

We operate in the pulp business and are the second largest producer of market northern bleached softwood kraft, or NBSK , pulp in the world. We are the sole kraft pulp producer, and the only producer of pulp for resale, known as market pulp , in Germany, which is the largest pulp import market in Europe. Our operations are located in Eastern Germany and Western Canada. We currently employ approximately 1,056 people at our German operations, 381 people at our Celgar mill in Western Canada and 18 people at our office in Vancouver, British Columbia, Canada. We operate three NBSK pulp mills with a consolidated annual production capacity of approximately 1.5 million ADMTs:

Rosenthal mill. Our wholly-owned subsidiary, Rosenthal, owns and operates a modern, efficient ISO 9002 certified NBSK pulp mill that has a current annual production capacity of approximately 330,000 ADMTs. The Rosenthal mill is located near the town of Blankenstein, Germany, approximately 250 kilometers south of Berlin.

Stendal mill. Our 74.9% owned subsidiary, Stendal, owns and operates a state-of-the-art, single-line NBSK pulp mill that has an annual production capacity of approximately 645,000 ADMTs. The Stendal mill is situated near the town of Stendal, Germany, approximately 100 kilometers west of Berlin.

Celgar mill. Our wholly-owned subsidiary, Celgar, owns and operates the Celgar mill, a modern, efficient ISO 9001 certified NBSK pulp mill with an annual production capacity of approximately 500,000 ADMTs. The Celgar mill is located near the city of Castlegar, British Columbia, Canada, approximately 400

kilometers east of the port city of Vancouver, British Columbia, Canada.

History and Development of Business

We acquired our initial pulp and paper operations in 1993. Subsequently, we disposed of our paper operations to focus our business on our core pulp operations.

In late 1999, we completed a major capital project which, among other things, converted the Rosenthal mill to the production of kraft pulp from sulphite pulp, increased its annual production capacity, reduced costs and improved efficiencies. The aggregate cost of this project was approximately 361.0 million, of which approximately 102.0 million was financed through government grants. Subsequent minor capital investments and efficiency improvements have reduced emissions and energy costs and increased the Rosenthal mill s annual production capacity to approximately 330,000 ADMTs.

Table of Contents

In September 2004, we completed construction of the Stendal mill at an aggregate cost of approximately 1.0 billion. The Stendal mill is one of the largest NBSK pulp mills in Europe. The Stendal mill was financed through a combination of government grants totaling approximately 275.0 million of low-cost, long-term project debt which is largely severally guaranteed by the federal government and a state government in Germany, and equity contributions.

We initially had a 63.6% ownership interest in Stendal and, over time, increased our interest to 74.9%.

We, Stendal and its minority shareholder are parties to a shareholders agreement dated August 26, 2002, as amended, to govern our respective interests in Stendal. The agreement contains terms and conditions customary for these types of agreements, including restrictions on transfers of share capital and shareholder loans other than to affiliates, rights of first refusal on share and shareholder loan transfers, pre-emptive rights and piggyback rights on dispositions of our interest. The shareholders are not obligated to fund any further equity capital contributions to the project. The shareholders agreement provides that Stendal s managing directors are appointed by holders of a simple majority of its share capital. Further, shareholder decisions, other than those mandated by law or for the provision of financial assistance to a shareholder, are determined by a simple majority of Stendal s share capital.

A significant portion of the capital investments at our German mills, including the construction of the Stendal mill, were financed through government grants. Since 1999, our German mills have benefited from an aggregate 383.7 million in government grants. These grants reduce the cost basis of the assets purchased when the grants are received and are not reported in our income. See - Capital Expenditures .

In February 2005, we acquired the Celgar mill for $210.0 million, of which $170.0 million was paid in cash and $40.0 million was paid in our shares, plus $16.0 million for the defined working capital of the mill. The Celgar mill was completely rebuilt in the early 1990s through a C$850.0 million modernization and expansion project, which transformed it into a modern and competitive producer.

In 2007, we completed a C$28.0 million capital project which improved efficiencies and reliability and, with other measures, increased the Celgar mill s annual production capacity to 500,000 ADMTs. In 2008, we commenced a new green energy project at our Celgar mill, referred to as the Celgar Energy Project , to increase the mill s production of green energy and optimize its power generation capacity. We are completing the project with approximately C$40 million in grants from the Canadian federal government and expect to complete the same in or about September 2010. See - Capital Expenditures .

Organizational Chart

The following chart sets out our directly and indirectly owned principal operating subsidiaries, their jurisdictions of organization and their principal activities:

Table of Contents

Our Competitive Strengths

Our competitive strengths include the following:

Modern and Competitive Mills. We operate three large, modern, competitive NBSK pulp mills that produce high quality NBSK pulp which is a premium grade of kraft pulp. The relative age and production capacity of our NBSK pulp mills provide us with certain manufacturing cost advantages over many of our competitors including lower maintenance capital expenditures.

Renewable Surplus Energy. Our modern mills generate electricity and steam in their boilers and are generally energy self-sufficient. Such energy is primarily produced from wood residuals which are a renewable carbon neutral source. This has permitted our German mills to benefit from the sales of emission allowances. All of our mills also generate surplus energy which we sell to third parties. Our Rosenthal and Stendal mills benefit from their participation under Germany s *Renewable Energy Resources Act* which has materially increased their revenues from sales of surplus power. Additionally, our Celgar mill is in the process of completing the Celgar Energy Project and has entered into an electricity purchase agreement with British Columbia s primary public utility provider for the sale of surplus power for ten years. When completed, the Celgar Energy Project is expected to increase our overall sales of surplus power by 238,000 MWh per annum to over 700,000 MWh per annum. We believe our generation and sale of surplus renewable green energy provides us with a competitive energy advantage.

Customer Proximity and Service. We are the only producer of market pulp in Germany, which is the largest pulp import market in Europe. Due to the proximity of our German mills to most of our European customers, we benefit from lower transportation costs relative to our major competitors. Our Celgar mill, located in Western Canada, is well situated to serve Asian and North American customers. We primarily work directly with customers to capitalize on our geographic diversity, coordinate sales and enhance customer relationships. We believe our ability to deliver high quality pulp on a timely basis and our customer service makes us a preferred supplier for many customers.

Advantageous Capital Investments and Financing. Our German mills are eligible to receive government grants in respect of qualifying capital investments. Over the last nine years, our German mills have benefited from approximately 383.7 million of such government grants. In addition, in October 2009, our Celgar mill qualified to receive C$57.7 million of credits under the Canadian government s new Pulp and Paper Green Transformation Program, referred to as the GTP . These grants reduce the cost basis of the assets purchased when the grants are received and are not reported in our income. Additionally, during the last ten years, capital investments at our German mills have reduced the amount of overall wastewater fees that would otherwise be payable by over 49.0 million. Further, our Stendal mill benefits from German governmental guarantees of its project financing which permitted it to obtain better credit terms and lower interest costs than would otherwise be available. The project debt of Stendal matures in 2017, currently bears interest at a rate of 5.28% per annum plus an applicable margin and is non-recourse to our other operations and Mercer Inc.

Competitive Fiber Supply. Although fiber is cyclical in both price and supply, there is a significant amount of high-quality fiber within a close radius of each of our mills. This fiber supply, combined with our purchasing power, enables us to enter into contracts and arrangements which have generally provided us with a competitive fiber supply.

Corporate Strategy

Our corporate strategy is to create shareholder value by focusing on the expansion of our asset and earnings base. Key features of our strategy include:

Focusing on NBSK Market Pulp. We focus on NBSK pulp because it is a premium grade kraft pulp and generally obtains the highest price relative to other kraft pulps. Although demand is cyclical, between 1998 and 2008, worldwide demand for softwood kraft market pulp grew at an average of approximately 2.3% per annum. We focus on servicing customers that produce high quality printing and writing paper

Table of Contents

grades in addition to tissue producers. This allows us to benefit from the stable relationships we hold with paper suppliers in Europe as well as participate in strong growth markets such as China where we also have strong customer relationships.

Maximizing Renewable Energy Realizations. In 2009 and 2008, our mills generated 478,674 MWh and 456,059 MWh, respectively, of surplus energy, primarily from a renewable carbon-neutral source. We are pursuing several initiatives to increase our overall energy generation and the amount of and price for our surplus power sales, including the Celgar Energy Project. After completing such project and, based upon the current production levels of our mills, we expect to generate and sell between 700,000 MWh and 750,000 MWh of surplus renewable energy per annum. We expect energy generation and sales to continue to be a key focus for our mills for the foreseeable future. We are also exploring other initiatives and potential high-return projects to further enhance our energy generation and revenues.

Enhancing Sustainability/Growth. With the recent global economic slowdown and crisis in financial and credit markets that started in 2008, our short-term focus has been on maintaining and enhancing the sustainability of our business. To this end, we worked to reduce costs, cut discretionary spending, including capital expenditures and reduced our working capital consumption levels. As economies and markets recover and access to capital improves, we intend to grow our operations and earning capacity both through organic growth and targeted strategic acquisitions.

Operating Modern, World-Class Mills. In order to keep our operating costs as low as possible, with a goal of generating positive cash flow in all market conditions, we operate large, modern NBSK pulp mills. We believe such production facilities provide us with the best platform to be an efficient and competitive producer of high-quality NBSK pulp without the need for significant sustaining capital. Such modern mills are also generally net exporters of renewable energy.

The Pulp Industry

General

Pulp is used in the production of paper, tissues and paper related products. Pulp is generally classified according to fiber type, the process used in its production and the degree to which it is bleached. Kraft pulp is produced through a sulphate chemical process in which lignin, the component of wood which binds individual fibers, is dissolved in a chemical reaction. Chemically prepared pulp allows the wood s fiber to retain its length and flexibility, resulting in stronger paper products. Kraft pulp can be bleached to increase its brightness. Kraft pulp is noted for its strength, brightness and absorption properties and is used to produce a variety of products, including lightweight publication grades of paper, tissues and paper related products.

The selling price of kraft pulp depends in part on the fiber used in the production process. There are two primary species of wood used as fiber: softwood and hardwood. Softwood species generally have long, flexible fibers which add strength to paper while fibers from species of hardwood contain shorter fibers which lend bulk and opacity. Generally, prices for softwood pulp are higher than for hardwood pulp. Most uses of market kraft pulp, including fine printing papers, coated and uncoated magazine papers and various tissue products, utilize a mix of softwood and hardwood grades to optimize production and product qualities. In recent years, production of hardwood pulp, based on fast growing plantation fiber primarily from Asia and South America, has increased much more rapidly than that of softwood grades that have longer growth cycles. As a result of the growth in supply and lower costs, kraft pulp customers have substituted some of the pulp content in their products to hardwood pulp. Counteracting customers increased proportionate usage of hardwood pulp has been the requirement for strength characteristics in finished goods. Paper and tissue makers focus on higher machine speeds and lower basis weights for publishing papers which

also require the strength characteristics of softwood pulp. We believe that the ability of kraft pulp users to continue to further substitute hardwood for softwood pulp is limited by such requirements.

NBSK pulp, which is a bleached kraft pulp manufactured using species of northern softwood, is considered a premium grade because of its strength. It generally obtains the highest price relative to other kraft pulps. Southern bleached softwood kraft pulp is kraft pulp manufactured using southern softwood species and does not possess the strength found in NBSK pulp. NBSK pulp is the sole product of our mills.

Table of Contents

Kraft pulp can be made in different grades, with varying technical specifications, for different end uses. High-quality kraft pulp is valued for its reinforcing role in mechanical printing papers, while other grades of kraft pulp are used to produce lower priced grades of paper, including tissues and paper related products.

Markets

We believe that over 125 million ADMTs of kraft pulp are converted annually into printing and writing papers, tissues, cartonboards and other white grades of paper and paperboard around the world. We also believe that approximately one third of this pulp is sold on the open market as market pulp, while the remainder is produced for internal purposes by integrated paper and paperboard manufacturers.

Demand for kraft pulp is cyclical in nature and is generally related to global and regional levels of economic activity. In 2008, overall global demand for all kraft pulp types, including softwood, was negatively impacted by the weak global economic conditions and global financial and credit turmoil the world began to experience in the second half of that year and which continued into the first half of 2009. Significant producer shutdowns and curtailments, along with strong demand from China, resulted in an improved supply-demand balance and increased prices in the second half of 2009.

Between 1998 and 2008 worldwide demand for softwood market pulp grew at an average rate of approximately 2.3% annually. Since 2007, demand for softwood market pulp has grown in the emerging markets of Asia, Eastern Europe and Latin America. China in particular has experienced substantial growth and its demand for softwood market pulp grew by approximately 12.2% per annum between 2003 and 2008. China now accounts for approximately 23% of global softwood market pulp demand compared to only 10.2% in 2003. Western Europe currently accounts for approximately 28% of global softwood market pulp demand. Within Europe, Eastern Europe has experienced significant demand growth with the region s demand for softwood market pulp increasing by approximately 6% between 2007 and 2009.

A measure of demand for kraft pulp is the ratio obtained by dividing the worldwide demand of kraft pulp by the worldwide capacity for the production of kraft pulp, or the demand/capacity ratio . An increase in this ratio generally occurs when there is an increase in global and regional levels of economic activity. An increase in this ratio generally indicates greater demand as consumption increases, which often results in rising kraft pulp prices, and a reduction of inventories by producers and buyers. As prices continue to rise, producers continue to run at higher operating rates. However, an adverse change in global and regional levels of economic activity generally negatively affects demand for kraft pulp, often leading buyers to reduce their purchases and relying on existing pulp inventories. As a result, producers run at lower operating rates by taking downtime to limit the build-up of their own inventories. The demand/capacity ratio for softwood kraft pulp was approximately 92% in 2009, approximately 89% in 2008 and approximately 94% in 2007.

We estimate that there were approximately 2.2 million ADMTs of NBSK capacity of indefinite and permanent closures during 2009. Some of such capacity closures may potentially be restarted during periods of strong pulp markets and prices.

We do not believe there are any significant new NBSK pulp production capacity increases coming online in the next several years due in part to fiber supply constraints and high capital costs.

Competition

Pulp markets are large and highly competitive. Producers ranging from small independent manufacturers to large integrated companies produce pulp worldwide. Our pulp and customer services compete with similar products

manufactured and distributed by others. While many factors influence our competitive position, particularly in weak economic times, a key factor is price. Other factors include service, quality and convenience of location. Some of our competitors are larger than we are in certain markets and have substantially greater financial resources. These resources may afford those competitors more purchasing power, increased financial flexibility, more capital resources for expansion and improvement and enable them to compete more effectively. Our key NBSK pulp competitors are principally located in Northern Europe and Canada.

Table of Contents

NBSK Pulp Pricing

Pulp prices are highly cyclical. Global economic conditions, changes in production capacity, inventory levels, and currency exchange rates are the primary factors affecting NBSK pulp list prices. The average annual European list prices for NBSK pulp since 2000 have ranged from a low of approximately $447 per ADMT in 2002 to a high of approximately $900 per ADMT in 2008.

Starting in 2006, pulp prices increased steadily from approximately $600 per ADMT in Europe to $870 per ADMT at the end of 2007. These price increases resulted from the closure of several pulp mills, particularly in North America, which reduced NBSK capacity by approximately 1.3 million ADMTs, better demand and the general weakness of the U.S. dollar against the Euro and the Canadian dollar.

In 2008, list prices for NBSK pulp in Europe continued to improve in the first half of the year but decreased markedly in the second half due to weak global economic conditions. As a result, list prices for NBSK pulp in Europe decreased from $900 per ADMT in mid-2008 to $635 per ADMT at the end of the year. Such price weakness continued into early 2009 as list prices in Europe fell to approximately $575 per ADMT. Commencing in mid-2009, pulp markets began to strengthen which led to improved prices. Strong demand from China, capacity closures and historically low global inventories for bleached softwood kraft pulp helped support upward price momentum. During the third quarter of 2009, three price increases raised European list prices by a total of $100 per ADMT to $730 per ADMT by quarter end. Subsequently, in the fourth quarter of 2009, list prices in Europe increased by a further $70 per ADMT. Such price increases were partially offset by the continued weakening of the U.S. dollar versus the Euro and Canadian dollar during the period. In the fourth quarter of 2009, global producer kraft pulp inventories were reported to have fallen to approximately 22 days of supply. In December 2009, list prices for pulp were approximately $800 per ADMT in Europe, $830 per ADMT in North America and $700 per ADMT in China. Subsequently, in the first quarter of 2010, producers implemented further list price increases totaling $60 per ADMT, bringing the European list price to $860 per tonne. However, as pulp prices are highly cyclical, there can be no assurance that prices will not decline in the future.

A producer s sales realizations will reflect customer discounts, commissions and other selling concessions. While there are differences between NBSK list prices in Europe, North America and Asia, European prices are generally regarded as the global benchmark and pricing in other regions tends to follow European trends. The nature of the pricing structure in Asia is different in that, while quoted list prices tend to be lower than Europe, customer discounts and commissions tend to be lower resulting in net sales realizations that are generally similar to other markets.

The majority of market NBSK pulp is produced and sold by North American and Scandinavian, or Norscan , producers, while the price of NBSK pulp is generally quoted in U.S. dollars. As a result, NBSK pricing is affected by fluctuations in the currency exchange rates for the U.S. dollar versus the Canadian dollar and the Euro. NBSK pulp price increases during 2006, 2007 and the first half of 2008 were in large part offset by the weakening of the U.S. dollar. Similarly, the strengthening of the U.S. dollar against the Canadian dollar and the Euro towards the end of 2008 helped slightly offset pulp price decreases caused by the deterioration in global economic conditions. NBSK pulp prices continued to trend downwards during the first half of 2009 but increased in the latter part of the year. The increase was partially offset by the weakening of the U.S. dollar.

Table of Contents

The following chart sets out the changes in list prices for NBSK pulp in Europe, as stated in U.S. dollars, Canadian dollars and Euros for the periods indicated.

Price Delivered to N. Europe (C$ and equivalent indexed to 2000)

The Manufacturing Process

The following diagram provides a simplified description of the kraft pulp manufacturing process at our pulp mills:

Table of Contents

In order to transform wood chips into kraft pulp, wood chips undergo a multi-step process involving the following principal stages: chip screening, digesting, pulp washing, screening, bleaching and drying.

In the initial processing stage, wood chips are screened to remove oversized chips and sawdust and are conveyed to a pressurized digester where they are heated and cooked with chemicals. This occurs in a continuous process at the Celgar and Rosenthal mills and in a batch process at the Stendal mill. This process softens and eventually dissolves the phenolic material called lignin that binds the fibers to each other in the wood.

Cooked pulp flows out of the digester and is washed and screened to remove most of the residual spent chemicals, called black liquor, and partially cooked wood chips. The pulp then undergoes a series of bleaching stages where the brightness of the pulp is gradually increased. Finally, the bleached pulp is sent to the pulp machine where it is dried to achieve a dryness level of more than 90%. The pulp is then ready to be baled for shipment to customers.

A significant feature of kraft pulping technology is the recovery system, whereby chemicals used in the cooking process are captured and extracted for re-use, which reduces chemical costs and improves environmental performance. During the cooking stage, dissolved organic wood materials and black liquor are extracted from the digester. After undergoing an evaporation process, black liquor is burned in a recovery boiler. The chemical compounds of the black liquor are collected from the recovery boiler and are reconstituted into cooking chemicals used in the digesting stage through additional processing in the recausticizing plant.

The heat produced by the recovery boiler is used to generate high-pressure steam. Additional steam is generated by a power boiler through the combustion of biomass consisting of bark and other wood residues from sawmills and our woodrooms and residue generated by the effluent treatment system. Additionally, during times of upset, we may use natural gas to generate steam. The steam produced by the recovery and power boilers is used to power a turbine generator to generate electricity, as well as to provide heat for the digesting and pulp drying processes.

Our Product

We manufacture and sell NBSK pulp produced from wood chips and pulp logs.

The kraft pulp produced at the Rosenthal mill is a long-fibered softwood pulp produced by a sulphate cooking process and manufactured primarily from wood chips and pulp logs. A number of factors beyond economic supply and demand have an impact on the market for chemical pulp, including requirements for pulp bleached without any chlorine compounds or without the use of chlorine gas. The Rosenthal mill has the capability of producing both totally chlorine free and elemental chlorine free pulp. Totally chlorine free pulp is bleached to a high brightness using oxygen, ozone and hydrogen peroxide as bleaching agents, whereas elemental chlorine free pulp is produced by substituting chlorine dioxide for chlorine gas in the bleaching process. This substitution virtually eliminates complex chloro-organic compounds from mill effluent.

Kraft pulp is valued for its reinforcing role in mechanical printing papers and is sought after by producers of paper for the publishing industry, primarily for magazines and advertising materials. Kraft pulp produced for reinforcement fibers is considered the highest grade of kraft pulp and generally obtains the highest price. The Rosenthal mill produces pulp for reinforcement fibers to the specifications of certain of our customers. We believe that a number of our customers consider us their supplier of choice. For more information about the facilities at the Rosenthal mill, see Item 2 Properties .

The kraft pulp produced at the Stendal mill is of a slightly different grade than the pulp produced at the Rosenthal mill as the mix of softwood fiber used is slightly different. This results in a complementary product more suitable for different end uses. The Stendal mill is capable of producing both totally chlorine free and elemental chlorine free pulp.

For more information about the facilities at the Stendal mill, see Item 2 Properties .

The Celgar mill produces high-quality kraft pulp that is made from a unique blend of slow growing/long-fiber Western Canadian tree species. It is used in the manufacture of high-quality paper and tissue products. We believe the Celgar mill s pulp is known for its excellent product characteristics, including tensile strength, wet strength and brightness. The Celgar mill is a long-established supplier to paper producers in Asia. For more information about the facilities at the Celgar mill, see Item 2 Properties .