SPECIAL REPORT

SICEM SAGA Celebrates 50 Years of Success in the Production and Sales of Hardwood CMP

The Mediterranean Sea location is opening excellent opportunities in Asia and the Middle East.

SICEM SAGA is proud to celebrate the 50th anniversary in the production of CMP (chemi-mechanical pulp). The strength of the Company is the flexibility of the production line and the unique technology, reason why CMP is suitable for most paper and board grades providing competitive advantages. In the last few years, SICEM SAGA's Mediterranean Sea location -in northern Italy- has enabled excellent opportunities in the fast growing markets of Asia and the Middle East.

SICEMA SAGA pulp mill, located in a strategic position in northern Italy, known for its poplar (aspen) tree plantations.

Looking at the past to discover the future

Introducing CMP (chemi-mechanical pulp) into most paper and board making applications has been well known for decades. Doing so gives cost savings in the papermaking process and provides many quality advantages at the same time. Among the leaders in the European pulp industry, SICEM SAGA has designed and developed unique technology to optimise the inherent properties of poplar (aspen) wood, producing customised pulps according to client requirements. SICEM SAGA was the first company to make chemi-mechanical pulp from chips using disk refiners. With a 100,000 t/y capacity, its strength is the flexibility of the equipment. We can produce a wide range of high yield pulps, bleached or unbleached, whose quality is well appreciated in a large variety of applications. Our customers include manufacturers of woodfree and wood-containing white papers (coated and uncoated), tissue paper, high quality board, saturated base paper, and other grades.

Today the Company has a substantial client, portfolio located throughout Italy and Europe. Furthermore, it has consolidated its presence in Asia and the Middle East. In the quickly developing Chinese paper industry, important producers value SICEM SAGA products for their consistent quality and physical properties in high speed paper and board machines.

Our pulp mill is located in northern Italy, known for its poplar tree plantations. A natural reforestation policy, traditional tree cultivation practices and the use of recycled wood all help making excellent products by means of ecology friendly process. The high yield, the use of recovery and fast growing raw materials, low energy and water consumption, help significantly to reduce negative environmental impacts. SICEM SAGA's attention to the environment has been rewarded by having achieved ISO 14001 and forest FSC certificates for many years.

What is CMP (chemi-mechanical pulp) ?

CMP is wood pulp for paper manufacturing. Its production process evolved from RMP -mechanical pulp from refiners- with the addition of a chemical impregnation using cold soda. This softens the fibres by loosening the complex lignin-hemicelluloses that binds them together. The subsequent refining process benefits from a reduction in energy consumption and improves the strength properties in the end products. This is why CMP's mechanical and chemical treatments prevent fibre degradation in paper making and board production plants.

CMP can be made from hardwoods (short fibres) or softwoods (long fibres). Presently, hardwood pulp is prized by paper makers for its improved brightness and low shives content. SICEM SAGA CMP is manufactured from 100% hardwood and is competitive with Canadian and Scandinavian CTMP (chemi-thermo-mechanical pulp) on the international market today.

CMP can be provided bleached or unbleached, depending on customer needs. Our modern peroxide bleaching plant yields excellent brightness levels using a TCF process. Currently, 90% of the pulp is bleached (to different degrees of brightness), and 10% is unbleached. Flash drying and pressing operations complete the production of pulp bales, packed

together in convenient transport units.

Why use CMP in the papermaking process ?

Several advantages suggest using CMP in paper and board manufacturing. Some of them simply reduce the cost of raw materials; others improve the quality of the end product.

Cost reduction. Typically, paper makers target cost cutting. CMP can replace significant quantities of more costly short fibre chemical pulp (e.g. mixed hardwood, eucalyptus or birch). CMP is priced lower and can make an important contribution by reducing short chemical fibre requirements from more expensive sources.

Opacity and formation. CMP is more than a cost reduction tool. Mixed with hardwood chemical pulp, it gives improved opacity and better web formation. These properties are of critical importance for producing woodfree papers and the top layers of white testliner (WTTL).

Bulk and stiffness. CMP can be produced with a particular process, to achieve high bulk properties. This is appreciated by most board makers and specialty paper producers. Also stiffness, related to high bulk, can be enhanced easily by our CMP.

Combining these benefits achieves the best results in quality and cost savings for a wide range of paper and board products.

CMP is advantageous for all paper and board grades

SICEM SAGA plant can produce chemi-mechanical pulp with different qualities for different end products. Our CMP is successfully used by most paper and board makers for:

- Coated paper (wood-free and wood-containing). These grades, typically for offset printing, can be made from 100% chemical pulp or contain groundwood. By using CMP to replace quantities from both these sources, producers gain considerable reductions in raw material costs.
- Printing & writing, copy paper and uncoated (woodfree and wood-containing) paper. Both formation and opacity can be improved using CMP.
- White top testliner (WTTL). The top layer of WTTL is commonly made from chemical pulp or selected waste paper. CMP can replace both for cost reduction and surface coverage effects. Visual appearance and formation can be highly improved.
- Board. Unbleached or bleached CMP with high bulk can be used in the middle layers of FBB or duplex board to increase bulk and stiffness. Using bleached CMP for the top layer of white board enhances surface properties and printability.
- Tissue paper. CMP can replace hardwood chemical pulp giving good opacity and bulk. One of SICEM SAGA's fastest growing markets is with hygienic products and kitchen towels producers.
- Panel board, melamine fiberboard as well as gypsum board makers know the many benefits of using CMP in their products.

Six bales package TRANSPORT UNIT, about 1400 kg, suitable for shipping overseas in 40 foot containers.

SICEM SAGA can also manufacture tailor-made pulps for dedicated applications. Every producer uses a different process: paper and board companies can always ask to adjust the CMP specifications according to their special requirements. This makes SICEM SAGA a preferred partner for all papermaking applications.

Shipment in containers makes a difference

CMP can be quickly shipped overseas using 40 foot containers. Containers are ideal for stowing SICEM SAGA CMP: they reduce transport costs providing full security and reliability. Each container holds about 25 Tonnes of flash dried pulp divided into 6 bales package units. Handling can be carried out in a short time using conventional fork-lifts: this allows easy loading and pull out at the destination. Hundred tonnes trial deliveries of customised CMP can be ordered and shipped in a short time.

Our company is proud of the reputation we have achieved in the industry over the last 50 years. We enjoy the challenge of serving the ever evolving paper and board makers worldwide. PA