AP&P tests and validate our customer pulp and paper requirement in our Design Institute Laboratory and works with the University of Qilu’s National Pulp and Paper Institute for China to independently validate the test results.

Our design focus is on developing ways to reduce both capital and operating costs per ton while providing a cleaner environmental solution. We are one of the very few solution providers that can say that we can deliver a harmless discharge or discharge free solution to our customers. Our goal is to not only meet regional environmental standards, but exceed them with every installation.

Our integrated solution and machinery components are base on the fundamental principle of simplicity and reliability. Our goal is not to be the biggest but the best in providing high quality machinery at superior price performance from our Chinese manufacturing facilities while giving our customers options to select world class North American and European brands of motors, pumps and valves and support from our international support teams.

ABOUT US

Advanced Pulp and Paper Machinery Ltd. is a Canadian-Chinese joint venture company that has assembled world class designers, manufacturing facilities, marketing and engineering specialists to design and manufacture pulp and paper machinery for the international market. AP&P has its own pulp and paper mill and is currently engaged in several joint venture pulp and paper mills projects in China and the Americas.

Our head office is in Richmond Canada and operates three ISO 9001 manufacturing and assembly facilities in the Provence of Shandong, China. We support our customers from our sales and technical support offices in Vancouver, Canada, Rio de Janerio, Brazil, Provence of Shandong, China with planned new offices opening in Mumbai, India and Guangzhou, China in 2018.
AP&P IS A TOTAL SOLUTION PROVIDER

AP&P Machinery is a full solution provider that designs, fabricates, installs and supports its customer installations. Through the consolidation of our collective resources, our Joint Venture company, AP&P provides OCC, biochemical, chemical, mechanical and chemical-mechanical solution to the pulp and paper industry. We also design and manufacture high performance small to mid-size paper machines using our patented drying technology that provides even drying at high speeds at a reduced operating cost per ton.

OUR SOLUTIONS DELIVERY PROCESS

Our engineers and designers have experience with a variety of raw material ranging from de-inking and OCC pulp for cardboard to dissolving pulp from bamboo to straw, bagasse and wood chips. Our lab validates our customers requirements and duplicates the performance of the technology to reproduce the pulp standard set by the customer.

ENVIRONMENTAL FRIENDLY

The pulp and paper industry is one of the world’s largest user of fresh water to produce pulp and paper products. AP&P’s Solution not only reduces discharge waste to meet regional standards, it can produce discharge free solutions. Our biomass waste water treatments solutions can recycle the water and eliminate contaminated waste discharge. We can even turn biomass waste sludge into organic fertilizer to provide additional income.

OPEN ARCHITECTURE ENGINEERING

To provide highest reliability of our processes and machinery, we provide our customers with Open Engineering Architecture (OEA). This gives our customers the option of selecting Global Brand Name, pumps, motors and valves in our machinery. This ensures improved performance and local availability of service and repair when required.
Most designers and manufacturers of pulp and paper machinery achieve the same end results. What makes them different is the cost per ton, reliability, productivity rate, support, safety and ability to meet environmental standards. For over 25 years I have improved my designs through a continuous improvement processes. The goal is to achieve the best designs with the most cost effective performance in the pulp and paper industry.

My new patented designs are friends to the environment and offer the ability to provide additional revenue applications such as organic fertilizer. They not only take advantage of the advancements in mechanical engineering techniques, but also those in microbiology and biochemistry. There is a new look that provides easier access for maintenance and repairs.

Fengning Li, Eng.
Chief Designer
Advance Pulp and Paper Machinery has three manufacturing and assembly facilities located in the Provence of Shandong, China. Through our joint venture investment we have automated our ISO 9001 manufacturing facilities with computer aided design interfaces to our workshop floor.

From our designers in Canada, China or anywhere on a customer site, we can communicate design specification to our manufacturing facilities.

We employ the use of the latest in automated fabrications for both cutting and welding. Our ISO procedures specify specific standards of material, cutting and types of welding to be used for both carbon and stainless steel machinery. We have quality control inspectors who verify the standards against the work performed on the shop floor.
Three Phase Cooking process: Our new continuous horizontal digester design provides an even three phase (gas, liquid, and solid) oxygen-alkaline cooking process. This new digester design provides pre-chemical processing stages for most raw materials used in the chemical-mechanical, semi-chemical, and ultra-sonic pulping processes.

Increased Reaction Rate: Dramatically increases the reaction rate and decreases the unbundle fibers amongst the pulp. The stock is constantly stirred providing a continuous mixing of liquor while moving the stock forward. It also defibers the (non-cooked fibers) and consistently blends in green chemical liquor. This process provides dynamic cooking or bleaching, which significantly reduces the time and minimize uncooked cellulose among the pulp without the need for blowing causing gas discharging into the environment.

Liquor Ratio: Freely adjusted in discrete increments which prevent uneven bleaching. This adjustment can reduce the steam consumption for cooking and the amount of black liquor in the extraction stage and reduces the workload of the black liquor evaporator. Depending on the type of stock, the liquor to stock ratio can be as low as 2.5:1 ratio.

Large Digester Chamber: Available in various capacities supporting annual pulp production from 10,000 – 200,000 tons per year or 28—570 tons per day.
The main components of the Horizontal Continuous Biomass Reactor Tunnel are the rotary feeding body and discharging screw. Raw material and the bio-reaction liquor are mixed at the feeding region and injected into the body, within the body, the stock keeps mixing and moving forward. After the digester process, the stock exits by means of a discharging screw.

This biological reactor is derived from the horizontal, rotary type, continuous digester. The advantage of this configuration is the biological digester process is more homogeneous and has a higher reaction rate.

The reactor has a larger footprint and single functional equipment. The dewatering system located at the front and end of the horizontal reactor. This reactor model is designed for treating raw materials which have negative buoyancy in liquor, such as cotton and bamboo filaments.
AP&P Machinery has developed its new high-efficiency waste bioreactor water treatment tower. The waste water treatment tower has a small footprint, 20-30% less of the traditional aeration tank, and has a shorter stay time of 1–2 hours. The reactor has a high volume load of up to 70kg CODcr/m3 or up to 30 times the conventional activated sludge method.

Capable of treating CODcr102-104mg/L waste water and is especially suited for high concentration removal of CODcr (Chemical Oxygen Demand) and reach over 65%, BOD5 (Biochemical Oxygen Demand) over 85%.

**Addresses a variety of raw material** processing waste and can manage pollution fluctuation loads of up to 40% without affecting the treatment quality.

**High biochemical reaction rate**, usually takes 0.5 to 2 hours completing various waste water treatment.

**High oxygen utilization rate**, up to 80% or above, conventional activated sludge process rate is about 15%, efficiency improved by at least 5 times.

**Power consumption is 1/3 of conventional** activated sludge method, overcome the high energy consumption problem worldwide exists among various aerobic biochemical method.
**TWIN WIRE PULP WASHER**

The Twin Wire Vertical Pulp Washer takes advantage of the extrusion forces produced by the tension of twin wire that works on the extractor roll. And under such extrusion force, the washer can do repeated dehydration of the pulp through the multi-stage up flow washing.

The washer also has another strong press roll with strong pre-pressure (to avoid high linear pressure crush the pulp layer) which is located right after the last extractor roll. The water out of press roll also goes into the next stage washing to further improve washing efficiency.

Therefore, the final pulp concentration can be up to 30% or even higher. The advantages of this patent are as follows:

The power consumption is 1/10 of the traditional horizontal belt washer’s power, and 1/5 of the traditional vacuum belt washer.

The average traditional washers are no more than 5-stage up flow washing devices. Our high-efficiency washers can achieve 8 to 16 multiple-stage washing. The washing efficiency can be over 99% using only 5 M3 of water per ton of pulp.

Our high-efficiency washers are designed with a small footprint and capable of output over 100 tons per day.
INTEGRATED MULTI-FUNCTIONAL SCREENER

Since 2004, we have revolutionized the design of the Multi-Screener to provide the function of multiple pieces of equipment into a single machine. The integrated multi-function screener is most often used in OCC or when waste paper is added to virgin pulp, can provide, screening sorting and de-flaking in a single process. Flakes are defibered and improves on fiber loss in tailings.

Our Integrated Multi-functional Screener consolidates all the functions of a series of conventional equipment into a single machine while still reducing energy consumption.

The features of the Integrated Multi-function screener are as follows:

- This single machine provides multi-section screening, and a higher fiber utilization rate resulting in less than .3% in the slurry tailings.

- Replaces up to 14 specialized traditional machines to perform the same functions.

- The new generation integrated multi-function screener is designed for low maintenance. The drum can be removed within 10 minutes compared to 5 hours in the first generation multi-function screener currently being marketed by third party manufacturers.

The 2nd generation of integrated Multi-functional screener is made of stainless steel and is available in varying capacities in accordance to each of our customers requirements.
WE PROVIDE INNOVATIVE SOLUTIONS FOR A MORE PRODUCTIVE AND CLEANER WORLD

Headquarters
British Columbia, Canada
Sales: +1 (604) 248-2466

Provence of Shandong, China
Sales: +86-1356261-5220

Rio de Janerio, Brazil S.A.
Sales: +55-21-98176-574

www.appmachinery.net