

INDUSTRY OVERVIEW

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SOURCE OF INFORMATION

We have commissioned Frost & Sullivan, an independent market research and consulting company, to conduct an analysis of, and to prepare a report on the papermaking felts manufacturing industry in the PRC. The report prepared by Frost & Sullivan for us is referred to in this document as the Frost & Sullivan Report. We agreed to pay Frost & Sullivan a fee of RMB669,000 which we believe reflects market rates for reports of this type.

Founded in 1961, Frost & Sullivan has 40 offices with more than 2,000 industry consultants, market research analysts, technology analysts and economists globally. Frost & Sullivan’s services include technology research, independent market research, economic research, corporate best practices advising, training, client research, competitive intelligence and corporate strategy.

We have included certain information from the Frost & Sullivan Report in this document because we believe this information facilitates an understanding of the papermaking felts manufacturing industry in the PRC for the prospective investors. The Frost & Sullivan Report includes information of the papermaking felts manufacturing industry in the PRC as well as other economic data, which have been quoted in this document. Frost & Sullivan’s independent research consists of both primary and secondary research obtained from various sources in respect of the papermaking felts manufacturing industry in the PRC. Primary research involved interviews with leading industry participants and industry experts. Secondary research involved reviewing company reports, independent research reports and data based on Frost & Sullivan’s own research database. Projected data were obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. Except as otherwise noted, all the data and forecasts contained in this section are derived from the Frost & Sullivan Report, various official government publications and other publications.

In compiling and preparing the research, save for the foreseeable impact resulted from COVID-19 outbreak, Frost & Sullivan assumed that (i) the social, economic and political environments in the relevant markets are likely to remain stable in the forecast period; and (ii) the demand and preferences of the ultimate users of the papermaking felts have no material change in the relevant markets, which ensures the steady development of papermaking felts manufacturing industry in the PRC. In preparation of the forecast data, given that the outbreak of COVID-19 in the PRC has been under effective control since the second half of 2020, Frost & Sullivan assumed that there will be a gradual resumption of economic performance thereafter, as supported by (i) declining number of confirmed COVID-19 cases in the PRC since mid of March in 2020, and (ii) recovery of GDP in the PRC with a year-on-year growth of approximately 21.2% and 13.6% in the first and second quarter of 2021, respectively, according to National Bureau of Statistics of China.

OVERVIEW OF PAPERMAKING INDUSTRY IN THE PRC

Definition and classification

Paper generally refers to thin matted or felted sheets of fibres made from pressing and drying of moist cellulose pulp derived from wood, rags or grasses through water suspension on a fine screen. Attributable to light weight, thinness and flexibility, paper is widely used for printing, writing, decorating and sanitary purposes. Paperboard is a thick paper-based material, which is usually heavier in weight and has higher rigidity and foldability comparing to ordinary paper. Paperboard is often used for packaging purposes.

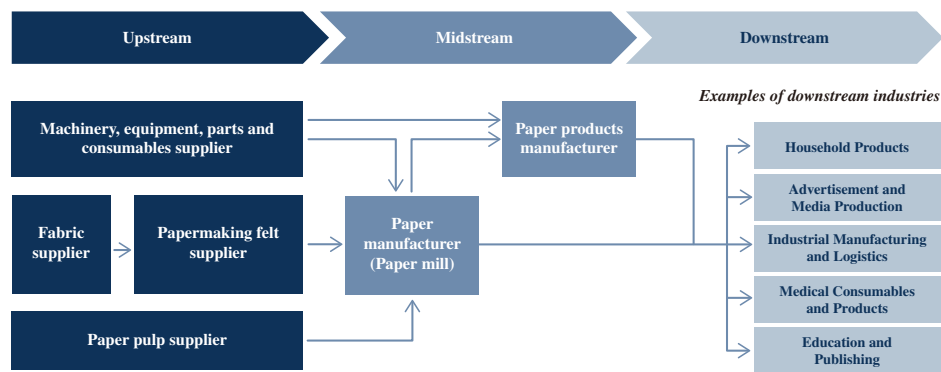
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- Packaging paper mainly includes corrugated medium and linerboard, which is commonly applied to serve protective effect to items or goods in logistics industry. Packaging paper is usually heavier in weight as compared to printing and household paper, coarser in terms of finishing.
- Printing paper includes newsprint, printing and writing paper, art paper etc. The weight, coating, finishing, opacity and brightness of printing paper are usually altered based on printing and design requirement.
- Household paper refers to consumable paper products such as paper towels, toilet tissue, facial tissue, paper napkins, moist flushable wipes, wet wipes etc. It is usually lesser in density, and softer in terms of paper strength as compared to other paper products.
- Specialty paper and other types of paper products includes special industrial paper, abrasive paper, papers for electrical insulation, medical use and agriculture use, etc.

Papermaking primarily consists of four stages, namely (i) stock preparation, (ii) dewatering, (iii) pressing and drying and (iv) finishing and converting. Mixture of wood pulps and recycled paper fibres will be fed from headbox to wet press section, dryer section and calendar section where moisture in the pulp is removed, paper sheet is formed, dried with further finishing steps.

Value chain analysis

The overall papermaking industry comprises upstream material suppliers, mid-stream paper and paper products manufacturers, as well as downstream industries for paper products consumption. Apart from machinery, equipment, parts and paper pulp suppliers, papermaking felts suppliers are core upstream stakeholders in the papermaking industry as papermaking felts are important consumables of papermaking machines. The midstream of the industry consists of paper manufacturers (paper mills) and paper products manufacturers which process and manufacture various types of paper and paper products for different downstream industries in domestic market or overseas market.



Source: Frost & Sullivan

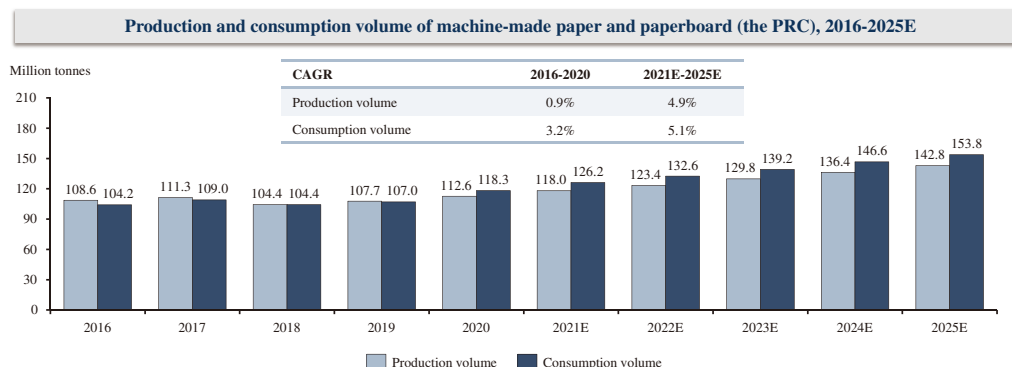
Production and consumption volume of machine-made paper and paperboard

According to the China Paper Association, the production and consumption volume of machine-made paper and paperboard in the PRC increased moderately at a CAGR of 0.9% and 3.2%, respectively during 2016 to 2020.

On the basis of (i) surge in demand for packaging paper due to trending e-commerce, and (ii) sustained demand for household paper as a necessity in daily lives of Chinese residents, it is expected that the production and consumption of machine-made paper and paperboard will not be adversely affected by the COVID-19 outbreak in 2020 in the PRC, except that the supply of paper has been temporarily affected by the suspension of business operation of papermaking enterprises in first quarter of 2020. On the other hand, the issuance of “Prohibit and Restrict the Production, Sales and Use of Disposable Plastic Products (Consultation Paper)” (《禁止、限制生產、銷售和使

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用的塑膠製品目錄(徵求意見稿)》) is set to drive the demand for paper as a substitute to disposable plastic products. Accordingly, the production volume and consumption volume of machine-made paper and paperboard in the PRC are estimated to increase at a CAGR of approximately 4.9% and approximately 5.1%, respectively during 2021 to 2025.

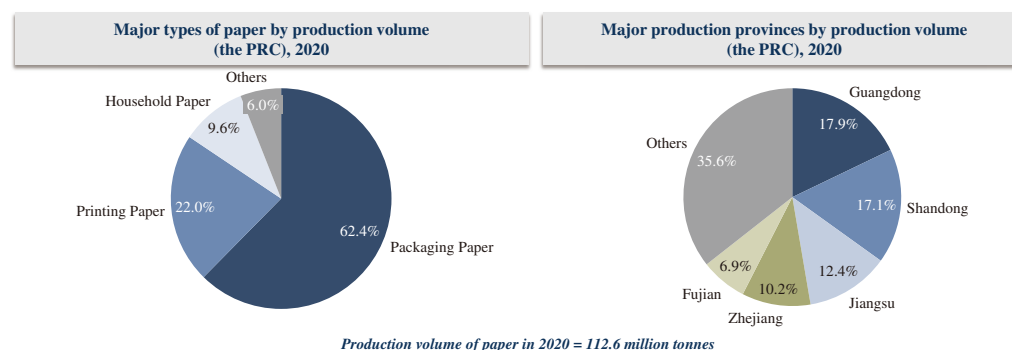


Source: China Paper Association, Frost & Sullivan

Key types and production sites of paper in the PRC

Packaging paper, including linerboard, corrugated medium and white board used for commodity and logistic packages, is the key paper products in the PRC, which accounted for approximately 62.4% of total production volume of paper in 2020. The substantial share of packaging paper is attributable to the demand from logistics industry as packaging is often required as a protection to goods and items in e-commerce and expressway deliveries. Printing paper, including newsprint paper, writing paper and coated art paper are mainly used for print media and office stationery, and accounted for approximately 22.0% of total production volume of paper in 2020.

Featured with well-developed infrastructure, production technology and logistics systems for better access to raw materials and distribution of products, Eastern and Southern provinces such as Guangdong, Fujian, Jiangsu and Zhejiang are the key papermaking regions in the PRC. In terms of production volume of paper, the top five provinces, including Guangdong, Shandong, Zhejiang, Jiangsu and Fujian, accounted for over 60% of paper production volume in the PRC in 2020.



Source: China Paper Association, Frost & Sullivan

The papermaking and paper products industry in the PRC is fragmented. According to China Paper Association, there were approximately 2,500 paper and paperboard manufacturing enterprises in the PRC in 2020. The top 10 papermaking enterprises had an estimated aggregate market share of approximately 46.6% in terms of production volume. The papermaking and paper products industry is undergoing consolidation, mainly driven by more stringent environmental protection policies that suspended disqualified and non-compliant small enterprises. Correspondingly, sizeable papermaking enterprises which demonstrate proven capability in compliance with new standards may capture the market share.

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OVERVIEW OF PAPERMAKING FELTS MANUFACTURING INDUSTRY IN THE PRC

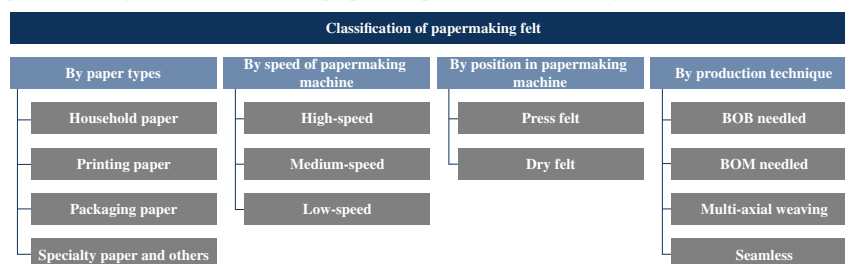
Definition and classification of papermaking felts

Papermaking felts are fabrics used in papermaking machines for pressing and dewatering, with a structure of mixed fabrics made from nylon and polyester. Papermaking felts are mainly used in wet press section and dryer section for dewatering, pressing, forming and drying of paper, which goes through a roll press together with the paper sheet to remove water off the wet web by absorbing the water without damaging the paper sheet. Papermaking felts are consumables with a replacement cycle of approximately 30 to 180 days and is regularly replaced in papermaking machines. The replacement cycle of papermaking felts is dependent on various factors such as specification of papermaking machine and type of paper produced.

Papermaking felts are specifically designed with features and core functions, such as (i) good elasticity for longitudinal extension, (ii) spaces and channels for flow of extracted moisture, (iii) high strength, stability and durability to withstand the compressive pressure, resistance to wearing and therefore avoid shifting of felt during operation of papermaking machine, along with other key features such as resistance to chemical, heat and microbial growth. In addition, papermaking felts are often customised based on the papermaking machines and types of paper output, and specifications of papermaking felts vary in width, length and thickness depending on the application in the machine. As such, papermaking felts are classified based on the paper types produced by papermaking machines (e.g. household paper, printing paper, packaging paper, specialty paper and others). On the other hand, pulp papermaking felts are used to enhance the dewatering ability and abrasion resistance, and withstand the high pressure between the pressing rollers during papermaking process.

Papermaking felts are also commonly classified into high-speed, medium-speed and low-speed based on the operating speed of papermaking machine and high-quality papermaking felts are generally required for high-speed papermaking machine. Other common classification of papermaking felts include position in papermaking machine (e.g. press felt and dry felt) and production technique (e.g. batt-on-base (“**BOB**”) needled, batt-on-mesh (“**BOM**”) needled, multi-axial weaving and seamless). With good elasticity and high strength, press felt is used to press the paper sheet in order to remove moisture and transfer the paper sheet to dry felt for dewatering of paper sheets.

There is no standard threshold for respective category of speed of papermaking machine due to large variations of paper types of weight and the threshold of respective speed category increases along with technological advancement. In general, high-speed refers to above 600m per minute, medium-speed refers to 200m per minute to 600m per minute, and low-speed refers to below 200m per minute. The categorisation of speed is different based on paper types and papermaking machine and there are different speed-type requirements for papermaking felts in different applications. For example, the threshold for certain high-speed packaging papermaking machine and household papermaking machine could exceed around 800m to 900m per minute above and certain high-speed newsprint and copy paper could reach 1,800m per minute. In general, there is a limitation for certain speed range in order to achieve complete dewatering of paper sheet in the papermaking machine. In view of the aforesaid reasons and considering the advancement of papermaking technology with higher speed for certain paper categories such as printing and packaging paper, higher speed papermaking machines have been developed and the range and threshold for speed categories for these paper types could be higher.



Source: Frost & Sullivan

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Sales volume and sales value of papermaking felts in the PRC

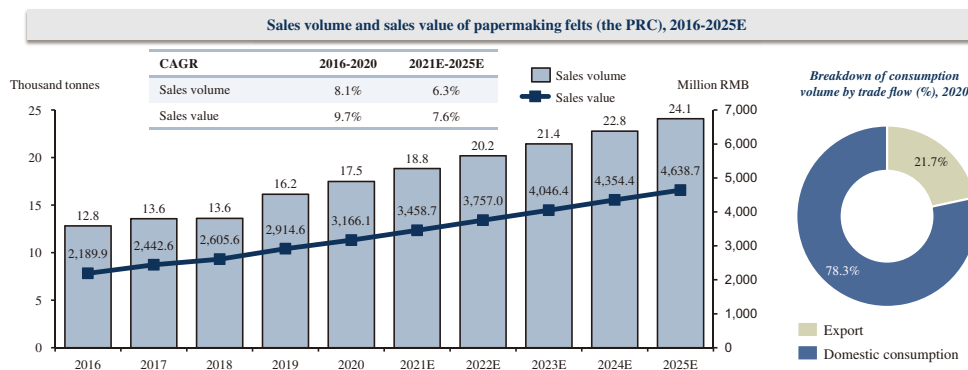
The market demand for papermaking felt is associated with the demand for paper. Specifically, the increase in output of paper machines, upgrade, replacement and expansion of production capacity from papermaking enterprises will drive the demand for papermaking felts which serve as customised consumables in different paper machines.

From 2016 to 2020, the sales volume of papermaking felts in the PRC grew from approximately 12,820.1 tonnes to approximately 17,487.9 tonnes, representing a CAGR of approximately 8.1%. Apart from the production and consumption of machine-made paper and paperboard, the market demand for papermaking felts depends on the upgrade of papermaking machine. In recent years, the increase in width of paper and production speed of papermaking machine with higher production capacity has higher wear and tear of consumables in the production process and requires the more frequent replacement and demand for papermaking felts, which results in growing demand for papermaking felts. Therefore, the increase in sales volume and sales value of papermaking felts in the PRC is higher than the increase in production and consumption volume of machine-made paper and paperboard in the PRC in 2016 to 2020.

Driven by the expected growth of domestic paper production and strong demand for papermaking felts in Southeast Asia, the sales volume of papermaking felt has seen a rapid growth from 2016 onwards with the improvement in product quality, the growth is set to maintain at a CAGR of 6.3% during 2021 to 2025.

Similarly, the sales value of papermaking felts in the PRC has achieved an overall growth from approximately RMB2,189.9 million in 2016 to approximately RMB3,166.1 million in 2020, representing a CAGR of approximately 9.7%. With the expanding production of high-speed papermaking felts among local papermaking felts manufacturers, the sales value of papermaking felts is expected to increase at a CAGR of approximately 7.6% during 2021 to 2025.

The impact of COVID-19 outbreak has temporarily affected the material supply and production of papermaking felts manufacturers in the PRC during first quarter of 2020. However, in view of the fact that (i) both papermaking felts manufacturers and their customers (i.e. paper manufacturers) generally resumed operation in mid of February 2020 and (ii) paper manufacturers are required to extend operation hours for order fulfilment upon resumption of operation, as well as (iii) expected growth in demand for paper as a result of the issuance of “Prohibit and Restrict the Production, Sales and Use of Disposable Plastic Products (Consultation Paper)” (《禁止、限制生產、銷售和使用的塑膠製品目錄(徵求意見稿)》), the market demand for papermaking felts in the PRC is expected to increase during from 2021 to 2025.



Note: the market data for the year of 2016 to 2019 is extracted from data published by China Paper Association. The market data for the year of 2020 is quoted from Frost & Sullivan’s (i) independent market research and interview, (ii) analysis of actual year-on-year financial and/or business performance of key market participants in 2020, and (iii) analysis of actual performance of papermaking industry in 2020, given that the data for year of 2020 is not yet published by China Paper Association as at the Latest Practicable Date.

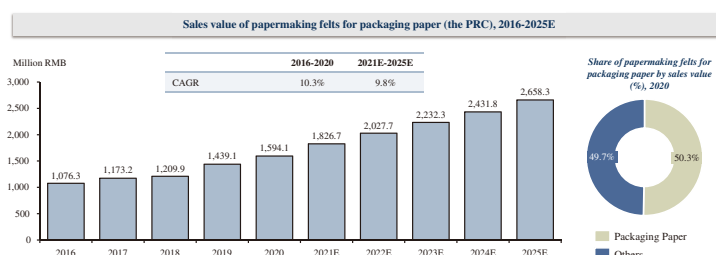
Source: China Paper Association, Frost & Sullivan

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Sales value of papermaking felts for packaging paper in the PRC

Packaging paper is the key paper product in the PRC, which accounted for approximately 62.4% of the total production volume of machine-made paper and paperboard in 2020. During the past five years, benefiting from the rising demand from logistics industry, production and consumption of packaging paper remained high in the PRC. In line with the sustained demand for packaging paper, sales value of papermaking felts for packaging paper increased from approximately RMB1,076.3 million in 2016 to approximately RMB1,594.1 million in 2020, representing a CAGR of approximately 10.3%. It is expected that the sales value of papermaking felts for packaging paper will continue to increase at a CAGR of approximately 9.8% during 2021 to 2025.

In view of the growing demand for packaging paper for logistics in e-commerce business in the midst of COVID-19 outbreak, the corresponding market demand for papermaking felts for packaging paper is estimated to demonstrate a higher growth rate during 2020 to 2021 on the basis that the outbreak of COVID-19 in the PRC is effectively controlled by mid-2020 and the policy for limiting the use of disposable plastic products is expected to stimulate the demand for packaging paper.



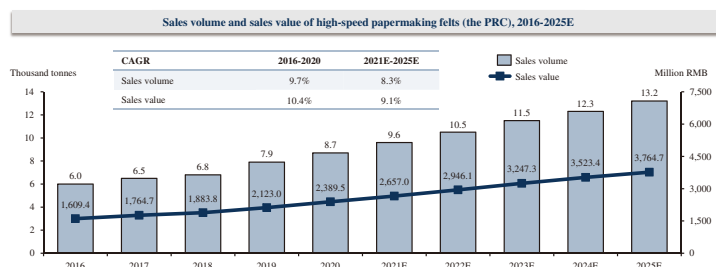
Note: the market data is derived based on Frost & Sullivan’s (i) review and analysis of data published by China Paper Association, (ii) independent market research and interview, (iii) analysis of actual year-on-year financial and/or business performance of key market participants, and (iii) analysis of actual performance of papermaking industry.

Source: China Paper Association, Frost & Sullivan

Sales volume and sales value of high-speed papermaking felts in the PRC

Driven by the trend of eliminating outdated production capacity of papermaking enterprises which are mainly equipped with low speed papermaking machines, and increasing application of high-speed papermaking machines in recent years, the sales volume of high-speed papermaking felts in the PRC recorded a growth from approximately 6,000 tonnes in 2016 to approximately 8,700 tonnes in 2020, representing a CAGR of 9.7%. Going forward, the sales volume of high-speed papermaking felts in the PRC is expected to increase at a CAGR of 8.3% from 2021 to 2025.

The sales value of high-speed papermaking felts in the PRC achieved a growth from approximately RMB1,609.4 million in 2016 to approximately RMB2,389.5 million in 2020, representing a CAGR of 10.4%, and is expected to grow further at a CAGR of 9.1% from 2021 to 2025.



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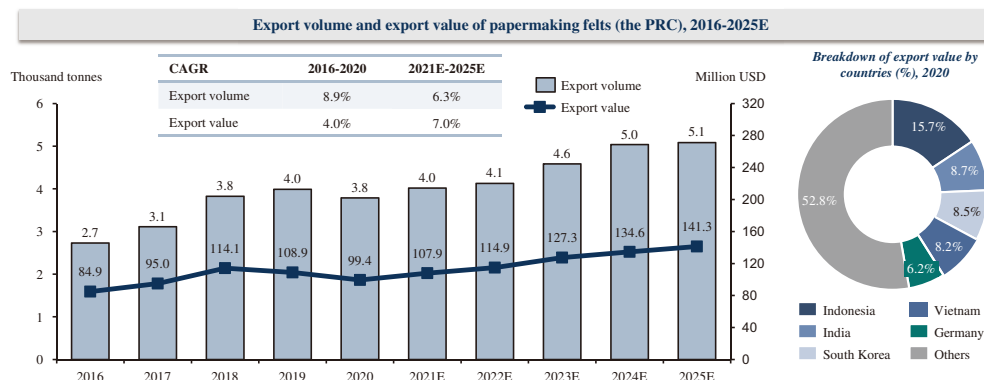
Note: High-speed papermaking felts refer to papermaking felts for papermaking machine with production speed of above 600m per minute. The market data is derived based on Frost & Sullivan’s (i) review and analysis of data published by China Paper Association, (ii) independent market research and interview, (iii) analysis of actual year-on-year financial and/or business performance of key market participants, and (iii) analysis of actual performance of papermaking industry.

Source: Frost & Sullivan

Export volume and export value of papermaking felts in the PRC

The export volume of papermaking felts in the PRC recorded a growth from approximately 2.7 thousand tonnes in 2016 to approximately 3.8 thousand tonnes in 2020, representing a CAGR of approximately 8.9%. Similarly, the export value of papermaking felts in the PRC also increased from approximately USD84.9 million in 2016 to approximately USD99.4 million in 2020, representing a CAGR of approximately 4.0%. The growth was mainly driven by the expansion of paper and paper products manufacturers in Southeast Asia during recent years with increasing number of factories opening in the region, boosting the demand of papermaking felts from the PRC. Indonesia was the major destination in terms of export value of papermaking felts from the PRC, accounting for a share of approximately 15.7% in terms of value in 2020.

Due to the disruption of papermaking and trade activities as a result of COVID-19 outbreak in Southeast Asia and other major end markets such as Europe and South Korea, the export volume and value of papermaking felts in the PRC is expected to grow moderately at a CAGR of approximately 6.3% and 7.0% respectively during 2021 to 2025.



Source: Trade Map, Frost & Sullivan

Major end markets for export of papermaking felts in the PRC

During the past five years, Southeast Asia remained an important end market to papermaking felts manufacturers in the PRC due to the growing number of paper and paper products manufacturers in the region. The export value of papermaking felts in the PRC to Indonesia recorded a growth from approximately USD11.5 million in 2016 to approximately USD15.6 million in 2020, representing a CAGR of approximately 7.8%. In particular, the export value to Vietnam has registered a CAGR of approximately 23.7% from 2016 to 2020. Going forward, underpinned by the continuous expansion of paper and paper products manufacturers in Southeast Asia to cope with the growing paper demand from urbanisation and higher living standards, the demand and therefore export value of papermaking felts from the PRC to Southeast Asia is expected to grow prosperously in the next few years.

On the other hand, owing to the increasing operation costs and intensified price competition amongst domestic papermaking felts manufacturers in the PRC especially for the high-speed papermaking felts, the export unit price and therefore export value of papermaking felt in the PRC recorded a moderate decline and papermaking felts manufacturers in the PRC are facing shrinking profitability when selling products to other overseas markets during 2019 to 2020.

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Source: Trade Map, Frost & Sullivan

Market drivers and opportunities

Higher demand of paper products in downstream industries — The expansion of the papermaking felts manufacturing industry in the PRC is highly associated with the growing demand of paper and paper products in downstream industries. According to the China Paper Association, the consumption demand of paper and paperboard products had increased from approximately 104.2 million tonnes in 2016 to approximately 118.3 million tonnes in 2020, representing a CAGR of approximately 3.2%. Attributable to the growing population, accelerated urbanisation, and economic growth, the consumption of paper products such as household paper, printing paper and packaging paper is expected to demonstrate a steady and sustainable growth in the forthcoming years as paper products are necessity in daily life for residents in the PRC. Specifically, the significant growth of online retail sales and e-commerce bolstered the demand for packaging paper in the PRC market given that the use of packaging is essential for e-commerce business. Despite the initiatives taken by certain e-commerce companies in reducing the packaging waste through adoption of green packaging in recent years, the impact on papermaking business is expected to be minimal on the basis that (i) the green initiatives generally focus on reducing the use of non-recyclable materials such as disposable foam packaging box, (ii) some types of paper are recyclable and are used for certain green packaging made from composite materials, and (iii) there is no foreseeable change in alternative recyclable substitutes for paper with similar properties and cost in near term. Furthermore, the demand for high quality paper also contributes to the development and sales of high-performance papermaking felts in the market.

Supportive policy for the development of industrial textiles industry — Pursuant to “the Guiding Opinions for the Development of the Industrial Textiles Industry in the 13th Five-Year Period” (《產業用紡織品行業“十三五”發展指導意見》) promulgated by the Ministry of Industry and Information Technology and the National Development and Reform Commission in 2017, “Made in China 2025” (《中國製造2025》) and “the Development Plan for the Textile Industry (2016-2020)” (《紡織工業發展規劃(2016-2020)》), the industrial textiles industry is considered as a key development area of textile industry in respect of the expansion of the industry and technological advancement. For example, the total industrial fabric processing volume is expected to grow at approximately 8% annually during 2016 to 2020 and the industrial textiles industry may demonstrate higher level of product innovation, expansion and integration of local enterprises, as well as more stringent regulations. Thus, as a sub-segment of industrial textile industry, the growth of papermaking felts manufacturing industry in the PRC is underpinned by the supportive guidance.

Expanding export trade with Southeast Asia and other emerging markets — Due to the rising consumption level of paper and paper products particularly in Southeast Asia, there is an increasing number of paper and paper products manufacturers setting up their business operations in the region. Furthermore, apart from targeting the domestic market, papermaking felts manufacturers in the PRC will also benefit from the growing export trade. For example, the export value of papermaking felts from the PRC to Indonesia and Vietnam had increased at a CAGR of 7.9% and 23.7%, respectively during 2016 to 2020. The growth in export trade with Southeast Asia and potentially other emerging countries such as India, will serve as a business opportunity for papermaking felts manufacturers in the PRC. In addition, the export trade of papermaking felt in

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the PRC is not materially affected by the U.S.-China trade war given that the export value of papermaking felt in the PRC to U.S. accounted for less than 2% of total export value of papermaking felt in the PRC from 2016 to 2020.

Market trends

Advancement of papermaking felts quality — Papermaking felts are considered a specialised industrial textile made from technical fabrics, which is specially designed and weaved for application in papermaking machine. Papermaking felts manufacturers are dedicated to research and development in respect of production technique that may influence the application, performance and durability of papermaking felts in papermaking machines. For example, researchers and certain papermaking felts manufacturers in the PRC had collaborated and conducted technical study to review the issue of vibration of papermaking felts and its associated impact on the safety of papermaking machine during operation. Furthermore, the shift of papermaking industry towards the use of high-speed papermaking machine and demand for high production speed and quality of paper also lead to the expansion of high-performance papermaking felts.

Industry consolidation and value chain integration — In view of the intensifying market competition and close business nature with stakeholders along the value chain, sizeable local papermaking felts manufacturers in the PRC may seek to merge with and/or acquire with their industry peers to enhance the production capacity and capability in research and development. Improvement of product technology is of vital importance to local papermaking felts manufacturers as the high-end market is currently dominated by foreign invested enterprises. In the future, sizeable enterprises may also demonstrate upstream or downstream expansion, given the close business relationship among stakeholders. For example, sizeable papermaking felts manufacturers may also acquire other manufacturers of paper machine consumables such as papermaking screen, in order to expand business horizontally in the industry chain and achieve synergies effects.

Adoption to green productions — The PRC government has put forth the promotion of green manufacturing and development of circular economy (循環經濟) in industrial textile industry and outline specific initiatives such as research and development of energy-saving production process, increase in the application of recycled fabrics in industrial textile and development of degradable industrial textile. As such, existing papermaking felts manufacturers are expected to demonstrate higher degree of adoption to the use of recycled materials for production.

Growing competitiveness of domestic players — Currently, the papermaking felts manufacturing industry is featured with several foreign invested market participants with strong capability in research and development and demonstrate premium product quality. Foreign invested papermaking felts manufacturers are highly competitive in the high-speed and high-performance segment of papermaking felts. In contrast, domestic market participants in the papermaking felts manufacturing industry are relatively competitive in terms of pricing and service level. In addition, in view of the government support for local enterprise towards the advancement of production quality and technology, domestic papermaking felts manufacturers are set to put higher emphasis on advancement of production technique and product quality.

Diversifying portfolio of paper and papermaking felts — The papermaking felts manufacturing industry serves as a service-oriented manufacturing industry and ties closely to downstream paper and paper products manufacturing industry, including household paper, printing paper (e.g. newsprint, printing and writing paper), packaging paper (e.g. linerboard, corrugated medium) and specialty paper and paper products manufacturers. Traditional paper and paper products manufacturers often provide homogeneous products and services, where they compete in pricing and logistics. In view of the increasing market competition and the foreseeable industry consolidation, mid-to-small sized paper and paper products manufacturers had attempted to innovate and start offering a wider product portfolio as well as other value-added services to stand out from the market competition. Correspondingly, as the upstream supplier to paper and paper products manufacturers, papermaking felts manufacturers are set to diversify their product portfolio to cope with the customer requirement.

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Growth of high-speed papermaking felt segment — The advancement of paper machine with higher operational efficiency, larger width and higher speed contributed to the higher requirements on consumables including papermaking felt. Specifically, the market of high-speed papermaking felt is expected to expand more rapidly as compared to other types of papermaking felts, which is mainly supported by the growing capability and investment of domestic enterprises on development and manufacturing of high-speed papermaking felt with improving product quality and at a competitive price over the foreign enterprises.

Market challenges and constraints

Evolving papermaking technology and higher customer requirement — The papermaking industry in the PRC is long-established and has experienced a rapid growth over the past decade with continuous upgrade of papermaking technology and efficiency. In particular, papermakers in the PRC has shown a strong preference of sourcing from papermaking felts manufacturers with distinctive product development capability and technology in design and production of high-speed papermaking felts. To cope with higher customer requirement, papermaking felts manufacturers are required to allocate additional financial and human resources to enhance research and development and production capability.

Talent recruitment — Development, production and sales of papermaking felts require in-depth and comprehensive know-how in relation to the requirement of downstream paper and paper products manufacturers. Given the fact that foreign invested papermaking felts enterprises own a strong research and development team with solid product development capability, domestic players find it difficult to recruit relevant experienced professionals to support their development. Similarly, availability of experienced management and sales professionals in the papermaking felts manufacturing industry is also limited, thus resulting in challenges for domestic players to expand their business. In contrast, papermaking felts manufacturers with stable management team and staff are more competitive as compared to their industry peers.

Impact of COVID-19 outbreak on papermaking and papermaking felts manufacturing market in the PRC

Since around December 2019, there has been an outbreak of new type of coronavirus disease, namely COVID-19, in the PRC and other countries. The PRC authorities have taken various measures, such as mandatory quarantine for residents and travellers, lockdown of certain cities and postponement of business units operation following the Chinese New Year holidays until mid of February 2020, in an attempt to contain COVID-19.

The level of impact of COVID-19 outbreak on paper manufacturers is dependent on the product types of categories which demonstrates different degrees of temporary change in market demand in the PRC. For example, the market demand for certain household and specialty papers, such as tissue paper, disposable medical wipes, as well as packaging paper primarily used in logistic sector, increased significantly during first two months of 2020 due to higher awareness towards personal hygiene and logistics demand resulted from the surge of e-commerce performance in the midst of closure of physical retail stores, while the other paper types such as printing paper has decreased in view of the temporary suspension of downstream business activities and limited raw material (e.g. scrap paper) supply. Similarly, the operation and business performance of papermaking felts manufacturers is likely to be affected by the COVID-19 outbreak during the first two months of 2020 and may experience certain degree of delay in material supply and order fulfilment, as well as temporary decline of market demand for papermaking felts resulted from the suspension of operation by some paper manufacturers.

However, the impact of COVID-19 outbreak is expected to be temporary given that (i) the number of confirmed COVID-19 cases in the PRC has been declining since February 2020 and (ii) some major paper manufacturers in the PRC have resumed over 80% of production capacity in March 2020. Subsequent to the resumption of operation of industrial enterprises, paper manufacturers in the PRC are expected to ramp up their utilisation for fulfilment of the delayed order, which will contribute to the surge in demand for consumables such as papermaking felts due to extended hours of operation of paper machines. In addition, paper manufacturer in the PRC are ramping up their production capacity to fulfil the growing market demand for paper amid the COVID-19 outbreak. According to China Paper association, the production capacity for cardboard

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and corrugated fiberboard of major paper manufacturers in the PRC is expected to increase by 12.4 million tonnes during 2020 to 2021, representing a growth rate of 23.0% from 2019 to 2021. Furthermore, the additional production capacity of household paper is set to reach approximately 2.6 million tonnes from 2020 onwards, which is higher than 2019 with approximately 1.6 million tonnes per year. As a result, the impact of COVID-19 outbreak on business performance of papermaking felts manufacturers such as our Group is set to be mitigated in a long term upon resumption of operation of paper manufacturers.

On the other hand, the ongoing COVID-19 outbreak in the overseas markets such as Southeast Asia and European countries have been adversely affecting the operation of paper manufacturers, logistics and trading companies, which results in decline of market demand and supply of papermaking felts imported from the PRC in the aforesaid overseas markets, and therefore affect the business performance of papermaking felts manufacturers in the PRC targeting overseas markets. However, given that some paper products such as household and specialty papers are considered essential, the impact of COVID-19 outbreak in overseas markets on papermaking felts manufacturers in the PRC is expected to recover in a long term when the outbreak is effectively controlled.

The COVID-19 outbreak also led to robust growth in demand for packaging paper with the surge in e-commerce due to change in consumption pattern of consumers as a result of social distancing measures. The demand for packaging paper and cardboard has also seen a recovery as reflected by the surge in paper price during the second half of 2020. As such, the adoption of online retail platform will benefit the supply chain of packaging paper and papermaking felt as consumables in papermaking process.

Cost structure analysis

The average monthly salary of employed persons in manufacturing industry witnessed a steady growth from approximately RMB3,892.8 in 2016 to approximately RMB5,232.6 in 2020, representing a CAGR of approximately 7.7%. The growth was primarily attributable to the higher demand for workers in the manufacturing industry. The average monthly salary of employed persons in the manufacturing industry is expected to increase at a CAGR of approximately 7.0% from 2021 to 2025.

Nylon is the major raw material of monofilaments and fibre for production of papermaking felts. The import price of imported nylon monofilaments and fibre increased at a CAGR of approximately 3.0% during 2016 to 2020. On the other hand, the price of domestic nylon monofilament and fibre recorded a fluctuation -3.2% during 2016 to 2020. Going forward, the price of imported and domestic nylon monofilaments and fibre is expected to increase during 2021 to 2025 with the growing demand from manufacturers. The growing operational cost is expected to drive the increasing price of papermaking felts.

Average price of imported and domestic monofilaments and fibre in papermaking felts manufacturing (the PRC), 2016-2025E

	Unit	2016	2017	2018	2019	2020	2021E	2025E	CAGR (2016-2020)	CAGR (2021E-2025E)
Price of imported nylon monofilament and fibre.	RMB per kg	57.7	60.2	63.1	64.9	64.9	67.2	76.1	3.0%	3.2%
Price of domestic nylon monofilament and fibre.	RMB per kg	20.6	27.1	29.0	22.6	18.1	18.5	20.6	-3.2%	2.7%

Note: the price of imported nylon monofilament and fibre takes into account the exchange rate fluctuation between USD and RMB

Source: Frost & Sullivan

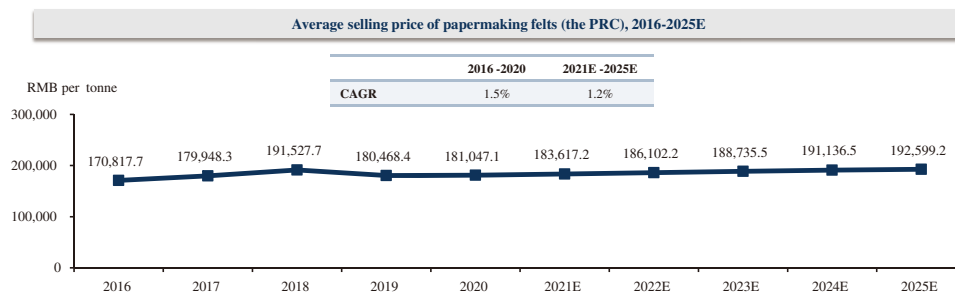
Price range and price trend of papermaking felts

Papermaking felts sold in the PRC typically have a wide price range and the price of papermaking felt in the PRC generally varies based on the product quality and category of papermaking felts by speed. The price of high-speed papermaking felt ranges from approximately RMB200,000 to approximately RMB450,000 per tonne while price of medium-speed papermaking felt ranges from approximately RMB130,000 to approximately RMB200,000 per tonne. The price of low-speed papermaking felt is generally below RMB130,000 per tonne in 2020.

Attributable to the rise in demand for paper and paper products and increase in raw materials cost, the average selling price of papermaking felts had achieved an overall growth from approximately RMB170,819.6 per tonne in 2016 to RMB181,047.1 per tonne in 2020, representing a CAGR of approximately 1.5%. The drop of the average selling price during 2019 to 2020 was

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mainly due to the intensified price competition of high-speed papermaking felts between foreign and domestic manufacturers. In particular, the decrease of aggregate market share of top five papermaking felt enterprises, comprising mainly foreign enterprise in the PRC from 49.3% to 48.6% during 2019 to 2020 indicates that domestic papermaking felt manufacturers expanded more rapidly and offer papermaking felts at a more competitive price over their foreign peers, which results in slight decline of overall average selling price of papermaking felt in the PRC. Going forward, with the positive outlook of the paper and paper products manufacturing industry in the PRC, the growing demand for high-speed and high-performance papermaking felts and the increasing level of participation by domestic papermaking felt manufacturers in developing high-speed papermaking felts of higher selling price than low-end and mid-speed papermaking felts, the average selling prices of papermaking felts in the PRC is expected to maintain a steady growth at a CAGR of approximately 1.2% during 2021 to 2025.



Source: Frost & Sullivan

The average selling price of papermaking felts sold by our Group is slightly lower than the average selling price of papermaking felts due to the fact that our Group's revenue from medium-speed papermaking felts accounted for approximately 56.7%, 55.5%, 50.0% and 48.2% of the total revenue of our Group during the Track Record Period, while the revenue of the Group from high-speed papermaking felts accounted for approximately 20.0%, 23.4%, 30.1% and 31.0% of revenue of our Group respectively. In contrast, the overall papermaking felts market comprises mainly high-speed papermaking felts which accounted for approximately 49.7% and 75.5% of overall sales volume and sales value of papermaking felts market in the PRC in 2020, and the unit price of high-speed papermaking felts is generally higher than the medium-speed papermaking felt and low-speed papermaking felt. In addition, the high-speed papermaking felts segment is also dominated by the foreign-invested papermaking felts manufacturers and their selling price is generally higher than that of local papermaking felts manufacturers including our Group, attributable to product quality and brand reputation, and the top 4 foreign-invested papermaking manufacturers has an aggregate market share of approximately 42.7% in the overall papermaking felts market in the PRC in terms of revenue in 2020. Despite the lower average selling price, it is a competitive edge for our Group to sell papermaking felts with comparable quality as compared to other foreign-invested papermaking felts manufacturers at a competitive price.

COMPETITIVE LANDSCAPE OF PAPERMAKING FELTS MANUFACTURING INDUSTRY IN THE PRC

Overview of market competition

Overall, the papermaking felts manufacturing industry in the PRC is relatively concentrated comprising a limited number of market participants. According to Frost & Sullivan, there were approximately 20 notable local enterprises and approximately 10 foreign invested enterprises engaging in manufacturing and sale of papermaking felts in the PRC. Attributable to the advanced technology, research and development capability and higher product quality, foreign invested enterprises in the papermaking felts manufacturing industry in the PRC are generally considered more competitive over most of the local papermaking felts manufacturers. On the other hand, only a few local papermaking felts manufacturers, including the Group, demonstrated capability of producing high quality papermaking felts for high-speed papermaking machines while majority of other local enterprises generally compete on supplying papermaking felts for medium and low-speed papermaking machines.

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Currently, leading foreign invested enterprises in the papermaking felts manufacturing industry in the PRC are long-established multinational companies with advanced technology and equipment focusing on the production of high-quality felts, and most of them demonstrated vertical expansion whereby they are involved in the supply of papermaking felts machines, papermaking machines and even paper products. The development of the papermaking felts manufacturing industry in the PRC in respect of technological advancement and strengthened research and development capabilities of leading market participants may pose the barrier for new entrants and threats to existing local enterprises without development capability.

According to Frost & Sullivan, the top five papermaking felts manufacturers in the PRC market accounted for approximately 48.6% of market share in terms of revenue in 2020. Our Group was one of the top five papermaking felts manufacturers in the PRC market, among which, our Group ranked fourth and was the only papermaking felts manufacturer headquartered in the PRC, with an approximate market share of 5.8% in terms of revenue in 2020. As compared to other top five papermaking felts manufacturers, our Group focuses primarily in the PRC with papermaking felts as the main product. In contrast, some of the other top five papermaking felts manufacturers are conglomerate with global presence, and may also focus on sales of other products including, papermaking machine as well as other papermaking consumables. In addition, our Group offers papermaking felts with different speed range while some of the other leading players mainly offer high speed papermaking felts. During the Track Record Period, major part of our revenue was generated from the products for medium-speed papermaking felts, which accounted for approximately 56.7%, 55.5%, 50.0% and 48.2% of our Group’s total revenue during the respective year/period due to (i) the high market demand for and relatively high gross profit margin of medium-speed papermaking felts as compared to low-speed papermaking felts which, coupled with our Group’s production capacity, provided stable income to our Group and maintained the market share of our Group’s product and the reputation of our Group; and (ii) the fact that a solid focus on end customers’ needs on medium-papermaking felts laid the foundation for our Group to expand the market share of high-speed papermaking felts in the future, since there is an expected increasing demand for high-speed papermaking felts in the papermaking industry as end customers upgrade from medium-speed and/or low-speed papermaking machines. As the leading domestic papermaking felts manufacturer, our Group demonstrates a better understanding towards the development of papermaking industry in the PRC with a more effective communication with domestic paper manufacturers in respect to the paper machine optimisation and other value-added services offered to customers especially for domestic papermaking enterprises of different size and scale in the PRC. On the other hand, despite the higher research and development capability and better useful life of product offered by other top five papermaking felts manufacturers, our Group is more competitive in customer service, after-sales service and price and the papermaking felts products sold by our Group has a higher cost performance as compared to by other top five papermaking felts manufacturers.

Leading papermaking felts manufacturers in the PRC, 2020

Rank	Market participant	Year of establishment	Headquarter	Approximate revenue (Million RMB)	Market share by revenue (%)
1	Company A	1895	United States	545.6	17.2%
2	Company B	1825	Germany	387.4	12.2%
3	Company C	1797	Finland	245.3	7.7%
4	Our Group	2007	The PRC	182.8	5.8%
5	Company D	1811	Germany	177.9	5.6%
Sub-total				1,539.0	48.6%
Others				1,627.1	51.4%
Total				3,166.1	100.0%

Notes:

- (i) Company A is the world’s leading producer of custom-designed fabrics and felts for papermaking machines. It operates 23 plants in 10 countries and manages its business in the PRC through its subsidiaries in Zhejiang and Guangdong.
- (ii) Company B has 15 subsidiaries in Asia with comprehensive solutions provided to the paper and paper products manufacturers. Its major products in the PRC include papermaking screens and felts for high-speed papermaking machines and papermaking machines and its factories are located in Jiangsu.

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- (iii) Company C engages in the development and supply of technologies, automation and services for the pulp, paper and energy industries, which has over 200 years of history as an industrial operator and is formerly owned by the State of Finland. Company C has three service centres in the PRC providing papermaking screens and felts, and machines to paper and paper products manufacturers. It has factories in Guangdong, Shandong, Jiangsu and etc.
- (iv) Company D has been established worldwide as one of the major suppliers of papermaking screens and felts for all sections and all paper grades. It has subsidiaries and production lines in the PRC located in Jiangsu.

Source: Frost & Sullivan

Nature of market competition

Product quality — Quality and performance of papermaking felts is associated with production efficiency and cost deduction in paper manufacturing process. Papermaking felts manufacturers are required to offer modifications and customisations of products to customers upon request to support their business operation. Therefore, papermaking felts manufacturers which can fulfil customer requirements by offering high quality products will stand out from the competitors.

Business relationship with stakeholders — Leading market participants in the papermaking felts manufacturing industry in the PRC generally maintained a close business relationship with upstream suppliers, downstream customers and other parties such as research institutions. A good business relationship with key stakeholders enables papermaking felts manufacturers to source materials, perform research and development activities, and provide customised products through understanding of customer requirement. Market participants can also obtain information on market trends and technology development by leveraging the business relationship with various parties.

Service delivery and technical support — The capability of providing desired products, service and technical support to customers has become a key differentiator for market participants in the papermaking felts market in the PRC. Sizeable paper and paper products manufacturers usually expect value-added services from established papermaking felts manufacturers including pre-sales consulting, customised product design and technical support during operation of papermaking machines. Technical supports include following up of the applicability of papermaking felts in paper machines, regular testing of papermaking felts to track the product quality and assist customers to enhance the efficiency of paper machines. Apart from bundle sales of paper machines and papermaking felts, some sizeable papermaking felt manufacturers also leverage their technical capability to offer production efficiency optimisation solution to papermaking enterprises on the papermaking machines, which include aftersales product testing, design optimisation services to increase customer loyalty.

Industry experience and reputation — Market participants with a proven track record, diversified product portfolio and a professional team of talents are generally more preferred by downstream customers. In general, sizeable paper and paper products manufacturers source papermaking felts from several established papermaking felts manufacturers in the PRC with strong reputation and outstanding product performance.

Entry barriers

Production technology and market know-how — The performance and quality of papermaking felts are highly associated with the reliability and efficiency of operation of papermaking machines. Established papermaking felts manufacturers generally possess advanced technology and needling expertise in developing papermaking felts with enhanced properties in relation to seam strength, dimensional stability and durability, coupled with in-depth experience and know-how in the papermaking process, as well as offering pre-sales and aftersales technical support and assists paper and paper products manufacturers to achieve efficient production, cost reduction and energy saving through the use of adequate papermaking felts. Specifically, only limited manufacturer is capable of supplying papermaking felt for high-speed papermaking machines. As a result, technology and market know-how serve as key barriers for new market entrants.

Industry connection and network — Customer relationship becomes a key barrier for new entrants, as papermaking felts are often customised based on the type of papermaking machines and paper products of the clients. Paper and paper products manufacturers will therefore choose familiar and well established papermaking felts manufacturers. In general, existing market participants tend to maintain established relationships with their key customers, and enable them to identify the requirements and provide customised products and even solutions. In contrast, new

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entrants without connection in the industry are hindered from development as paper and paper products manufacturers generally show a preference towards established papermaking felts manufacturers as their major suppliers.

Access to industry professionals — The papermaking felts manufacturing industry in the PRC relies heavily on professionals and talents for product development and production. Sizeable market participants generally acquire and retain professionals with extensive and comprehensive knowledge and expertise in paper manufacturing, procurement, and research and development of papermaking felts. Furthermore, qualified and competent workers, as well as management professionals, are required in production process. In view of the large scale of operation and reputation in the industry, established papermaking felts manufacturers are more capable of attracting professionals and talents compared with new entrants without presence in the industry, which poses a challenge to new entrants in talent acquisition.

COMPETITIVE STRENGTHS OF OUR GROUP

According to Frost & Sullivan, the key competitive strengths of the Group include: (i) experienced and high calibre professional and management team, (ii) research and development capabilities, (iii) established strong business relationships with key customers and suppliers, (iv) well-established reputation and proven track record in the papermaking felts manufacturing industry in the PRC with a long history of operation and brand recognition and (v) capability of providing papermaking machine efficiency optimisation services.

Please refer to the paragraph headed “Business — Competitive strengths” in this document for a detailed discussion of competitive strengths of our Group.

DIRECTORS’ CONFIRMATION

Our Directors, after due and reasonable consideration, are of the view that there has been no adverse change in the market information since the date of the Frost & Sullivan Report which may qualify, contradict or have an impact on the information therein.