### 4.16 Breakout of Fire, Energy Crisis and Other Emergency Crisis

The Group, being manufacturing-based, relies on its production capabilities. Any disruption to its production activities either by fire, power disruptions, floods, natural disasters or emergency situations such as riots, social and political upheavals, trade embargos, war or other such unpredictable events, could adversely affect the operations of the Group.

The Group's premises and production facilities have been inspected by the Jabatan Bomba Malaysia. The Group also ensures that there is adequate safety and fire-fighting equipment in place to contain any possible fires. The Group also engages the services of a third party, who is approved by the Jabatan Bomba, to periodically inspect the Group's fire-fighting equipments to ensure that they are in order.

In the event of a power failure, the Group has a backup generator which is petrol-based, to provide power supply for critical equipments such as the electronic chart recorder for the kilns. The chart recorder is critical as it would record the temperature of the kilns which will be subsequently reviewed to ensure that the temperature of the kiln was in accordance with the specified temperature. The temperature of the kiln would affect the quality of the hand formers produced. In addition, the Group also has a water tank with a capacity to store five (5) tonnes of water to be used for its critical production process in the event of a disruption in water supply.

Nevertheless, despite the measures put in place by the Group to mitigate the risk of the above-mentioned crisis, there can be no assurance that the effect of the crisis may not cause interruptions in the Group's operations in the future.

### 4.17 Ownership and Control of the Company

The Promoters, Wong Fook Choy, Choy Swee Lan, Wong Fook Lin and Kam Yee Lam, will collectively hold approximately 72.73% of ES Ceramics' issued and paid-up share capital upon completion of the Public Issue. With their shareholding of approximately 72.73%, the Promoters will possess voting control over the Company, thus giving them the ability to influence, amongst others, the appointment of at least a majority of the Company's Board and to control the vote on significant corporate transactions, unless they are required to abstain from voting by law and/or by the relevant authorities. As a mitigating step, and also as a form of corporate governance measure, the Group has appointed independent directors who are also members of the audit committee to ensure that all transactions involving related parties, if any, are entered into on arms-length basis.

### 4.18 Environmental Concerns

The Group has the approval from the local authorities, such as Jabatan Alam Sekitar Negeri Perak and the Jabatan Bomba Malaysia to operate its factories. Water used in the production process is mainly to clean the advanced ceramic hand formers and as the formers do not contain harmful chemicals, the water discharged does not contain pollutants and is collected in a well to allow for the advanced ceramics residue to settle before being released to the waterways. The sludge formed on the base of the well is later disposed by an approved contractor of Kualiti Alam Sdn Bhd. The seasoned moulds used to form the hand formers, production wastages and scrap materials are collected for disposal by a contractor approved by the Jabatan Alam Sekitar on a regular basis.

### 4.19 Insurance Coverage on the Group's Assets and Operations

With the substantial cost incurred by the Group for the purchase of plant, machinery and equipment, as well as the cost of the other assets of the Group, such as raw materials and inventories, the Board is aware of the Group's exposure to risk in the event that the Group's assets are not adequately insured. In view of this, the Group regularly reviews the adequacy of its insurance coverage on its assets to ensure that the assets are adequately insured as a step towards reducing the Group's exposure to the possible risk of damage and loss to its assets. However, the Group has not taken up insurance for consequential losses and product liability.

Regardless of the measure taken by the Board to ensure the adequacy of the insurance coverage on the assets of the Group, there can be no assurance that in the event of any loss or damage, the claim from the insurance company would be adequate for the Group to replace the assets that were lost or damaged.

### 4.20 Disclosure Regarding Forward-Looking Statements

This Prospectus, in addition to statements made in press releases and oral statements may contain statements which constitutes "forward-looking statements" made by ES Ceramics, directors or employees acting on the Company's behalf, that are not statements of historical fact. Investors may identify some of these statements by forward-looking terms such as "expect", "plan", "intend", "estimate", "anticipate", "may", "will", "would", and "could" or similar words. However, investors should note that these words are not the exclusive means of identifying forward-looking statements and that all statements regarding the Company's expected financial position, business strategy, plans and prospects are forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements.

### 4.21 Uncertainty in the Proposed 5-Year Business Development Plan

The achievability of the Group's proposed future plans and prospects would depend, to a certain extent, on the Group's ability to enter into strategic marketing and other arrangements on a timely basis and on favourable terms, successfully manage its growth, obtain adequate financing for its operations and growth as and when funds are needed, hire and retain skilled personnel and to successfully develop and enhance its products to satisfy customers needs and requirements.

As a mitigating factor, the Group has been in operation since 1998 and have skilled and experienced key personnel most of whom have been with the Group since its incorporation. Nevertheless, there can be no assurance that the Group will be able to successfully implement its business plans or that unanticipated expenses, unforeseen problems or technical difficulties which may result in material delays in the implementation or even deviation from the Group's original business plans will not occur. Furthermore, the actual results of the Group may differ from the initial business plans due to changes in the market conditions, competitive pressures and rapid technological changes.

### 4.22 New Products

With its active R & D department and in line with its 5-year business development plan, the Group plans to widen the products produced using its existing formulation in the future. However, there is no assurance that the new products introduced by the Group will be accepted and that a market for the new products will exist.

### 4.23 Government Control or Regulation

At present, the Group's main product is the hand former which are used to produce examination gloves. Gloves produced which are exported to foreign countries are subject to stringent tests of the respective country's administrative authorities. The Board believes that the main regulation governing gloves which are determined by hand formers are the dimensions of the gloves produced as the hand former provides the gloves with its shape. The non-compliance of such specifications may materially affect the Group's revenue and operations due to the loss of customers who manufacture gloves for export markets. Nevertheless, the Group has in place quality control procedures to ensure that the hand formers produced conform to the relevant standards.

### 4.24 Dependence on Certain Suppliers

The Group produces advanced ceramics formulation as well as hand formers. As the hand formers are produced using the Group's advanced ceramics formulation, the Group is mainly dependent on their suppliers for raw materials used to produce the advanced ceramics formulation. The Group does not enter into long-term contacts with their suppliers of raw materials and the Board believes that this is normal in the industry. Furthermore, due to the infancy of the advanced ceramic industry, there are limited suppliers for the raw materials, both locally and abroad. To mitigate this, the Group usually places bulk purchase orders for raw materials which can generally support the production requirements of advanced ceramics formulation for approximately two (2) months of production and the Group has had dealings with certain suppliers for several years and as such has fostered good working relationships with them thus ensuring their co-operation in terms of supply frequencies and production schedule changes. Nevertheless, such co-operation is not able to overcome any commercial pressures on the prices of raw materials.

The Group is selective of the raw materials used as the raw materials contribute to the quality of the formulation produced and thus the non-availability of raw materials may have an adverse effect on the profits and operations of the Group. Nevertheless, the Group is able to source the raw materials from various suppliers and has the flexibility to alter its advanced ceramic formulation in the event of the non-availability of certain raw materials. In addition, the Group is currently researching on alternative sources of raw materials for its formulation to reduce its reliance on current suppliers.

### 4.25 Litigation Risks

The Group does not have product liability insurance and thus there may be a risk that the Group's interests will not be adequately protected in the event of litigation. However, the Group has never been sued for any product liability claims in respect of its products.

As disclosed in Sections 2.8 and 14.5 of this Prospectus, as at 29 August 2005, the Group is not engaged either as a plaintiff or defendant in any legal action, proceeding, arbitration or prosecution for any criminal offence, which has a material effect on the financial position of the Group.

### 4.26 Absence of Long-Term Contractual Agreements with Customers

The Group does not have any long-term agreements with its customers as the Board believes that it is the standard practice of the players in the hand former industry. The failure to secure future orders due to the absence of long-term contracts may have a material adverse effect on the Group's future financial performance.

Although the Group does not enter into long-term agreements with its customers, the Group has recurring orders from its customers mainly due to the Group's competitive pricing and its commitment to provide customers with value added services and quality products. The Group has satisfied the stringent demands of its customers, thus enabling long-standing business relationships to be fostered and maintained. In addition, the Group has been increasing its customer base via its marketing efforts such as by participating in international trade exhibitions held locally to introduce and market the Group's products.

### 4.27 Dependency on the Glove Industry

The Group produces a wide range of advanced ceramic products which range from various models of hand formers, balloon formers, finger cot formers and breathing bag formers, in addition to products such as crucible and beverage column. However, the main revenue contributor of the Group is from the sale of hand formers used to produce gloves. Therefore, the decrease in demand for gloves may have an adverse effect on the Group's revenue. Nevertheless, the Group has plans to increase its existing product range through its R & D efforts to reduce the dependence on this one particular market sector.

### 4.28 Energy Cost

A major portion of the costs involved in the production of formers is attributable to energy cost. The Group uses liquid petroleum gas ("**LPG**") to operate its kilns. Based on the audited financial statements for the year ended 31 May 2005, approximately 18% of the Group's production cost is energy cost as the formers are fired at high temperatures for a required length of time.

As a significant portion of the manufacturing cost is attributable to energy cost, any increase in the cost of LPG may have an adverse effect on the Group's results. As a measure towards reducing the energy cost incurred, the Group, via its R & D efforts, have developed advanced ceramic materials and have re-engineered the Group's production processes which reduced the length of time for firing the products, thus reducing the energy cost. Furthermore, the Group is able to mitigate the risk of increased energy costs by passing on the costs to the customers.

### 4.29 Failure or Delay in the Listing of ES Ceramics

The listing of ES Ceramics on the MESDAQ Market is also exposed to the risk that it may fail or be delayed should any of the following events occur:-

(a) The placees under the private placement tranche of the Public Issue fail to acquire the Public Issue Shares allocated to them;

(b) The Underwriting Agreement is terminated; or

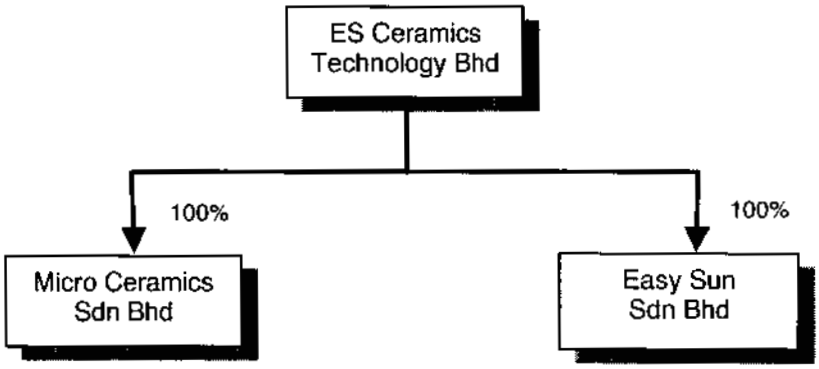
(c) ES Ceramics is unable to meet the public shareholding spread requirements i.e. at least 25% but not more than 49% of the issued and paid-up capital of the Company must be held by a minimum of 200 public shareholders at the time of the Company's admission to the Official List of the MESDAQ Market.

## 5. BUSINESS AND OPERATIONAL OVERVIEW

### 5.1 History of the Group

ES Ceramics was incorporated in Malaysia on 4 September 2003 under the Act as a private limited company. The Company was subsequently converted into a public company on 27 September 2003 to facilitate the listing of ES Ceramics on the MESDAQ Market. ES Ceramics is principally an investment holding company with two (2) wholly owned subsidiary companies, MCSB and ESSB. ES Ceramics does not have any associated companies.

The current structure of the Group is as follows:-




The Group is principally involved in the design, development and production of specialty advanced ceramic materials and the design, development and manufacturing of specialty advanced ceramic products.

Advanced ceramics are also known as fine ceramics or advanced technical ceramics and is defined by ISO as a highly engineered, high performance, predominantly non-metallic, inorganic, ceramic material having specific functional attributes.

Currently, the Group processes its own advanced ceramics formulation known as ES Fine 1. Based on the Advanced Ceramics Industry Assessment Report prepared by SIRIM dated 19 November 2003, the Group is one (1) of the four (4) companies in Malaysia which formulates and produces advanced ceramic materials. The ES Fine 1 can be used to produce crucibles, columns for dispensing beverages and formers, such as those used for producing gloves, finger cots and breathing bags. In addition, the Group is one (1) of only two (2) glove former manufacturers in Malaysia with in house advanced ceramic formulation and production facilities.

Based on the Advanced Ceramics Industry Assessment Report prepared by SIRIM dated 19 November 2003, the Group is also one (1) of the eight (8) hand former manufacturers in Malaysia and Malaysia is currently the main producer of hand formers in the world.

Incorporated in 1998, ESSB commenced its operations on 1 June 1998 at a rented factory in Kawasan Perindustrian Menglembu, Perak Darul Ridzuan, with a production space of 14,300 sq. ft. During the first year of its operation, ESSB's annual capacity was approximately 0.24 million pieces of standard hand formers. In May 2002, ESSB shifted its operations to its own factory located at Kawasan Perindustrian Silibin, Perak Darul Ridzuan which has a built-up-area of approximately 37,340 sq. ft. With the increase in available space, the Group increased its production capacity to approximately 0.54 million pieces of standard hand formers per annum. In October 2001, ESSB commenced its R & D activities in formulating the advanced ceramic materials.

On 1 March 2002, MCSB commenced operations and the R & D activities in the formulation of advanced ceramics were transferred from ESSB to MCSB. The commencement of MCSB's operations were in line with the Group's vertical business expansion plan of producing its own advanced ceramic formulation. MCSB was first located in Kawasan Perindustrian Menglembu, Perak Darul Ridzuan. In June 2002, MCSB had successfully developed the Group's ES Fine 1 formulation and commenced the commercial production of ES Fine 1 for the production requirements of ESSB. In May 2003, MCSB shifted its operations to a rented factory at Kawasan Perindustrian Silibin, Perak Darul Ridzuan with a land area of 20,799 sq. ft. and a production floor space of 10,595 sq. ft.

The milestones achieved by the Group thus far can be summarised as follows:-

| | |
|---|---|
| June 1998 | Commencement of business at Kawasan Perindustrian Menglembu, Perak Darul Ridzuan with an annual production capacity of approximately 0.24 million pieces of standard hand formers. |
| December 2000 | Developed ES Coat 1, the Group's own special aluminous surface coating for hand formers, which enables the hand former to be used for the production of latex and nitrile gloves, in addition to prolonging the life span of the hand formers by acting as a protective cover against chemical corrosion. |
| October 2001 | Commenced R & D activities in the formulation of advanced ceramics in ESSB. |
| March 2002 | MCSB commenced operations and the R & D activities in the formulation of advanced ceramic materials were transferred from ESSB to MCSB. |
| May 2002 | ESSB shifted its operations to its own factory located at Kawasan Perindustrian Silibin, Perak Darul Ridzuan with a built-up-area of 37,340 sq. ft. |
| June 2002 | Developed ES Fine 1, the Group's own advanced ceramic material. |
| April 2003 | Developed P20, the Group's own hand former design which complies with the requirements of ASTM's dimension specifications and due to its special design it reduces latex and energy consumption in the manufacturing process of gloves. |
| May 2003 | MCSB shifted its operations to Kawasan Perindustrian Silibin, Perak Darul Ridzuan with a production floor space of 10,595 sq. ft. |
| September 2003 | Re-engineered the production process of hand formers by the elimination of the "biscuit firing" process (except in producing finger textured hand formers) thus reducing the production cycle and contributing to an increase in productivity. |
| January 2004 | Introduction of a specially formulated texture material, known as the M77 that is used in the production of spray-on textured surfaces on formers which are used in the production of textured latex and synthetic gloves. |
| December 2004 | Introduction of the enhanced version of the M77, known as M88, enables the production of formers which produces gloves with higher tensile especially synthetic gloves. |

Details of the subsidiary companies of ES Ceramics are set out in Section 5.3 of this Prospectus.

## 5.2 Share Capital And Changes In Share Capital

The present authorised share capital of ES Ceramics is RM10,000,000 comprising 100,000,000 Shares.

The present issued and paid-up share capital of the Company is RM4,135,000 comprising 41,350,000 Shares. Upon completion of the Public Issue, the enlarged issued and paid-up share capital of ES Ceramics will be RM5,235,000 comprising 52,350,000 Shares.

The details of the changes in the Company's issued and paid-up share capital since its incorporation are set out below:-

| Date of Allotment | No. of Shares | Par Value | Consideration | Total |
|---|---|---|---|---|
| | | (RM) | | (RM) |
| 04.09.2003 | 2 | 1.00 | Cash | 2 |
| 15.02.2005 | 4,134,998 | 1.00 | Acquisition of MCSB and Acquisition of ESSB | 4,135,000 |
| 16.02.2005 | 41,350,000 | 0.10 | Share Split | 4,135,000 |
| Upon Listing | 11,000,000 | 0.10 | Public Issue | 5,235,000 |

## 5.3 Subsidiary and Associated Companies

The details of the subsidiary companies of ES Ceramics are as follows:-

| Name | Date / Place of Incorporation | Issued and Paid-up Share Capital | Effective Equity Interest | Principal Activities |
|---|---|---|---|---|
| | | (RM) | (%) | |
| MCSB | 29.09.1999 / Malaysia | 150,000 | 100 | Design, development and processing of specialty advanced ceramic materials. |
| ESSB | 25.03.1998 / Malaysia | 1,700,000 | 100 | Design, development and manufacture of specialty advanced ceramic products. |

ES Ceramics does not have any associated companies.

### *5.3.1 Information on MCSB*

MCSB was incorporated in Malaysia on 29 September 1999 under the Act as a private limited company under the name of Deliyohan Sdn Bhd. On 8 September 2003, it changed its name to its present name. MCSB commenced its business on 1 March 2002 and is principally engaged in the design, development and production of specialty advanced ceramic materials.

MCSB's present authorised share capital is RM500,000 comprising 500,000 ordinary shares of RM1.00 each in MCSB. The present issued and paid-up share capital of MCSB is RM150,000 comprising 150,000 ordinary shares of RM1.00 each in MCSB.

MCSB is a wholly owned subsidiary of ES Ceramics. MCSB does not have any subsidiary or associated companies.

The changes in the issued and paid-up share capital of MCSB since its incorporation are as follows:-

| Date of Allotment | No. of Shares | Par Value | Consideration | Total |
|---|---|---|---|---|
| | | (RM) | | (RM) |
| 29.09.1999 | 2 | 1.00 | Cash | 2 |
| 18.07.2003 | 98 | 1.00 | Cash | 100 |
| 27.08.2003 | 149,900 | 1.00 | Capitalisation of RM149,900 being the amount standing to the credit of the directors of MCSB | 150,000 |

### *5.3.2 Information on ESSB*

ESSB was incorporated in Malaysia on 25 March 1998 under the Act as a private limited company. ESSB commenced its business on 1 June 1998 and is principally engaged in the design, development and manufacture of specialty advanced ceramic products.

ESSB's present authorised share capital is RM5,000,000 comprising 5,000,000 ordinary shares of RM1.00 each in ESSB. The present issued and paid-up share capital of ESSB is RM1,700,000 comprising 1,700,000 ordinary shares of RM1.00 each in ESSB.

ESSB is a wholly owned subsidiary of ES Ceramics. ESSB does not have any subsidiary or associated companies.

The changes in the issued and paid-up share capital of ESSB since its incorporation are as follows:-

| Date of Allotment | No. of Shares | Par Value | Consideration | Total |
|---|---|---|---|---|
| | | (RM) | | (RM) |
| 25.03.1998 | 2 | 1.00 | Cash | 2 |
| 01.09.1998 | 99,998 | 1.00 | Cash | 100,000 |
| 21.06.1999 | 100,000 | 1.00 | Cash | 200,000 |
| 27.01.2000 | 200,000 | 1.00 | Cash | 400,000 |
| 15.05.2000 | 100,000 | 1.00 | Cash | 500,000 |
| 22.05.2003 | 1,200,000 | 1.00 | Capitalisation of RM1,200,000 being the amount standing to the credit of the directors of ESSB | 1,700,000 |

## 5.4 Products

The Group is mainly involved in the design, development and production of advanced ceramic materials and hand formers. The advanced ceramic formulation produced by the Group is known as ES Fine 1 and can be used to make various products such as formers, crucibles and columns for dispensing beverages. At present, the advanced ceramic material is reserved solely for the Group's internal use to produce hand formers and balloon formers due to the limited capacity of the production facilities for advanced ceramic materials. For the financial year commencing 1 June 2005, with the funds raised from the listing, the Group intends to market the ES Fine 1 to the local and overseas markets. ES Fine 1 is formulated by the Group based on its research into the raw materials used, in terms of its mineral composition, quantity and quality as these factors determines the strength, chemical resistance and thermal shock resistance of the end product.

At present, the Group's main revenue contributor is from the sale of hand formers. Hand formers are made from advanced ceramic materials as these materials have special characteristics such as resistance to chemical corrosion and thermal shock. These special characteristics are important attributes for hand formers as the manufacturing process of gloves requires the hand formers to be exposed to chemical solutions and drastic hot-cold temperature fluctuations. The type of hand formers used would determine the shape, dimension and texture of the gloves.

The hand formers produced by the Group are made from ES Fine 1 and are used for the production of examination gloves. The hand formers produced by the Group are of various dimension, colour, shape and surface finishing, and can be used to produce latex, nitrile and polymer gloves.

The Group's hand formers may be categorised as follows:-

(i) Standard hand formers

The standard hand formers are used for the production of examination gloves and are based on the design used in the industry. These standard hand formers are compliant to the standards set by ASTM and are available in six (6) different sizes ranging from extra small to extra extra large. These hand formers are in compliance with ASTM's dimension standards as most of the gloves manufactured are exported to the US and the ASTM is a standard governing the US. Based on the export of rubber gloves from Malaysia for the period from October to December 2004, the total quantity of gloves exported to the US was approximately 3,756.6 million pairs of gloves, which accounts for approximately 41.3% of the total export of gloves for the 3-month period from October to December 2004. (Source: Monthly Trade Statistics, Department of Statistics Malaysia);

(ii) Specially designed hand former

The Group's specially designed hand former is known as the P20. The P20 is available in six (6) different sizes and is compliant to the dimension specifications of ASTM. The Group, via ESSB, owns the intellectual property right to the P20 design which is registered under the Industrial Designs Act, 1996 duly certified by the Intellectual Property Corporation of Malaysia on 11 November 2003. The advantages of the P20 design includes the following:-

(a) Reduces latex and energy consumption of the glove manufacturing process; and

(b) Enhances productivity by reducing rejects due to thin spots in the gloves produced;

(iii) Customised formers

The Group produces hand formers which are based on the specifications and requirements of its customers.

A glazed hand former produced by the Group was tested by SIRIM, together with five (5) other hand formers available in the local market, for alkaline corrosion resistance and thermal shock resistance. Alkaline corrosion test was performed as alkaline is usually more corrosive than acidic conditions. The hand formers are exposed to alkaline and acidic chemicals when the hand formers are dipped into the coagulation agent and when they are cleaned. The alkaline corrosion test determines the alkaline resistance of the hand formers. Exposure to alkaline conditions corrodes the surface of the hand formers thus resulting in pinholes. These pinholes would then lead to unfavourable textures on the glove manufactured. Thermal shock test was performed as the glove production process requires the hand formers to undergo drastic hot-cold cycles which range from room temperature to approximately 160 degrees Celsius within a production cycle. The results of the tests conducted showed that the hand former produced by the Group has the best alkaline resistance and compares favourably in terms of its thermal shock resistance which exceeds the requirement for the production of examination gloves. (Source: Advance Ceramics Industry Assessment Report by SIRIM dated 19 November 2003).

Apart from hand formers, the Group also produces balloon formers, which contributes to a small percentage of the Group's revenue. In addition to hand formers and balloon formers, the Group also has the capability to produce crucibles, columns for dispensing beverages and other types of formers, such as for producing breathing bags and finger cots.

## 5.5 Production Process

The Group mainly produces two (2) products – advanced ceramic materials and hand formers.

### *(i) Production Process of Advanced Ceramic Materials*

All ingredients used to formulate the advanced ceramic materials are tested to ensure conformity to the quality specifications of the Group. Subsequently, the individual ingredients are weighed according to the specifications contained in the formulation approved by the Group's R & D department.

The ingredients are mixed thoroughly by a high-speed primary blunger. The mixture is then sieved through a set of fine wire mesh using a vibrating separator filter.

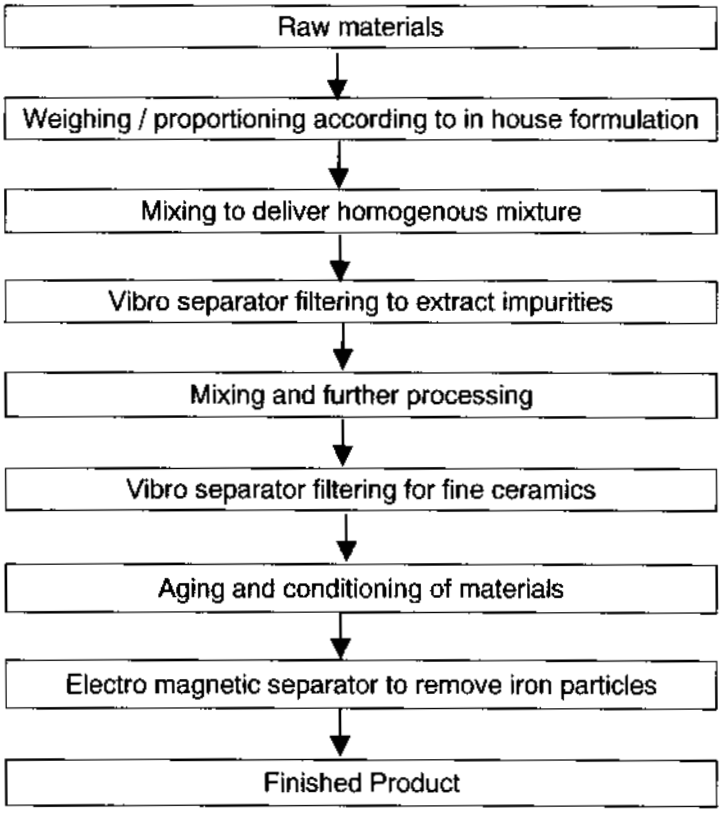
The sieved mixture is then transferred to a secondary high-speed blunger where further ingredients are added to the mixture. The ingredients together with the sieved mixture are then thoroughly mixed at high-speed and homogenised in the secondary blunger.

The thoroughly mixed and homogenised mixture is released from the secondary blunger to a vibrating separator filter with a fine filter screen to be sieved into the receiving tank.

The sieved mixture is then transferred from the receiving tank to the aging tank. The mixture is left to age and is subsequently transferred into the transit tank. The mixture will be left to further age in the transit tank. Subsequently, the mixture will be released through an electro magnet to extract the iron particles contained in the mixture.

After going through the electro magnet, the mixture will be sieved through a vibrating separator filter. The sieved mixture is ready to be delivered to the customer for the production of advanced ceramic products.

A summary diagram showing the production processes for the advanced ceramic formulation is set out below:-



### *(ii) Production of Hand Formers*

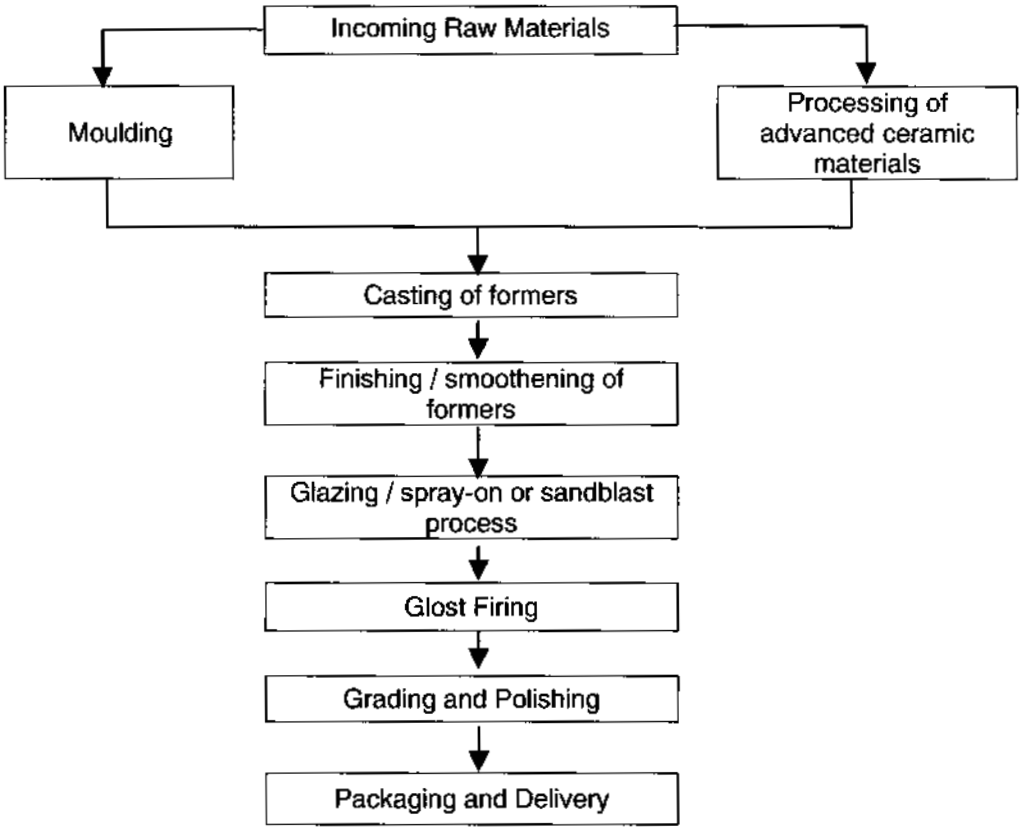
Firstly, a case mould is made to shape the plaster moulds used to form the hand formers. Subsequently, the case mould is filled with liquid plaster to form the shape of the hand former. The dried plaster mould is then sent to the casting section.

At the casting section, advanced ceramic material is poured into the plaster mould and left to dry. The excess advanced ceramic material is then drained from the plaster mould. The shaped formers are then transferred to the finishing section.

At the finishing section, the seam line on the hand former is removed and the surface is smoothened. The hand formers are either transferred to the glazing section or for further surface finishing processes which includes the spray-on or sandblast processes. The hand formers that have gone through the spray-on or sandblast processes will then be sent to the glazing section.

At the glazing section, the hand formers are either fully glazed or half glazed. The glazed hand formers are then placed into the kiln for the gloss firing process. The glost-fired hand formers are subsequently sent to the grading section. At the grading section, the hand formers will be graded and polished.

The production process involved in the manufacturing of hand formers are depicted as follows:-



## 5.6 Technology Used in the Production Processes

Advanced Ceramic Materials/Formulation

The formulation of advanced ceramic materials requires research into its ingredients, in terms of its mineral composition, characteristics, fundamental features, quality and quantity as these would determine the strength, chemical resistance and thermal shock resistance of the end product made. Each ingredient used in the formulation provides certain characteristics and features to the final composition, which includes amongst others, providing the materials with the suitable consistency for casting hand formers, resistance to chemical corrosions and thermal shock, control in the shrinkage of the hand former during the drying stage and the firing process, and stabilises the shape of the product formed.

Research and tests are performed on the ingredients to determine their suitability to produce quality materials. The suitability of the ingredients is based on its mineral compositions and quality. The quantity of the respective ingredient is also critical as the proportion of the respective ingredient used would affect the final characteristics of the hand formers produced. Thus, the critical process of producing the advanced ceramic material lies with the careful selection of the ingredients and the appropriate quantities of each ingredient to achieve the level of strength and resistance to chemical corrosion and thermal shock required.

The processing stage of the product formulation is also important to ensure that the ingredients are added to the mixture at the correct stages of the production process. This is to ensure that the ingredients are thoroughly homogenised and not over-processed. The processing technique used is critical to the production of the advanced ceramic materials as it would determine the quality of the mixture.

The mass production of the formulation which is of consistent quality requires technical knowledge on the ingredients used, and the processing technique adopted.

Former Production

The main technology used by the Group is based on the production technologies for hand formers used to produce examination gloves. However, the critical process of producing formers is to achieve the dimensions specified by the customers. The dimensions of the hand former when it is first formed by the plaster mould will reduce when it has completed the production process. The percentage of contraction is dependent on the formulation used, in terms of its composition of ingredients and water content, and the temperature of the kiln. Thus research and tests have been performed by the Group to determine a suitable formulation and kiln temperature in order to produce the hand formers according to the specified dimensions. Furthermore, the dimensions of a standard examination glove which are used to produce gloves for overseas markets would have to satisfy the dimension specifications set by the relevant country's authoritative body, such as the ASTM for the US market.

Another critical process is in the firing process of the hand formers. The temperature of the kiln and the time taken for the firing process would depend, to a certain extent, on the formulation used. The suitable temperature and the length of the firing process would have direct implications on the quality of the hand formers produced, in terms of their integrity of shape, dimension and resistance to chemical corrosion and thermal shock.

The mass production of hand formers, which is of consistent quality and of specific dimensions, requires technical knowledge on the formulation used and the production processes involved.

In addition to producing standard and customised hand former designs, the Group also has its special design of hand former, known as the P20. The P20 design of hand former produces examination gloves of standard dimensions which are in compliance with the requirements of the ASTM although the design is different from the standard hand former design. The P20 design has special features to facilitate an efficient manufacturing process in terms of better latex pick-up, less thin spots in the gloves produced and promotes cost savings in terms of energy and latex consumption.

To further enhance the hand formers, the Group uses the ES Coat 1, which is an aluminous coating for the hand formers. A special feature of the ES Coat 1 is that it enables the hand former to be used for the production of both latex and nitrile gloves. Another feature of the ES Coat 1 is that it provides the hand formers with better protection against chemical corrosion when compared to unglazed hand formers.

## 5.7 Location and Production Facilities

The Group operates from two (2) factories, both located at Kawasan Perindustrian Silibin, Perak Darul Ridzuan. One of the factories is a rented factory and is used to manufacture the advanced ceramic materials. The other factory is owned by the Group and is used for the manufacturing of formers. Details of its production facilities are set out below:-

### (i) Production of Advanced Ceramic Materials

The production of advanced ceramic materials is carried out by MCSB at a single storey rented factory with an annexed two-storey building located at Lot 4, Lengkok Rishah 2, Kawasan Perindustrian Silibin, Perak Darul Ridzuan. The total land area and built-up area of this factory is 20,799 sq. ft and 10,595 sq. ft. respectively. This factory has the capacity to produce approximately 1,800 tonnes of ES Fine 1 per annum.

### (ii) Manufacturing of Hand Formers

ESSB is the manufacturing arm of the Group and it operates from its own factory built on leasehold land expiring on 22 March 2045 measuring 42,545 sq. ft. located at Lot 37 & 39, Lengkok Rishah 2, Kawasan Perindustrian Silibin, Perak Darul Ridzuan. The factory comprises three (3) factory blocks, which are 1-storey, 1½-storey and 2-storey respectively with an annexed 2-storey office building. The total built-up area of this factory together with the office building is 37,340 sq. ft. and it has the capacity to produce approximately 1.092 million pieces of standard hand formers per annum.

The Group, via ESSB, had via a Sale and Purchase Agreement dated 11 May 2004, acquired a piece of leasehold land located next to ESSB's existing factory. At present, a factory is being constructed on the vacant piece of leasehold land.

There have been no major disruptions in the operations of the Group's factories in the past 12 months.

## 5.8 Major Customers and Principal Markets

The Group's advanced ceramic material, ES Fine 1 is currently reserved for the internal consumption of the Group due to the limitation on the production capacity for advanced ceramic materials. As such, the major customers of the Group are from the sale of the Group's hand formers which are marketed locally and overseas. For the financial year ended 31 May 2005, approximately 29% of the Group's revenue of approximately RM2.1 million was contributed by overseas customers located in Sri Lanka, Thailand and Indonesia.

The list of the Group's major customers as at 31 May 2005, being the date of the latest available audited financial statements of ES Ceramics for the financial year ended 31 May 2005, is as follows:-

| Customers based on revenue for the financial year ended 31 May 2005 | Length of Relationship (Years) | % of Total Turnover (%) |
|---|---|---|
| Seal Polymer Industries Berhad | 7.0 | 28 |
| Safeskin Corporation (Thailand) Ltd | 2.5 | 24 |
| Latexx Manufacturing Sdn Bhd | 5.5 | 21 |
| Lalan Rubbers (Pvt) Ltd | 3.5 | 8 |
| Top Glove Sdn Bhd | 7.0 | 5 |
| Safeskin Medical & Scientific (Thailand) Ltd | 1.0 | 1 |
| Alliance Rubber Products Sdn Bhd | 5.0 | 1 |
| Hartalega Sdn Bhd | 5.5 | 1 |
| Maxter Glove Manufacturing Sdn Bhd | 1.0 | 1 |
| YTY Industry Sdn Bhd | 4.5 | 1 |

The Board of Directors believes that the Group is not dependent on any of its major customers.

## 5.9 Marketing and Method of Distribution

The Group markets its products directly to its customers locally, as well as abroad to countries such as Sri Lanka, Thailand, Indonesia and Vietnam. For the financial year ended 31 May 2005, the Group's revenue may be categorised as approximately 71% local and approximately 29% export, where 76% and 22% of the total exports were to Thailand and Sri Lanka respectively, while 2% was to Indonesia.

The Group has been actively increasing its marketing efforts to expand the customer base and market reach. The Group commenced the export of its hand formers during the year 2000 and has been increasing its overseas customer base progressively over the years. The Group plans to further increase the sale of its products via sales to new locations such as Philippines and China.

The Group's products are sold directly to the manufacturers, both locally and abroad. Sales are handled by the Group's sales and marketing team which includes the Group's technical personnel who are able to explain to the customers on the benefits of the various types of hand formers produced by the Group. The Group's marketing efforts are spearheaded by Wong Fook Choy, the Director and CEO of ES Ceramics, who is supported by a marketing executive and technical personnel.

Due to the nature of the industry and its products being intermediary products, the Group does not require a large marketing and distribution network and the Group's existing personnel are able to support the sales and marketing plans of the Group. Nevertheless, in line with the Group's proposed business expansion plans, the Group will be strengthening its sales and marketing force gradually.

## 5.10 Sources of Raw Materials and Major Suppliers

The essential raw materials used by the Group in the production of ES Fine 1 are barium carbonate, sodium carbonate, cobalt sulphate, sodium silicate, semi processed ball clay, refined kaolin, milled feldspar, quartz flour, calcined alumina and zirconium silicate. Some ingredients used are sourced locally, such as kaolin, while others are imported mainly due to the required quality and characteristics of the raw materials used.

The Group commenced its R & D activities in advanced ceramic formulation through ESSB in October 2001. Subsequently, the R & D activities relating to the formulation of advanced ceramics were transferred to MCSB. The production of ES Fine 1 for the production use of ESSB followed in June 2002 and as such the length of the business relationship with its suppliers for raw materials is less than four (4) years.

The Group has access to regular supplies of raw materials which are also sourced at competitive prices. The Group has had dealings with certain main suppliers over the years and as such, has fostered a good working relationship with their suppliers. Thus, the Group is confident that its suppliers would continue to supply and support the Group's requirements for raw materials in future.

The list of the Group's major suppliers as at 31 May 2005, being the date of the latest available audited financial statements of ES Ceramics for the financial year ended 31 May 2005, is as follows:-

| Suppliers based on the Purchases for the financial year ended 31 May 2005 | Length of Relationship (Years) | % of Total Purchases (%) | Raw Materials Purchased |
|---|---|---|---|
| BP Malaysia Sdn Bhd | 4.5 | 18 | Liquid Petroleum Gas |
| T.S. Ceramic Materials (J) Sdn Bhd | 5.5 | 8 | Minerals |
| Lafarge Prestia Co Ltd | 5.0 | 6 | Plaster of paris |
| Continental Ceramics Services Sdn Bhd | 4.5 | 2 | Minerals |
| Soka Societe Kaoliniere Armoricaine | 3.5 | 6 | Kaolin |
| Sibelco Malaysia Sdn Bhd | 3.5 | 9 | Minerals |
| Concord Chemicals Corporation Sdn Bhd | 4.0 | 7 | Minerals and stains |
| Tinex Kaolin Corporation Sdn Bhd | 3.5 | 9 | Kaolin |
| WBB Eastern Europe Ltd | 3.5 | 5 | Minerals |
| Shingko Paper Cartons (M) Sdn Bhd | 3.0 | 1 | Carton boxes |

The Group is not dependent on any particular supplier as it has been able to secure the materials required for its operations from various suppliers.

## 5.11 Quality Assurance and Control Procedures

The Group adopts a stringent internal quality assurance and quality control policy as the Group has built a reputation in the advanced ceramic industry, especially in the hand former industry for its quality products. The Group believes that its consistent quality of hand formers is attributable to the quality and consistency of its ES Fine 1 formulation and the well coordinated manufacturing process of the hand formers as there is a co-relation between the advanced ceramic materials used and the production processes involved in manufacturing hand formers, particularly the firing and finishing processes. The Group has in place various control procedures and checkpoints to ensure that the quality of the products is in accordance with the Group's standards.

Quality checks are performed at the critical stages of production. For the production of its advanced ceramic material, ES Fine 1, the critical stage is in the quality of ingredients, thus tests are conducted upon receipt of the ingredients from suppliers. This is to ensure that the ingredients are in accordance to the agreed quality. Another critical stage is in the quantity of the raw materials used, therefore the weight of the raw materials segregated for the production of ES Fine 1 are checked and approved by the supervisor before it is used in the production process. Upon completion of the production process, the laboratory personnel will cast a specimen hand former to ensure the conformance of the materials to the requirements set by the Group's R & D department. The specimen hand former would also ensure that the material is suitable to be used in the production process at ESSB.

At ESSB, the laboratory manager will test the ES Fine 1 material received from MCSB as a control measure. The tests performed include making a specimen hand former with the material to confirm its percentage of contraction and resistance to chemical corrosion and thermal shock. Only approved materials will be used for the production of hand formers. Another critical checkpoint is the temperature of the kiln during the firing process as it would affect the quality of the hand formers produced. The chart indicating the temperature of the kiln will be reviewed to ensure that it conforms to the required temperature.

The Group also uses various technologically advanced apparatus to conduct its quality control tests, which includes the torscion viscometer to check the rheology, digital thermometer with external probe to check the temperature of a heated former, light tube magnifying glass to conduct visual checks on the surface of the hand former and electronic temperature chart recorder to monitor the firing temperature of the kiln.

The Group has obtained international quality accreditation, namely the ISO 9001:2000 for its quality systems. The details of the ISO 9001:2000 quality award are as follows:-

| Company | Quality Award | Date Obtained | Accreditation Body | Scope of Registration |
|---|---|---|---|---|
| ESSB | ISO 9001:2000 | 16.01.2004 | Moody International Certification (Malaysia) Sdn Bhd | Manufacture of Technical Fine Ceramics Hand Formers and Moulds for Latex Dipping Industry |
| ESSB | BS EN ISO 9001:2000 | 20.02.2004 | Moody International Certification | Manufacture of Technical Fine Ceramics Hand Formers and Moulds for Latex Dipping Industry |

## 5.12 Research & Development

The Group's R & D team comprises three (3) personnel and is headed by Kam Yee Lam who is an executive director of the Company and the Chief Technology Officer of the Group. The Group has two (2) laboratories to conduct its quality control tests as well as R & D activities. The Group undertakes R & D activities for the following:-

(i) Research and development of new formulation of advanced ceramic materials and products such as hand formers for the production of various types of gloves, such as surgical, industrial and polyvinyl chloride ("**PVC**");

(ii) To explore on ingredients for the advanced ceramic material formulation to diversify the sources of raw materials used to produce the materials to reduce the production cost without compromising on the quality of the formulation and to further improve on the formulation to achieve better quality, longer life span and increase its application use;

(iii) To develop products which are able to provide the Group with products which can be differentiated from its competitors; and

(iv) Improve on existing products and design specifications to create value to its customers and to reduce the customer's manufacturing costs.

The Group is currently researching on alternative raw material sources for the production of ES Fine 1 to reduce the cost of producing ES Fine 1 as well as increase the Group's flexibility in terms of the source of its raw materials. In addition, the Group is also researching on producing new products.

The Group's R & D department is equipped with testing equipments to facilitate the testing of ES Fine 1 in terms of its density, water composition, consistency and suitability for use in the production of hand formers. Testing on the Group's products would mainly be on its consistency, water composition, and resistance to chemical corrosion and thermal shock.

The Group's R & D team together with the assistance of the relevant personnel has recorded achievements over the past few years. Among the Group's key achievements are the development of ES Fine 1, ES Coat 1 and the P20 dipping hand former design.

The ES Fine 1 was successfully designed and developed by the Group in June 2002. This formulation is mainly tailored for the production of hand formers but can generally be used to produce crucibles, columns for dispensing beverages and dipping formers, such as formers for producing finger cots and breathing bags. The hand formers produced using the ES Fine 1 formulation is suitable for the production of latex, nitrile and polymer gloves. ES Fine 1 also facilitated the elimination of the "biscuit firing" process which is normally required for the manufacturing of hand formers, thereby reducing the production cycle and costs.

The ES Coat 1 is another achievement of the Group. The ES Coat 1 is a type of surface coating for the advanced ceramic hand formers that enables it to be used in the production of both latex and nitrile gloves. This dual functionality of the hand former benefits glove manufacturers in terms of their flexibility in switching between the types of gloves produced without materially affecting the manufacturing cost. The use of a single hand former for the production of both latex and nitrile gloves would reduce the need to have both types of hand formers and to change between the hand formers in the production line, as well as the need for machine downtime to change the hand formers. In addition to this special feature, the ES Coat 1 also provides the following benefits:-

(i) Covers minor surface imperfections on unglazed formers, thus reducing the former's proneness and vulnerability to chemical corrosion;

(ii) Reduces the tendency of the former to trap dirt and contaminants gathered during the glove manufacturing process, thus facilitating the cleaning process of the hand formers for the next production cycle;

(iii) Increases the life span of the formers as it acts as a protective cover for the formers;

(iv) Increases productivity, as the longer life span of formers reduces machine downtime to replace the hand formers; and

(v) Less costly for glove manufacturers to change production lines between latex and nitrile gloves as the same former can be used.

In addition to ES Fine 1 and the ES Coat 1, the R & D department of the Group has also successfully invented the P20 hand former design for the production of examination gloves which are in compliance with the dimension specifications of ASTM. The P20 design has the following advantages:-

(i) Promotes cost savings to the glove manufacturers, in terms of energy and latex savings; and

(ii) Enhances productivity by reducing rejects due to thin spots in the gloves produced.

## 5.13 Competitive Advantages

The Group believes that it has a competitive advantage over the other players in the market due to the following factors:-

(a) With more than seven (7) years in the business of manufacturing hand former, the Group has established long-standing relationships with its customers which includes both local and overseas companies. The Group strives to meet the stringent demands and specification of its customers by producing quality products which are suitable to the customer's production process;

(b) The Group has its own in-house advanced ceramics formulation and production facilities and based on the Advanced Ceramics Industry Assessment Report by SIRIM dated 19 November 2003, the Group is one (1) of the four (4) advanced ceramic material producers in Malaysia. The Group's advanced ceramic material, ES Fine 1 can be used for the production of a range of application, which includes the production of crucibles, columns for dispensing beverages and formers, such as for breathing bags, gloves, finger cots and balloons. With the Group's ability to formulate and produce advanced ceramic materials, the Group is better able to manage its cost structure as compared to other competitors who procure their formulated body materials from third party suppliers. The Group believes that its ability to produce advanced ceramic material provides the Group with the following advantages:-

- Being a local producer of advanced ceramic materials, the Group would be able to make the materials readily available to potential new customers, although the Group has not explored the local market potential due to its current manufacturing constraints in production capacity and working capital; and

- Being a producer of advanced ceramic materials, the Group is able to source the ingredients at more cost competitive prices and thus reduce its manufacturing cost of materials. Previously, the Group had sourced its advanced ceramic materials from a producer and the price of the advanced ceramic materials are set by the supplier due to the limited number of advanced ceramic material producers in Malaysia. However, with the Group's current ability to produce its own advanced ceramic materials using its in-house formulation and technology, the Group has the flexibility to substitute and/or source for raw materials from various suppliers at competitive prices which will result in reduced manufacturing costs;

(c) Based on the Advanced Ceramics Industry Assessment Report by SIRIM dated 19 November 2003, the Group is one (1) of the eight (8) glove former manufacturers in Malaysia and is one (1) of only two (2) hand former manufacturers who produces advanced ceramic materials locally and is equipped with an in house advanced ceramic material production facility. The integration of the advanced ceramic material and hand former manufacturing facilities places the Group in a better position to capture a wider market share in the industry;

(d) With the integration of the Group's advanced ceramic materials and the hand former production facilities, the Group believes that it has the following advantages over its competitors:-

- The Group has the capability to customise the advanced ceramic formulation to provide the materials with the required characteristics for making hand formers which are suitable for the customer's glove manufacturing process, such as higher thermal shock resistance and/or better chemical corrosion resistance;

- Being a producer of advanced ceramic materials, the Group is able to source the materials at more cost competitive prices and thus reduce its manufacturing cost of hand formers;

- With an in house advanced ceramic production facility, the Group has ready access to advanced ceramic materials, thus reducing the cost of holding inventory; and

- The Group was able to re-engineer its hand former production process using its in house advanced ceramic material by eliminating the production process which reduced the production cycle and increased the Group's production efficiency.

(e) An experienced and knowledgeable management team together with the R & D team who are able to enhance and develop new products which meet the demands in the market. The effective collaboration between the Group's management and R & D team where opportunities are identified by the management team while the R & D activities are implemented by the R & D team based on the opportunities identified by the management team. This collaboration facilitates the translation of the opportunities into value added services by providing customers with better products, in terms of suitability, quality and usability. The achievements of the Group's R & D team in collaboration with the management team includes the following:-

- The development of products which have enhanced the Group's hand formers, such as its glazing material and the ES Coat 1. The ES Coat 1 enables the hand formers to be used for the production of both latex and nitrile gloves. This dual functionality benefits the glove manufacturers as they would be able to switch their production lines between latex and nitrile gloves without having to incur additional manufacturing cost. The use of ES Coat 1 coated hand formers would eliminate the need to purchase the different type of hand formers and the need for machine downtime to change between the hand formers. In addition, the ES Coat 1 also has the benefits as disclosed in Section 5.12 of this Prospectus;

- Successful formulation and production of the advanced ceramic material, ES Fine 1, which have reduced the Group's reliance on its advanced ceramic materials supplier, improved profits due to the lower production and materials costs and the increase in quality of the hand formers produced, while creating an opportunity for the Group to re-engineer its production process for the manufacturing of hand formers which resulted in lower energy consumption and shorter production cycles; and

- Introduction of the P20 hand former design for the production of examination gloves, which is compliant with the dimension specifications set by ASTM. The P20 hand former design promotes cost savings to the glove manufacturers in terms of energy and latex consumption and enhances productivity by reducing the number of rejects due to thin spots on the gloves produced.

## 5.14 Employees

As at 29 August 2005, the Group has 136 full-time employees in the following categories:-

| | No. of Employees | Average Length of Service (Years) |
|---|---|---|
| Managerial and professional | 11 | 3.9 |
| Technical and supervisory | 15 | 2.7 |
| Clerical and related occupations | 3 | 0.8 |
| General workers | 4 | 4.8 |
| Factory operators | | |
| - Skilled | 52 | 3.0 |
| - Unskilled | 51 | 0.9 |
| **Total** | **136** | |

The Group provides the new factory operators with in house training before they are allocated to the respective production process. New recruits are provided with on-the-job training and will be guided by an experienced employee of the same production line.

In addition, the Group provides various practical and technical training, broadly covering three (3) main areas, i.e. existing products and processes employed, new products, process and/or quality improvements and general training, such as safety awareness. In addition to in house training programs, the Group also sends their employees to various external training programs and seminars which cover specialised areas such as glazing and decoration, firing quality control and health hazard training programs, and finance matters. The Group also has implemented job-rotation where employees are allocated to different tasks within the production stage as well as to other production stages. The job-rotation procedure benefits both the employees and the Group as the employees are able to develop and learn new skills, while the Group would be less susceptible to work disruptions in the event of a shortage of production staff. In addition, the Group would also have the flexibility to allocate staff to critical production stages where additional staff is needed.

The employees are not members of any labour unions and enjoy cordial relationships with the management. There have not been any industrial disputes in the past between the employees and the management.

## 5.15 Summary of Landed Properties

Details of the properties owned by the Group as at 29 August 2005, are as shown below:-

| Registered and/or Beneficial Owner/ Location | Postal Address | Description/ Existing Use | Age of Building (Years) | Land Area (Sq. ft.) | Built-Up Area (Sq. ft.) | Tenure and Expiry Date | Cost (RM'000) | Net Book Value as at 31.05.2005 (RM'000) | Note |
|---|---|---|---|---|---|---|---|---|---|
| ESSB / PN 37787 Lot 128228 and PN 37788 Lot 128229 Mukim Hulu Kinta, Daerah Kinta, Perak Darul Ridzuan. | Lot 37 & 39, Lengkok Rishah 2, Kawasan Perindustrian Silibin, 30100 Ipoh, Perak Darul Ridzuan | 3-block factory with an annexed 2-storey office building / Production of formers or other products | 16 (Office building) 1 (Factory Building) | 42,545 | 37,340 | Leasehold for 60 years (expiring on 22.03.2045) | 2,133 | 1,927 | (a) (b) (c) (d) |
| ESSB / PN37786 Lot 128227 Mukim Hulu Kinta, Daerah Kinta, Perak Darul Ridzuan. | Lot 41, Lengkok Rishah 2, Kawasan Perindustrian Silibin, 30100 Ipoh, Perak Darul Ridzuan | Vacant land with construction of a factory in progress | N/A | 21,272 | Nil | Leasehold for 60 years (expiring on 22.03.2045) | 483 | 483 | (d) |

*Notes:-*

*(a) The two-storey office have been issued certificate of fitness by Majlis Bandaraya Ipoh, Perak on 21 May 1992.*

*(b) The factory buildings have been issued certificates of fitness by Majlis Bandaraya Ipoh, Perak on 24 April 2002.*

*(c) The two (2) plots of land are currently charged to Southern Bank Malaysia Berhad for credit facilities granted to ESSB.*

*(d) The land cannot be transferred in any way, subleased, charged or encumbered except with the approval of Y.A.B. Menteri Besar Perak. This condition is exempted as long as the land is owned by Perbadanan Kemajuan Negeri Perak.*

*N/A Not applicable.*

## 5.16 Approvals, Licences and Permits Obtained

The details of approvals, major licences and permits obtained by the Group as at 29 August 2005 are as follows: -

| Authority | Date of Approval/ Licence/ Registration | Validity of Licence | Nature of Approval / Licence | Major Conditions Imposed |
|---|---|---|---|---|
| **Approval** | | | | |
| ***MCSB*** | | | | |
| Malaysian Industrial Development Authority ("**MIDA**") | 12.08.2004 | N/A | Pioneer Status for the production of "ceramic former" | - MCSB is to apply to MITI for the Pioneer Status Certificate within six (6) months from 12 August 2004. MITI had vide its letter dated 5 February 2005 approved the application for an extension of time to a year from the date of its approval letter dated 5 February 2005.<br>- The tax exemption of 70% on the statutory income for a period of five (5) years for the production of ceramic former are subject to the following conditions:-<br>(i) MCSB is to add value of at least 50% to the production of ceramic former;<br>(ii) Total staff in management, technical and supervisory levels is to achieve a level of at least 15% of MCSB's total manpower. |
| **Licences** | | | | |
| ***ESSB*** | | | | |
| MITI | 28.10.2003 | 14.08.2003[a] | Manufacturing Licence for the production of "ceramic former" | - MITI is to be informed on any sale of shares in ESSB;<br>- ESSB is to train Malaysians to facilitate the transfer of technology and expertise to all positions;<br>- Projects implemented by ESSB have to be as approved subject to the above-mentioned conditions and in accordance with the other laws and regulations endorsed in Malaysia;<br>- MITI is to be informed of the appointment of and any changes to ESSB's board members;<br>- For local sales, ESSB is to as far as possible use the services of Malaysians including the appointment of Malaysian owned companies where at least 30% of ESSB's domestic sales are distributed by Bumiputera distributors. |
| Royal Customs and Excise Malaysia | 16.07.1998 | 15.07.1998[a] | Licence under the Sales Tax Act - Manufacturer's Licence | Nil |

| Authority | Date of Approval/ Licence/ Registration | Validity of Licence | Nature of Approval / Licence | Major Conditions Imposed |
|---|---|---|---|---|
| ***MCSB*** | | | | |
| MITI | 13.01.2002 [b] | 01.09.2002-31.08.2007 | Pioneer Status | - MCSB is to add value of at least 50% to the production of "processed ball clay"; and<br>- The ratio of manpower at the administration, technical and supervisory levels has to be at least 15% of MCSB's total manpower. |

*Notes:-*
*(a) These licences do not have any expiry date.*
*(b) The licence was subsequently reissued under the present name of MCSB on 8 January 2004.*
*N/A Not applicable.*

## 5.17 Brand Names, Patents, Trade Marks, Licences, Technical Assistance Agreements, Franchises and Other Intellectual Property Rights

The Group, via ESSB, owns the intellectual property right to the P20 hand former design which is registered under the Industrial Designs Act, 1996 and duly certified by the Intellectual Property Corporation of Malaysia on 11 November 2003.

Save for the above-mentioned intellectual property right, the Group does not have any registered trademarks, technical assistance agreements, franchises or other intellectual property rights.

## 5.18 Dependency on Patents, Licences, Industrial, Commercial or Financial Contracts and New Manufacturing Processes

The board of directors of ES Ceramics confirm that the Group does not depend on patents or licences, industrial, commercial or financial contracts or new manufacturing processes.

## 5.19 Industry Overview

Ceramics Industry in Malaysia

The ceramics industry in Malaysia is mainly made up of two (2) important sectors – traditional or commodity ceramics and fine or advanced ceramics. The traditional or commodity ceramics are mainly based on clay minerals and this sector dominates the ceramics industry in Malaysia. The traditional or commodity ceramics industry in Malaysia comprise of the following sub-sectors:-

| Sub-Sector | Products Manufactured |
|---|---|
| Whiteware | Tiles, sanitaryware, tableware, gardenware, potteries and souvenir items |
| Refractory | Fire bricks, castable, high alumina and insulating bricks |
| Structural clays | Bricks, roofing tiles and vitrified clay pipes |
| Technical ceramics | Porcelain crucibles and lamp holders |

The advanced ceramics are mainly based on highly pure inorganic materials. The ISO standard has defined advanced ceramics, also known as fine ceramics or advanced technical ceramics as highly engineered, high performance, predominantly non-metallic, inorganic, ceramic material having specific functional attributes.

The advanced ceramics sector in Malaysia and its composite manufacturing sector are still in its infancy stage of development. Thus, the sub-sectors of the advanced ceramics sector comprise of the following:-

| Sub-Sector | Products Manufactured |
|---|---|
| Magnetic | Soft ferrites |
| Electronics | Capacitors and resistors |
| Porous | Catalyst coating |
| Fibre Optic | Fibre Optics |
| Advanced Technical Ceramics | Spark plugs, glove formers, high temperature crucibles, finger cots and balloon formers |

Advanced Ceramics Sector in Malaysia

The main use of advanced ceramics in Malaysia is in the advanced technical ceramics subsector, particularly in the manufacturing of formers. This is mainly attributable to the fact that Malaysia is the largest producer of rubber gloves, condoms and catheters, and formers are used to shape these products.

Advanced ceramic material is currently being used to manufacture formers due to its favourable characteristics of having high resistance to chemical corrosion and thermal shock. These attributes are essential in formers as the manufacturing process to produce products such as gloves, condoms and catheters requires the formers to be exposed to corrosive chemical solutions and drastic hot-cold cycles where the temperature fluctuates significantly within a production cycle. Currently, advanced ceramics does not face any competition from other products such as plastic or metal due to its excellent thermal and mechanical resistant behaviour especially in higher temperatures. Furthermore, advanced ceramics are more resistant to chemical attack compared to plastic or metal.

At present, there are only four (4) players in the Malaysian market who manufactures advanced ceramic formulation locally. The players comprise T.S Ceramics (Malaysia) Sdn Bhd / T.S. Ceramics Materials (Japan) Sdn Bhd, Fusan Clays and Glazes Sdn Bhd, GBH Procelain Sdn Bhd and the Group's wholly-owned subsidiary company, MCSB. Of the four (4) players, two (2) are manufacturing the advanced ceramics formulation for the production consumption within the group of companies as they are also involved in the production of hand formers.

Hand Former Manufacturing Sector in Malaysia

Malaysia is the main producer of glove former in the world. In line with this, there is a demand for hand formers to support this industry. There are currently eight (8) hand former manufacturers to meet the demand of the glove manufacturing industry, comprising CeramTec Innovative Ceramic Engineering (M) Sdn Bhd, SNKO Ceramics (M) Sdn Bhd, GBH Procelain Sdn Bhd, GTR Ceramics Sdn Bhd, Mark Dynamics Sdn Bhd, HT Ceramics (M) Sdn Bhd, NS Formers (M) Sdn Bhd and the Group's wholly-owned subsidiary company, ESSB.

The manufacturing of advanced ceramic materials and hand formers are governed by regulatory authorities such as the MITI and the Malaysian Industrial Development Authority. As hand formers are used to shape the gloves and gloves are an export-oriented product, certain regulations governing gloves would indirectly apply to the hand former manufacturers. However, the main regulation governing the hand former manufacturers is on the dimensions of the hand former as it would determine the actual dimensions of the glove produced.

Due to the inter dependencies between the hand former industry and the glove manufacturing industry, the demand for hand formers is dependent on the demand for the principal export markets for rubber gloves. The supply of hand formers is not a concern as the players in the market are able to meet the demand in the market.

Due to the material used in making hand formers, the hand formers do not face any competition from other products such as plastic or metal due to its excellent thermal and mechanical resistance behaviour especially when being used at high temperatures as well as when subject to drastic hot-cold cycles. In addition, the hand formers are also more resistant to chemical attack compared to plastic or metal.

The advanced ceramic industry is mainly reliant on the import of raw materials such as pure and industrial grade oxides, nitrides, carbides and borides as there is a complete absence of these raw materials locally. The unavailability of these pure raw inorganic materials is mainly attributable to the need of special know-how and expertise in the material formulation technology, in addition to high capital investment cost in terms of the machinery and facilities involved. Other factors also include the small market size in Malaysia due to the infancy stage of the local advanced ceramic industry as well as the number of players in the market. However, there are other raw materials used in producing the advanced ceramic formulation which can be sourced locally.

*(Source: Advanced Ceramics Industry Assessment Report by SIRIM Berhad dated 19 November 2003)*

**THE REMAINDER OF THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK**

# 6. PROSPECTS AND FUTURE PLANS

## 6.1 Overview of the Malaysian Economy

With the more robust growth in global trade and domestic demand, the momentum of economic growth in Malaysia, which began in the second half of 2003, gathered pace in 2004. Real gross domestic product (GDP) increased by 7.1% in 2004 (2003:5.3%), the fastest growth since 2000. The economy benefited from the rapid growth of global trade in manufactures and higher prices for primary commodities. Although global growth moderated somewhat in the second half of the year, the Malaysian economy remained resilient with stronger domestic demand providing the impetus for sustained expansion. The private sector was the main force of economic expansion, while the Government continued with fiscal consolidation.

The improvement in the economy was reflected by positive growth across all sectors except construction. The main drivers of growth were the manufacturing, services and primary commodities sectors. Value added in the manufacturing sector expanded strongly by 9.8%, as output growth in both export- and domestic-oriented industries reflected stronger external and domestic demand for manufactured goods. In the export-oriented industries, the strongest output expansion was seen in the electronics industry, benefiting from the upturn in the global semiconductor cycle. However, the high production during the earlier part of the year led to some inventory accumulation, which led to more moderate expansion in the second half of the year. In addition to strong growth in the electronics industry, growth was reinforced by sustained external demand for resource-based products such as chemical, rubber and wood products. Growth in the domestic-oriented industries was supported by strong demand in the fabricated metal products industry and a turnaround in the transport equipment industry. The favourable performance of the manufacturing sector was also reflected in the stronger expansion in manufactured exports (19.7%) and sustained high capacity utilisation level (79%), in spite of investments in new capacity during the year.

**Outlook for 2005**

The prospects for the Malaysian economy in 2005 remain sound. Real GDP is expected to expand by 5 – 6%. The sustained global growth, the modest downturn in the global semiconductor industry as well as relatively favourable prices for primary commodities are expected to provide support to export growth. While the global electronics industry is consolidating after reaching a peak in mid-2004, the cyclical downturn is forecast to be modest in view of the strong Asian demand, the rapid inventory adjustments and relatively low inventory levels. Current indications point to an expected upturn in the global electronics cycle in the second half-year. In the domestic economy, the private sector would remain as the main driver of growth, as the Government remains committed to optimising expenditure in order to strengthen the fiscal position. With the core inflation projected to remain low in 2005 (1.8%), monetary policy is able to remain supportive of the further expansion in private sector activities.

*(Source: BNM Annual Report 2004)*

## 6.2 Overview of the Manufacturing Industry

The manufacturing sector recorded another strong double-digit expansion in 2004, with output growth strengthening to 12.7% (2003: 10.5%). The robust performance was supported by the positive external environment following stronger growth in both the industrial and regional countries, and further reinforced by improved domestic demand. Growth was more pronounced in the first half-year (16.1%; second half-year: 9.6%), fuelled by strong demand for electronics, in line with the upward momentum in the global semiconductor cycle. Growth during the year was also underpinned by strong export demand for resource-based products including rubber, chemicals and wood. In the domestic-oriented industries, growth was led by a turnaround in the transport equipment industry and robust expansion in the fabricated metal industry, which more than offset the moderation in the construction-related materials industry. Consequently, growth in both the export-oriented and domestic-oriented industries strengthened to 14.2% and 7.1% respectively in 2004 (2003: 11.9% and 6.1% respectively).