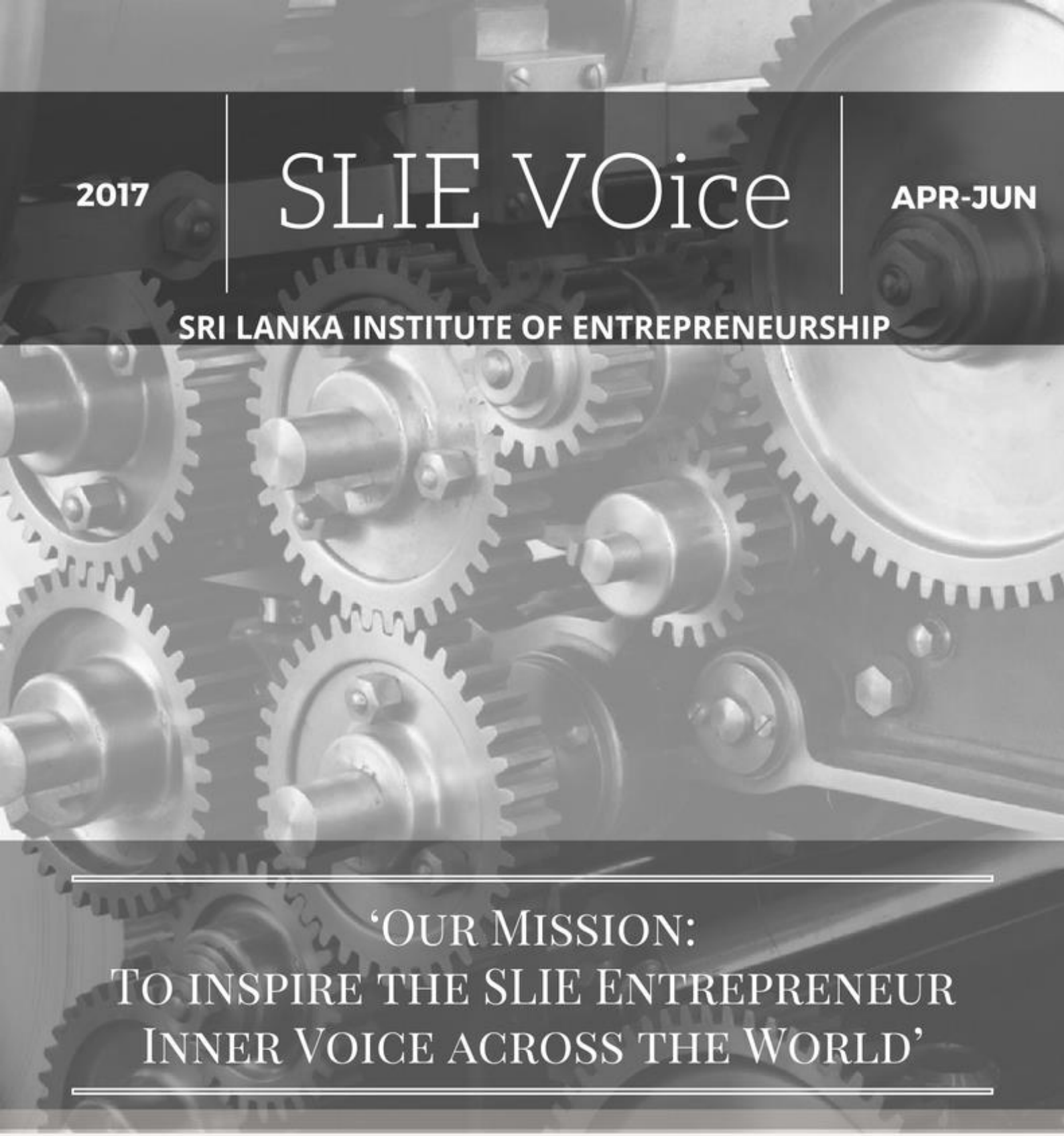

2017 APR-JUN

SLIE VOice

SRI LANKA INSTITUTE OF ENTREPRENEURSHIP

'Our Mission:
To inspire the SLIE Entrepreneur
Inner Voice across the World'

PERIODIC ELECTRONIC MAGAZINE
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DEVELOPMENT DEPARTMENT, SRI LANKA
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Contact Tel/Email: 0115682849, voice@slie.lk and education@slie.lk or <saviyamca@gmail.com>

Joint Editors:

M M A Latiff, Chris Defonseka, Buddhini J A Dankanda

Writers: Tennakoon Dankanda, Chris Defonseka, Patrick Rodrigo, IAB, SLIE Academy, SLIE YES Project TEAM & SLIE VOice Project TEAM

Saviya Management Consultancy Associates (SAVIYA MCA)

Magazine Lay-out: Chris & Buddhini, Cover Page Design: Gayan Ranaraja

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Special Announcement from Tennakoon P B Dankanda, President / Co- Founder

Sri Lanka Institute of Entrepreneurship (SLIE) & CEO SLIE Project Investments LTD

Our Tribute to the TEAM@2010-2017 .SLIE

The President & the SLIE BOM wish to congratulate the TEAM EFFORT

Buddhini.J.A Dankanda (Senior Vice President /Co-Founder & Chief Academic Officer),
Vice President (Patrick Rodrigo),General Secretary (Chandrasiri Gannile), Chris Defonseka- Chairman/Industry Advisory Board (**IAB**), Legal and Auditor

The Treasurer (Panchali Keerthiratne), the three Corporate Members (Dankanda Plantations Management Ltd, Saviya Management Consultancy Associates, SLIE Academy), Institutional Member (SLIE Project Investments Ltd-SLIEPIL) and the Patron (Wilfred Klaassen).

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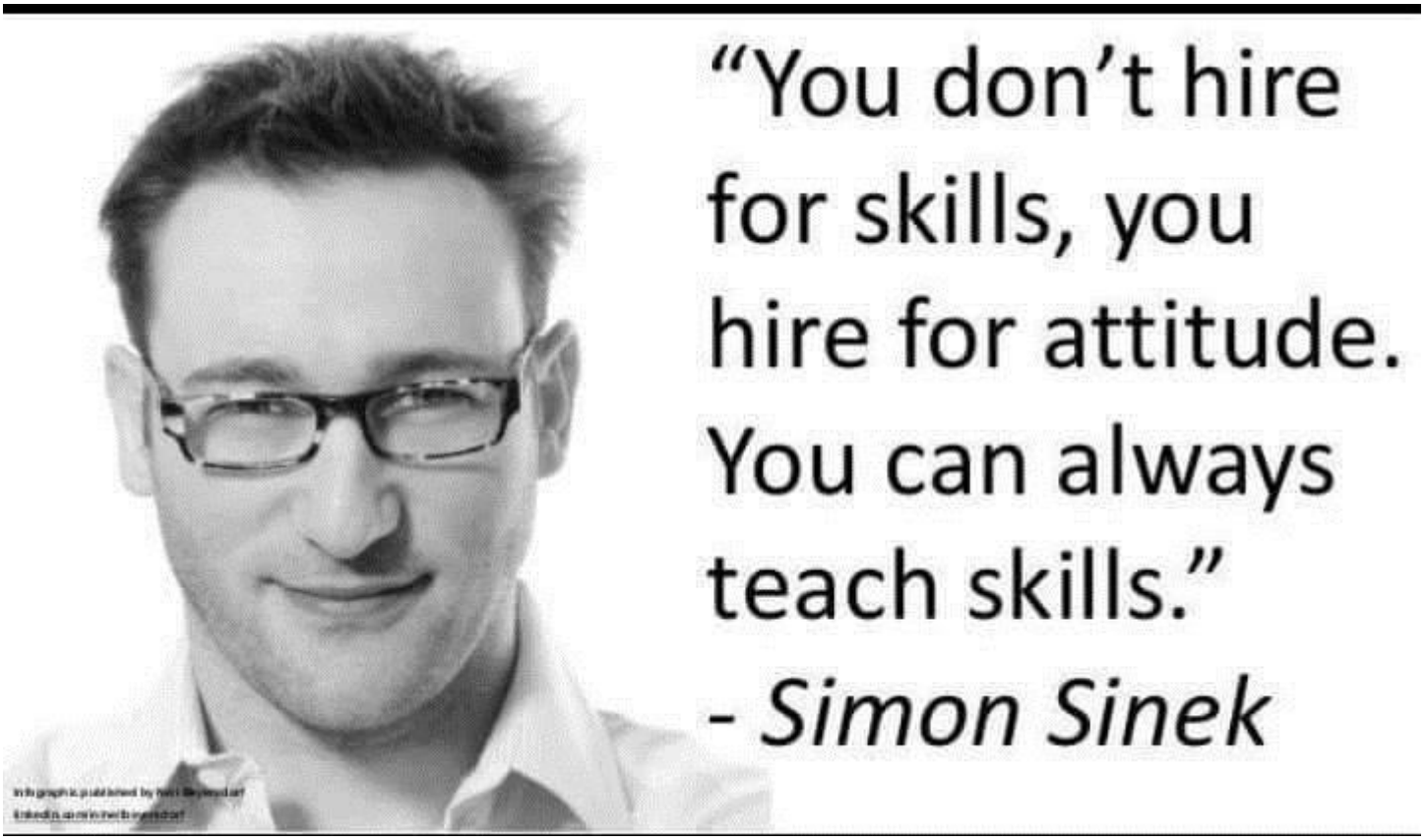
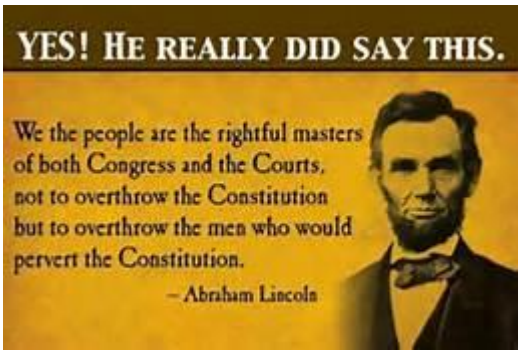
SLIEPIL-SLIE Quotes



"Hard work, Innovation, Creative thinking are the Pillars for a Successful Business"



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“Important Official Announcement from SLIE to Public”

The Sri Lanka Institute of Entrepreneurship (SLIE) is a duly constituted and registered Business entity and governed by its constitution. The Public is hereby noticed that SLIE will not be responsible for any transaction or communication by any unauthorized party or parties, who attempt or may attempt to use valuable SLIE advertising content through negligence or otherwise.

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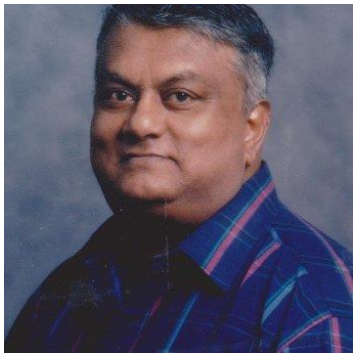
Patrick

Gannile

Chris

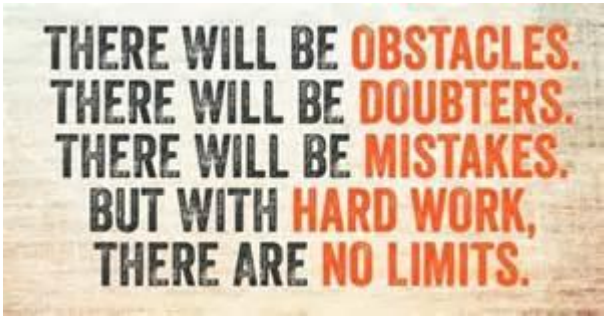


How to Build Trust in Open Entrepreneurial Innovation with SLIE

Entrepreneurs today recognize the value of embracing open innovation by tapping into an outside pool of experts to help them fine-tune their innovative idea/ideas, accelerate their implementation and compete in the marketplace. The Sri Lanka Institute of Entrepreneurship (SLIE) is an ideal source, where unique all-round services are offered.

At the same time, even companies today will see how working with a resourceful and dynamic organization as the SLIE can help them to elevate their current performances, expand their market horizons and have meaningful expansion of their businesses. One of the key platforms for success between the seekers and providers is the building of collaborative trust and relationships for mutual benefit.

Both seekers and providers may worry about protecting their intellectual property but developing honest and clear strategies and mutually agreed approaches to agreements to identify each partner's contribution. For an individual entrepreneur it is much easier than for a company or a large organization to negotiate workable terms, as the latter may have several smaller groups to contend with. One of the most difficult areas for preservation of intellectual property is – *Technology*. This is especially true where open dialogue is the mode for discussion, presentation and involves sharing of ideas. On the other hand, there may be advantages too, finding quicker solutions for difficult problems, forging new trust based partnerships through open dialogue that will generate mutual value and good results.



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BIZ Talks

Great Research & Development Projects for Sri Lanka

By Chris Defonseka Hon. FSLIE

As the world is engaging in the reduction of environmental concerns by increasing the use of biomass, phasing out petroleum-based products, Sri Lanka is also ideally positioned to make a major contribution towards this end.

For example, the West and Europe is phasing out coal and diesel as a fuel for steam power generation and using biomass wooden pellets. The writer, as a Research Engineer based in Toronto is currently engaged with other research colleagues in the conversion of wheat hulls wastes into liquid fuel. Another interesting developing project is the use of polymeric resins filled with biomass 40:60. In addition to cost advantages, shorter cycle times and less power consumption factors are driving the plastics moulding processors to systematically change to using these versatile composite resins.

The writer highlights the following projects which will have great potential of national value for Sri Lanka. These can be easily researched and produced commercially with the added advantage of export.

1. Manufacture of Polymer/Rice Hulls composite Lumber as an ideal substitute for natural wood.
2. Manufacture of Rice Hulls pellets for alternate fuels for diesel & coal. (local & export)
3. Conversion of rice hulls wastes into liquid fuel.
4. Manufacture of Composite Polymer Resins for injection moulding, extrusion & compression moulding

****

Chris Defonseka is an Industrial & Management Consultant with over 40 years' experience. He was a Lecturer in several Entrepreneur Development Programs and has also set up several projects both locally and internationally. His book –"Practical Guide to Flexible Polyurethane Foams"- is specially designed for entrepreneurs and is available at cparkinson@smithers.com

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Rev. Dr. Martin Luther King, Jr.”

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Research Column

Researched Solutions for large Flexible Polyurethane Foam Manufacturing Factory Needing assistance

Chris in Assignment Office

Chris Defonseka Hon. FSLIE

Consultant (CESO), International Industrial & Management Consultant, Published Author

Chairman- Industry Advisory Board- (IAB) – SLIE

email: defonsekachris@rogers.com

Client: ABC Foam Ltd. Caribbean Islands

Consulted Source: CESO – Canadian Government Foreign Assistance Agency undertaking foreign assignments for Technology Solutions, Business & Management support. A selected panel of consultants serves this organization covering a wide range of activities on a global scale.

Abstract

ABC Foam Ltd. located in the Caribbean is a very large Flexible Polyurethane (PUR) foam manufacturer of products like foam mattresses, cushions, sheets, slabs, convoluted foam and other foam products for both local consumption and export to other Caribbean islands. The Factory consisted of 200,000 square foot floor area, employing over 300 personnel. The board of Directors consisted of a President, Technical Director, Production Director supported by a CEO, General Manager and a large staff. The company had many departments in keeping with the needs of processing a large volume of foam. In keeping with producing a very large volume of foam annually, using modern machinery, the company had many departments covering all aspects as needed by ISO standards. The foaming line was fully automatic supported by automatic and semi-automatic cutting systems. As the foam production volumes grew with addition of new machinery, the company experienced predictable manufacturing problems with regard to quality issues, excessive foam wastes, declining process efficiency and naturally drop in profits. The Board of Directors had sought the assistance of two local consultants on a personal basis and since they were unable to produce any satisfactory results, they then decided to seek the assistance of CESO based in Toronto Canada.

Keywords: PUR foam, excess foam waste, quality issues, declining process efficiency

1. Introduction

PUR foams are the most popular and best material for comfort products. ABC Foam Ltd. Had started as a small single owner operation making foam mattresses. Diligent planning at the beginning had made available plenty of land space and during their 20 year operation as the brand name established itself with sales volumes increasing, the small company was able to slowly expand with periodic factory floor additions and the installation of new equipment. Their latest acquisition of a fully automatic foaming line with suitable cutting & fabrication systems enabled them to really expand their foam business to meet the increasing demand. Due to lack of technical know-how and handling very large volumes of foam productions, they were now faced with problems in areas such as maintaining quality in respect to load bearing factor which was an important marketing tool, excessive foam wastes- 33% against acceptable standard of 15%, declining process efficiency, naturally resulting in drop in profits.

CESO in keeping with standard procedure requested the client via an application form for full details with emphasis on their concerns, the final results they expected and the background of the Consultant they preferred for this assignment. Once these were established, CESO offered the services of Chris Defonseka, with recent assignments in-Russia, Serbia, Philippines and so on, whom the client accepted.

2. Procedure

The established procedure for CESO Consultants on a pre-assignment basis is to communicate with the client once accepted via emails and telephone conversations and obtain first-hand information and set targets for solving their concerns. Also, the establishment of a tentative- Work Plan- based on mutual agreement before commencement of assignment.

3. Assignment Parameters

- The CESO Team: Project Coordinator
  CESO Consultant
  Caribbean Country Representative
- Client Team : CEO (main contact)
  General Manager (working contact)
  Team Secretary
  Coordinator (Administration)

- Assignment duration: 4 weeks
- Assignment period : March/April 2010
- Assignment targets : a. Waste reduction – 33% to 15%
  b. Quality issue – ensure foam load bearing IFD> 2.0
  c. Process efficiency – minimum 75%

- Client's Situation :
  1. At 33% foam material waste, the company was experiencing a material loss of US $ 60,000/- per month which was well over the standard acceptable 15%, which is the normal acceptable range for a manufacturing operation of PUR foam.
  2. Foam products for bedding and furniture are basically classified by their density and IFD (load-bearing factor), with the key factor for marketing being the IFD, which should be greater than 2.0. Client's products were under 2.0, thus, creating marketing restraints.
  3. With expansion of production volumes, the process efficiency of the overall factory operation had declined to around 60%, which was low as compared to industrial standards.

Week 1

Introduction of CESO Consultant to client by CESO Country Representative- preliminary inspection of factory- brief study of current operation – examination and evaluation of company financial and production records and data- discussion with directors – meeting key departmental personnel – selection of final action team (Consultant, GM, secretary, production manager, engineer, technologist).

Meeting with CEO, GM and Heads of Departments

Week 2

On- going study and research with close observation of activity of each department and process flow in general – Action flow: 8am – 1pm (observation, discussion, recording)- 2pm – 5pm (training of personnel from different key departments).

- Waste reduction: Foaming section, Storage, Cutting, Assembly
- Quality issues : Foaming section, Quality control, Cutting
- Process efficiency: All sections

Training Parameters: Basic plastics & PUR foam technology- foaming calculations- functions of components – foam formulating techniques – troubleshooting foam defects – monitoring – recording- evaluation & action - quality control systems- statistical process control (SPC) – calculations for load-bearing factors (IFD) – density calculations/formulating – use of foam cutting systems – zero waste cutting – how to set up an in-house laboratory – ASTM standards – preventive maintenance methods – Lean manufacturing practice – introduction of log books- meeting scheduled targets – safety factors & chemical spill management.

What is Flexible Polyurethane Foam?

A flexible polyurethane foam is a soft, open-cell and pliable material, belonging to the *thermosetting* group of plastics and is made by the combination of several chemicals. The main ingredients are: polyols, isocyanates, water, methylene chloride, amine catalysts and tin catalysts.

The incorporation of additives will give the foam special properties like- colour, UV protection, high resiliency, fire retardation, anti-fungal protection and so on. These foams can be made in different densities and qualities by adjusting the quantities of ingredients in a formula. Polyols are based on polyethers and polyesters and although both will produce open cell foams, the latter due to their smaller cell structures have tighter air-flow and are less flexible.

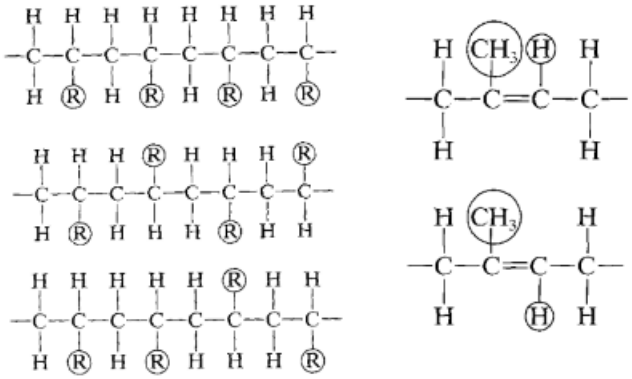
Polyether based polyols give are much softer foams and the preferred material for comfort applications. Eco-polyols, for example, made from soya, will also produce open cell foams but will give lower yields and an odour-masking additive may have to be used. Foams made from all three types are widely used in very large volumes in many applications all over the world.

What is IFD?

The indentation force deflection (IFD) value as a number is required as a marketing tool in addition to other aspects. This is the ratio of compression of a selected foam sample at 25% and 65%. This test is carried out by compressing a representative foam sample – 60 x 60 x 10 cm- of a production batch using an indenter plate of an electro-mechanical device and noting the force values for 25% and 65% compression of its height. The ratio of values- 65% divided by 25% is the IFD number and should be ≥2.0.

Lean Manufacturing

This is an operational tool applicable to all sections of an organizations of all types. It simply means elimination of waste at every sector of an operation. In this client's case, being a manufacturing operation, parameters like- JIT (ordering of all materials just in time) thus, not carrying excess stocks and tying up valuable capital, preventive maintenance which will reduce machinery downtime, proper handling of chemicals to prevent wastage of chemicals by spills, countering production downtime due to power failures, good quality control practices, proper understanding of foam technology to formulate effectively to prevent foam wastes on production runs, all come under the umbrella of Lean Manufacturing which will automatically improve –*Process Efficiency.*



Chemical Bonding – The polymeric materials known as polyurethane foam is a family of polymers which are essentially different from most plastics in that there is no urethane monomer and the polymer is almost invariably created by the reactions between particular chemicals.

Polyurethanes are made by an exothermic reaction between alcohols with two or more reactive hydroxyl (OH) groups per molecule and isocyanates that have more than one reactive isocyanate group (NCO) per molecule. The group formed by these reactions is known as the 'urethane linkage' being the essential part of the polyurethane molecule.

Training Methodology: Individual & group discussions of problem areas – group lectures – Videos – handouts – literature – magazines – books.

Production Flow as Observed

All chemicals are bulk purchases and on arrival are pumped into large holding tanks which are connected to the main fully automatic Foaming Machine. A crew of five operators with one Lead-Hand was in charge of the foam production. Being a modern automatic foaming system capable of very fast foaming it needed about an hour's preparation before foaming could commence. The crew came in at 7 am but came to the machine only around 8 am and the machine set-up took about 2 hours and was ready for a production run around 10 am. The Lead-Hand then studied the production scheduled for that day as issued to them by the production section and was seen discussing it with his team. The requirement was two runs of 700 Kg. of foams but of two different densities. With the Lead-Hand setting the control valves according to a standard formula, the mixing head delivered a liquid mixture deposited a small volume of under-mixed chemicals onto a paper trough moving very slowly on a conveyor. This mix was slow to rise which was normal and formed part of the inherent initial waste. The subsequent flow was good foam rising to a height of 42 inches and forming a 1.5 inches meniscus on top.

As the foam went forward it began to 'cure' and formed a solid mass but very hot due to the exothermic heat reaction. Down the line a vertical foam cutting system, cut the foam into large standard size blocks which were held in an area before transport to storage. The entire duration of the foaming cycle was 48 seconds. It was observed that at the beginning and at the end there were foam waste, which was sent to the recycling section, when the foam was sufficiently cooled down.

The machine was then set-up for the second run of a different density, with production parameters more or less the same. It was observed that at the end of each run, the cut foam blocks were marked showing the date and density of each block. The crew then went about the task of tidying up the foaming section. The crew returned at 1pm after lunch and plenty of idling time was observed till 3 pm when their shift ended. An important observation was that while all the foam blocks made around 10 am were of 'good foam quality', some of the foam blocks made during the second run around 11.30 am tended to collapse or was of poorer quality. Overall additional foaming defects were – foam splits, tacky bun surfaces and dense bottom skin. This needed careful research and analysis of all formulae and pre-foaming of small samples for testing using the standard 'box-test' methods.

Client's Foaming Line –photo curtsy of A. S. Enterprises-India

Storage

The post-production storage area for foam blocks was very good and clean with good ventilation and gas-exhaust systems in place. However, the foam blocks were placed in a 'mixed' pattern for post-curing period of 24 hours (minimum) which takes place in the storage phase, before they can be taken out for fabrication. During this period, gas is emitted from the exothermic (heat giving) reactions still taking place inside the blocks. Hence the need for good ventilation and exhaust systems. If by mistake or other, under-cured foam blocks are taken for fabrication, then the foam will be of poor quality and also the possibility of a fire hazard must be kept in mind. This was observed on some occasions as the foam blocks taken for fabrication were still 'wet and sticky' when the top was cut to remove the rounded surface (meniscus). This meant that these foam blocks were under-cured and under the stipulated curing time of 24 hours.

Flexible polyurethane foam blocks when stored for post-curing should be spaced at least one foot from each other and never be placed one on top of each other to prevent creating a fire hazard as for about 20 hours they will be emitting gas due to the exothermic reactions place inside the foam blocks. Hence it is important to check the air quality inside this storage area also, when the periodic air quality tests are carried out on the production areas.

Some large volume manufacturers prefer to have this post-curing area away from the main production floor area to minimize fire hazards. This is generally not a good idea, as foam blocks have to be brought back into the cutting area, thus interfering with good process flow, unless the cutting area is adjacent to the storage area with easy access to foam blocks.

Storage of Foam Blocks

Cutting & Fabrication

Foam Blocks Trimming Machine

Auto/Semi-Auto Mattress Cutting Machine

Photos curtsy of –A.S. Enterprises India

The current practice as observed was the trimming of the 1.5 inches thick rounded top of all foam blocks taken for fabrication and then proceeding to trim all four sides and bottom. Although, this was the norm, in this current situation where the overall operational waste was tremendously excessive at 33%, a change in trimming patterns had to be implemented. Moreover, since the large foam blocks were cut on the foaming machine to one standard size, when cut to mattress, cushion sizes or sheets, large slabs of good foam was generated and carried off to the recycling section. This was unacceptable. After weighing all the foam wastes per shift over a 10 shift period to include all trimmings and post fabrication waste and taking an average, it was concluded that the cutting and fabrication section contributed the most (around 20%) of the monthly 33% overall wastage factor of the company.

This operation being the pivotal process action for the whole operation, the quality control steps taken were virtually non-existent. This is the section that should give a feedback to the Production Manager/General Manager of all foam blocks being fabricated into pre assembly products. The minimum feedback data should have been at least on-density, weight, compression factor or load bearing factor (IFD). Some of the marketing restraints of the company's mattresses and cushions in addition to low IFD was dimensional irregularities.

Assembly & Finishing

This section worked efficiently and different types of foam mattresses were made. Essentially this section comprised of assembly of foam slabs, sheets, padding, soft patterned cloth and trimmings. However, they had two problems. One was the variation in foam quality and the other was that the padding foam (thin foam sheeting) made in the factory in the form of rolls of sheet was too coarse and was posing problems by sticking to the cutting blade, giving uneven surfaces. After observation and study, it was established that the problem lay in the foaming section.

Range of Mattresses

Addressing Concerns

After diligent observation, recordings, discussions and research it was agreed that the targets set-up could be achieved and to address concerns of each section separately and then combine them in an overall ‘smooth-flow’ operation to raise the standard of process efficiency. The following recommendations were made with commencement of implementation with immediate effect under the supervision of the Consultant and his team.

Recommended/Implemented Solutions

a) Foaming Section

- The foaming crew to setup the foaming machine between 1pm & 3pm ready for the next day’s production, instead of setting it in the morning.
- The two foam runs to commence and finish between 8am & 10.30am in the morning, when it is cooler. This will enhance good quality, even density foam for both runs. Since atmospheric conditions have a bearing on PUR foaming, from pour-time, through creaming to foam rise and cure, cooler room temperatures, as the factory warms, the warmer temperatures will affect the quality of foam.
- The quality of the release paper forming the trough sides was inferior, which resulted in poor release of foam sides, with large patches of foam sticking to the paper. This would necessitate extra trimming later. Use of better release paper would ensure smooth sides which will not require trimming and loss of foam.
- The foam runs should be longer. For example, the foam wastes at the beginning and end of a 48 seconds 700 kg. run would be the same for a 60 seconds run which would give a gain of 175 kg. per run or 350 kg. for two runs for the same amount of waste. This will see a significant reduction in waste and also reduce the number of foaming days due to the extra production.
- Foam blocks to be cut to exact/no waste sizes as per dimensions (lengths) submitted by the fabrication section, instead of cutting to convenient standard lengths which will generate a great deal of waste later.

- Weigh and record machine generated foam waste for each shift. These data will be of great help when analysed.
- Each block to be tagged with data such as – production date/ weight/ density/ block dimensions/ other, before being sent to storage for final cure.
- To be implemented later. A light-weight free- rolling roller to be placed on the hot foam top surface to eliminate the 1.5 inches meniscus (round top) being formed. Consultant in discussions with the engineering department provided a design which could be turned out in their own workshop.
- Introduction of 'box-test.' This is a simple test as practised by many foam manufacturers. A small light-weight wooden box – 12 ins. X 12 ins. X 6 ins. (height) with a removable bottom be used to mix and pour system every time a new formula or a batch of foam is to be made. Analyse the data from the small foam sample and adjust formula, if necessary, before using a new formula straight away on the machine. This will save foam wastes.
- To increase the foam load-bearing factor from < 2.0 to >2.0, the filler content on all formulations were raised by 4.0% after a 'box test' trial. This was based on three tests done with 4%, 6% & 8% increase in filler and 4% was found to be sufficient. The resulting foam productions when tested showed IFD (load-bearing factor) was > 2.1 which was acceptable.

b) Storage

- This comprises of two areas- a post-production holding area and the final storage area for semi-cured blocks until fully cured (24 hours). Recommended that all foam blocks coming off the machines to be placed with rounded- top at the bottom (upside down), to flatten the rounded –top, which would reduce the meniscus height from 1.5 inched to 0.5 inches thus saving foam waste later. This also signifies a savings of raw material, that instead of a standard foaming height of 42 inches to get a final trimmed height of 40 inches (shrinkage 0.5 ins. + 1.5 ins. meniscus), the foaming height could now be 41.0 inches. On the spot checks proved this practice correct.
- Recommended that instead of just transporting these foam blocks and storing at random in the final holding area, that a FIFO system (first-in, first-out) be adopted. This would also help the next section- cutting & fabrication to access the foam blocks on the basis of fully cured blocks.
- Other important areas like- ventilation, exhaust systems and safety factors were satisfactory and did not need any improvements.

c) Cutting & Fabrication

- The most generation of foam waste was in this section. Large sections and slabs of foam was left over after the mattresses, cushions and sheets were cut. Jobs for special orders like- odd shapes, wedges, medical needs and so on, left large pieces of foam leftover, which were sent for recycling.
- As a first step, a quality control system was introduced. Three areas were set-up- Green (QC passed), Yellow (On-Hold) and Red (reject). All QC passed products were held in 'Green', large pieces of leftover foam was held in 'Yellow' and small pieces and others held in 'Red' for recycling.

- To get a green sticker put on a product, the QC inspector had to carry out tests on a batch system since it was not possible to carry out individual checks due to the large volumes being processed. Wooden fixtures were introduced to check dimensions of mattresses and cushions, which enabled QC to carry out random checks. Only products with 'green' stickers were sent for assembly.
- The IFD of mattresses and cushions could be checked with a small hand-held device, while the density could be easily checked by using weight and dimensional data.
- The foam lots in 'yellow' yielded marketable smaller cushions and pads. From the still smaller pieces, on the recommendation of the Consultant with the marketing division agreeing, a range of *sponges* for domestic purposes were cut and introduced into the company's product range. Thus, even the foam pieces in the 'yellow' were reduced to negligible waste, with the remnants being sent via the 'red' for recycling.
- Important training- the crew of this section were trained to calculate the length of each foam block in relation to volume of orders in hand to be cut into different products. They had to inform the foaming section, at least one day ahead of the lengths/density of foam blocks needed. This meant that the foaming section would no longer cut foam block-lengths to a convenient standard length but would have to cut different lengths on a foaming run. This system was possible as the marketing/sales division was feeding the required product schedule to the production manager/production division well in advance.
- Tremendous change- when this system was introduced, the foam waste factor dropped drastically when the blocks were cut, the wastage left was much less than before.

d) Assembly & Finishing

- Efficient and successful operation. The problem of varying foam densities/quality being addressed at the foaming section no longer caused any problems. Under the supervision of the Consultant and adjusting of existing foam formula for foam blocks to be produced for thin continuous sheeting, the foam was successfully converted from a 'coarse' to 'soft' fine-celled foam. The changes made were increasing air component by 1.0 % and increase of blowing agent by 0.08% which were effective. All other parameters remained the same.

e) Process Efficiency

- Due to time restraints, it was not possible to really see the final actual overall increase in process efficiency. However, the thorough theoretical classroom training of each of the important sections combined with Lean Manufacturing practices recommended, plus the implementation of new methods introduced, no doubt would lead to overall process efficiency, well above the target set at the beginning of the assignment. For an overall improvement and consistent performance on a daily basis in operational efficiency, it would take a period around 3 to 6 months. Reports reaching CESO later confirmed the fact that on an average the efficiency factor had risen well beyond set target levels.

Conclusion

The last day morning was spent handing over of Consultant's Assignment Report and discussion in detail with the CEO and General Manager. In the afternoon, a final meeting was held with the Board of Directors present, where the CEO presented and explained to the Board the assignment results. The CEO reported an immediate foam waste reduction of 19% with the possibility of a further reduction of 2% once the operation was running smoothly on the new systems recommended and implemented. He also reported that the quality of foam had improved by way of- consistency of parameters like density uniformity, consistent readings for load bearing factor (> 2.0) and the process efficiency had also improved tremendously. The Consultant in conclusion recommended that the overall operation should be monitored every two weeks for the first 3 months and then at least every month and any needed action be taken until a free-flow smooth operation was reached. He also thanked the Board, CEO, GM and all personnel for the wonderful support and cooperation extended to him throughout the assignment. End of assignment.

Chris with General Manager –travel inside factory by Golf Cart

Author's note: Company name not real for protection of client. All machinery shown as currently in use by client. Standard practice is for a Consultant to be in communication with client to monitor progress for a period of 6 months after end of assignment.

SLIE Young Entrepreneurial Society Project (SLIE YES)

SLIE YES Mission: "To foster entrepreneurship among students and developing future leaders by establishing SLIE Young Entrepreneurial Societies - (SLIE YES)"

Become a SLIE YES member today -- you won't be disappointed!!!

"We welcome students, undergraduates or graduates and potential entrepreneurs"

We are delighted to announce the eligible Age/Group criteria for SLIE YES membership - : Group (A) 15-19, Group (B) 20-24 and Group (C) 25-29.

Here's a link to our SLIE YES membership application form Email info@slie.lk and <slieyes.info@gmail.com> , With Best Wishes!

SLIE YES Project TEAM/Twitter (slieyesproject)

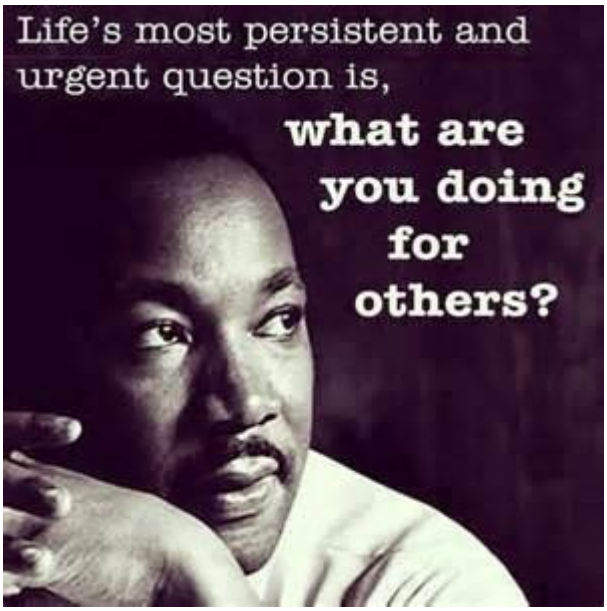
"SLIE YES"-SLIE Young Entrepreneurial Society Project is endorsed by **SLIEPIL**

Welcome Message from Vice President & Chairman / Membership Sub Committee, Sri Lanka Institute of Entrepreneurship

SLIE Membership (2017/ 2018)

"Join SLIE-Your Professional Partner in Business" 'Make a Difference as a SLIE Ambassador'
All Members need to go beyond extra mile to survive -30day Probationary period of SLIE Organizational culture'
Applications for membership in the Institute are to be directed to the Membership Manager of SLIE via info@slie.lk or <saviyamca@gmail.com>
** SLIE Membership Benefits-
• Professional Recognition – Designatory Letters (FSLIE, MSLIE or AMSLIE)
• SLIE Community/ Groups & Get-Together's
• SLIE Faculty for Education & Enterprise Support
• Membership Directory
Please note that- 1-'Only a member -MSLIE, upgraded to a Fellow' and
2- Every cent of your money is utilized to sponsor a SLIE Project **

With Best wishes!
Patrick Rodrigo, Hon. FSLIE



U are welcome to check –out the New dates

https://www.researchgate.net/project/SLIE-First-Annual-Undergraduate-Multi-Disciplinary-Research-Poster-Competition-Forum-2017

Sponsor for SLIE Projects

"**The role of project sponsors is often overlooked by most institutions. But for every stage of a project, there are key executive sponsor behaviors that can make the difference between Success and Failure".**

SLIE Project Investments LTD brings all SLIE Projects under One Umbrella:-

Sri Lanka Institute of Entrepreneurship, SLIE Academy,

SLIE YES (SLIE Young Entrepreneurial Society Project),

SLIE Library & SLIE Voice Online & SLIE Journal of Multi-Disciplinary Research & Development (SLIE JMRD)

In order to improve goals of SLIE in the future we have focused on many activities for our members.

*SLIE Library (e reference), Special events-the SLIE Forum, Business PLAN Competitions, Coordinate with SLIE Undergraduate, Multi-Disciplinary Research Poster Competitions, SLIE Publication -SLIE VOice Quarterly.

SLIE Library-Valuable and informative books will be available for reference to SLIE Staff/ members and students. Donations of books from publishers and well-wishers would be most welcome

Business Plan Competitions-Trophies**,** Certificates, Scholarships for winners (Entrepreneurs & students)-Annual event

Multi-Disciplinary Undergraduate Research Poster Competition
Trophies, Certificates and Cash Awards for winners' -Annual event

SLIE Awards -Each year, SLIE YES Organizers will be awarded for their efforts. Sponsor an award, and help us celebrate these outstanding people and organizations at our Annual Awards Ceremony

SLIE Grants Projects-V welcome SLIE members to identify projects taking place in communities that need support.
SLIE Educational Outreach- Your sponsorship for SLIE Educational Outreach: - Providing information for educational and research purpose.

Event Cost –For further details U are welcome to Contact us at: Promotion & Advertising Unit slieplc.info@gmail.com, Tel: 0115682849
www.slie.lk

Biz Quiz

Subject: General **For: Entrepreneurs**

Presented by the Industry Advisory Board (IAB) – SLIE

Questions: Good Luck!

1. Are Plastics & Rubber both Polymers?
2. Does egg shells have Calcium Carbonate?
3. What is a Contribution Margin?
4. Is Working Capital part of Capital Requirements?
5. What is the ISO standard for the Automobile Industry?
6. What does ISO in industrial terms stand for?
7. What is the difference between- Creditors & Debtors?
8. An electricity bill for 8 Units-how many watts have been consumed?
9. In a Breakeven Analysis-what are the three important parameters?
10. What is a Cascade System in an industrial operation?
11. Name the Industrial Standards for- Britain, Germany, Japan & Canada
12. What is an example of a Fixed Cost & Variable Cost?
13. A foam block- 20 x 20 x 60 ins. height. Using a Band Saw m/c, how many cushions of size 20 x 20 x 4 ins. can be cut?
14. What is the difference between Single Phase & Three Phase Power?
15. Density is a common term in industry. In the British system it is expressed as – lbs/ cubic foot. What is the equivalent in the Metric System?

Answers: 15-14 excellent 13-11 good 10-8 fair

Our Ambassadors

The Voice Uncut - ‘Your voice will never die Arjuna’

“As we grieve know that we are remembering you and honoring the memory of Our Professional colleague and friend T.Arjuna and his Voice…

‘Loss is constant. But life flows with new entrants, new perspectives. Until we go the way of the others, some will stay with us, for some time some will go before us, some will appear and disappear; but none will stay eternally, for that cannot happen (Arjuna, 2016)’…”

May your soul rest in peace,

SLIE Management & Staff
www.slie.lk

Entrepreneurs Corner

Do You Want to be Your Own Boss?

By Chris Defonseka International Industrial & Management Consultant

It's not all rosy but exciting and rewarding. Especially when your creativity is displayed on the shelves of popular retailers in the marketplace or recognized as an innovative service provider or yet again as an internationally acclaimed exporter……

I have been often asked by my friends and colleagues, how difficult it was for me to start my own business in Sri Lanka, especially when I had to give up a prestigious and lucrative employment. Most times, I tell them not to think of the difficulties but rather to think on overcoming the exciting challenges of becoming an entrepreneur and its great rewards.

Let me start with a few hard truths and an insight into the – *realities of becoming an Entrepreneur.*

1. **The Decision:** This is the first important step. A lot of influence will depend on whether you are single or married with a family or holding a very prestigious and lucrative job. Are you confident enough to leave a guaranteed monthly income with other perks and put your family at risk? If your product/service idea is new, the risk is higher but if your product/service has a well-established market, then the risks are much less.
2. **Planning:** You have decided to go ahead. Obviously you have already done a market research and approached possible sources for financing. You also possess or are able to get the technical know-how needed. You need to start with a Business Plan containing and Action Plan and a Marketing Plan. You may have a professional colleague's assistance to fine-tune your plan.
3. **Launching Project:** You launch your project with confidence, helped by a few employees or friends willing to help out. Since your initial resources are limited, you will have to cover most of the work. You will work long hours and meet prospective customers personally, until a network is established. You will arrange for customer feedback and establish a close and friendly relationship. Initially, you will handle the financials yourself but have an accountant and a lawyer on contract for work, when necessary.

4. **It's Stressful:** If you are a Sole Proprietor, the stress is greater than in a Partnership, where the other partners will share the work and thus less stressful for you. Your business performance keeps reminding you that you have mortgaged your house and property and if the business is struggling, it will be stressful for you. Other factors that contribute towards stress are: bank loans, private loans, credit cards and so on. If your cash flow is strong you not be too much stressed but the thought of the future could raise your stress levels.
5. **Never-Ending Work:** If you are in a good paying job and a prestigious one too, after sometime you may realize that you are being paid well because you have great talents and skills. You are using those to make a load of money for some individual or company. In the past, most jobs gave you the freedom to leave your office on time and go home and enjoy your life with family and friends. Not anymore. As businesses look for more and more money and profit, subtle lay-offs called're-structuring' is taking place on a global scale and in these cases, long-standing, efficiency and loyalty- for example 20 years' service- to an organization means nothing and you can easily be a victim. The 'lucky' ones remaining will soon find out that they are not lucky but will have to shoulder extra workloads and their 9am to 5pm routine is no longer possible. True, an entrepreneur will also experience this never-ending work load but he can do it at his or her pace and the rewards are much better.
6. **The Rewards:** You have worked hard and your efforts are now bearing fruits. You have the pleasure of employing a few people. Together you make extra efforts to expand your business, knowing you are now responsible for more families. The demand for your products or services are growing and you see them on the shelves of prestigious retailers or grateful clients thank you for efficient services rendered or yet again your products are accepted on the international market and you receive bigger orders. Yes, it is time to relax a bit and enjoy, knowing your business is financially stable and growing. You are accepted and recognized in business circles and you have the resources for foreign travel to establish new buyers. You feel elated and why not? You are the boss and have the freedom to work at your own pace and it is time to reap the rewards of satisfaction, which can be quite exhilarating.

Entrepreneurship is not a part-time or full-time job but it is a – Lifestyle!

(Acknowledgement: Above quote is from SLIE website)

Social Net

Passing Through

- Chris Defonseka, in memory of our SLIE Colleague-Arjuna

Uninvited hither we came
Without regret departed hence.
Having completed my earthly sojourn,
Hope, haven't hurt anyone in my path.
As I ascend to my glorious heavenly abode
Let no one, friend or foe, hinder my path
Thro' love or regret, as we shall meet again
Across that golden shore.

Our Special appreciation for LinkedIn, Facebook, Twitter and Research Gate for giving access to share and publish updates of SLIEPIL-SLIE Projects"

Come –JOIN Us

'V invite you all to join us as we promote public communication through study, research and practice' Contact Emails-<info@slie.lk>,<education@slie.lk> or slieacademy@gmail.com
Thank U, Project TEAM.
voice@slie.lk; Twitter (slievoice)
SLIEPIL-SLIE Website (www.slie.lk)

"Safety is No-01

Culture is No-02….

It is what we do around here"

Check Ur answers; Biz Quiz

1. Yes
2. Yes – 95 -98% (ideal for cottage industry)
3. Contribution towards overheads (unit sale price – variable cost)
4. Yes
5. QS 9000
6. International Organization for Standardization
7. Creditors- you owe Debtors- you are owed
8. 8000 watts
9. Fixed Costs – Variable Costs – Sales
10. Vertical fall system to cool water being re-circulated
11. BSS – DIN – JIS – CSA
12. Fixed Cost – Rent Variable Cost – Raw material
13. 14 plus one less than 4 ins. thick. With each cut, a slight material loss due to blade thickness
14. Voltage- single 230 V 3 Phase- 440 V
15. kg/cubic metre