

An Internship Report  
On  
**Toka Ink Bangladesh Limited**

In Partial Fulfillment of  
Masters Degree in Business Administration,  
BRAC University, Dhaka

**Submitted by**

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## **Letter of transmittal**

Date: 30th March, 2014

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BRAC University, Dhaka-1212

Subject: Submission of Internship Report

Dear Sir,

With great pleasure I am submitting this internship report that I have been assigned as an important requirement of MBA program at BRAC University. I have found my internship quite interesting, knowledgeable and valuable. I have tried my best to prepare an honest and useful report. This report is about Toka Ink Bangladesh Limited.

I would also like to thank you for your support and patience with me and I appreciate the opportunity provided by BRAC University and Toka Ink Bangladesh Limited to work on this program.

Sincerely yours,

FarihaRahman

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MBA Program

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## **Introduction**

The printing ink market is an industry that embodies the strength of global as well as regional economies. With a high relationship to a country's GDP, the printing inks market is recurring in nature, with economic ups and downs amplifying the demand patterns. (Printing Inks Market, Mike King, 11 June 2012)

Ink is used to print on thousands of different surfaces. It is expected to withstand extremes of temperatures, humidity and weather conditions. On food packaging it displays dietary information, or storage and handling instructions which can for example reduce the chance of wasted produce. In its most serious role, ink educates and informs, updating us on world events and warn us of danger. (Printing Inks Market, Mike King, 11 June 2012)

The printing inks market is projected to reach US \$18.2 billion by the year 2017, driven by the mounting popularity of environmentally friendly inks, and improving technology innovations that are opening up newer growth avenues including relatively new markets such as UV and ink jet inks. (Printing Inks Market, Mike King, 11 June 2012)

## **Global And National Outlook**

The global economy virtually is yet to regain momentum to shake off the fallout that started in 2008-2009. It dropped to almost 3% in 2012. Bangladesh Bank has commented that policy measures taken by major advanced economics failed to rebuild adequate confidence in the medium-term to uphold prospects.

Though many emerging markets and developing economies are growing at a rate of 5%, output growth in the advanced economies are to remain sluggish further. In Asia, both China and India showed slower growth in 2012 compared to 2011. Japan however recovered from disastrous situation of 2011 to gain a little momentum in 2012. The IMF suggests that in 2013 the World Economy will not progress further and the growth may remain almost same with little advancement.

In contrary to global scenario, Bangladesh showed steady growth for last few years despite political instability, poor infrastructure, corruption, insufficient power supply and slow implementation of economic reforms. In 2012, the overall growth experienced in Bangladesh is 6.1% while it was 6.5 % in the previous year. In Agriculture sector, the growth suffered a setback by attaining 2.5% growth in 2012 compared with 5.1% growth in 2011. The Industry Sector showed significant growth of 9.5% in 2012 while it was 8.2% in 2011. The Service sector maintained steady progress keeping its growth around 6.1%. The economists forecast that in 2013, Bangladesh may keep its growth at 5.7% - 6.1%.

## **Overall Market of Printing Ink in Bangladesh**

In order to meet the 2500 tonnes/year domestic ink demand, over a dozen local and joint-venture companies initiated manufacturing the chemical product.

Within a few years, combined capacity of these local manufacturers proved themselves capable of meeting the total domestic demand and earned reputation for the ink's quality.

Besides Toka, local brands like Super Tone, Taj, Fuji, Hugli, Crown, Deer and others have jointly achieved the production capacity sufficient to meet the domestic printing ink demand.

Practically Bangladesh did not experience any expansion in printing and publishing sector in general and hence, our market did not expand that much. The increase in the raw material price caused a negative impact and advent of low priced inks from China and India had further affected our market share severely, especially in Web sector.

## **Definition of Offset Printing**

Offset printing or web offset printing is a commonly used printing technique in which the inked image is transferred (or "offset") from a plate to a rubber blanket, then to the printing surface. When used in combination with the lithographic process, which is based on the repulsion of oil and water, the offset technique employs a flat (planographic) image carrier on which the image to be printed obtains ink from ink rollers, while the non-printing area attracts a water-based film (called "fountain solution"), keeping the non-printing areas ink-free. The modern "web" process feeds a large reel of paper through a large press machine in several parts, typically for several meters, which then prints continuously as the paper is fed through. (Wikipedia, 2013)

## **Offset printing at present**

Offset lithography is one of the most common ways of creating printed matter. A few of its common applications include: newspapers, magazines, brochures, stationery, and books. Compared to other printing methods, offset printing is best suited for economically producing large volumes of high quality prints in a manner that requires little maintenance. Many modern offset presses use computer to plate systems as opposed to the older computer to film work flows, which further increases their quality. (Wikipedia, 2013)

**Advantages of offset printing compared to other printing methods include:**

- Consistent high image quality-Offset printing produces sharp and clean images and type more easily than, for example, letterpress printing; this is because the rubber blanket conforms to the texture of the printing surface. (Wikipedia, 2013)
- Quick and easy production of printing plates. (Wikipedia, 2013)
- Longer printing plate life than on direct litho presses because there is no direct contact between the plate and the printing surface. Properly developed plates used with optimized inks and fountain solution may achieve run lengths of more than a million impressions. (Wikipedia, 2013)
- Cost-Offset printing is the cheapest method for producing high quality prints in commercial printing quantities. (Wikipedia, 2013)
- A further advantage of offset printing is the possibility of adjusting the amount of ink on the fountain roller with screw keys. Most commonly, a metal blade controls the amount of ink transferred from the ink trough to the fountain roller. By adjusting the screws, the gap between the blade and the fountain roller is altered, leading to the amount of ink applied to the roller to be increased or decreased in certain areas. Consequently the density of the colour in the respective area of the image is modified. On older machines the screws are adjusted manually, but on modern machines the screw keys are operated electronically by the printer controlling the machine, enabling a much more precise result (Wikipedia, 2013).

**Disadvantages of offset printing compared to other printing methods include:**

- Slightly inferior image quality compared to rotogravure or photogravure printing. (Wikipedia, 2013)
- Propensity for anodized aluminum printing plates to become sensitive (due to chemical oxidation) and print in non-image/background areas when developed plates are not cared for properly. (Wikipedia, 2013)
- Time and cost associated with producing plates and printing press setup. As a result, very small quantity printing jobs may now use digital offset machines. (Wikipedia, 2013)

## **The offset printing process**

The most common kind of offset printing is derived from the photo offset process, which involves using light-sensitive chemicals and photographic techniques to transfer images and type from original materials to printing plates. In current use, original materials may be an actual photographic print and typeset text. However, it is more common — with the prevalence of computers and digital images — that the source material exists only as data in a digital publishing system. (Wikipedia, 2013)

Offset Lithographic printing on to a web (reel) of paper is commonly used for printing of newspapers and magazines for high speed production. In this process, ink is transferred from the ink duct to the paper in several steps:

- The ink duct roller delivers ink from the ink duct to the ink pyramid, also called the Ink Train. (Wikipedia, 2013)

- The ductor roller, sometimes called a vibrator roller due to its rapid back and forth motion, transfers ink from the duct roller to the first distribution roller. It is never in contact with both rollers at the same time. (Wikipedia, 2013)
- The distribution rollers evenly distribute the ink. The first distribution roller picks up the ink from driving rollers, and the last distribution rollers transfer the ink to the form rollers. (Wikipedia, 2013)
- The transfer rollers transfer ink between the ink-absorbing and ink-delivering driving rollers. (Wikipedia, 2013)
- Driving rollers roll against the distribution rollers and either absorb or deliver ink, depending on their placement. (Wikipedia, 2013)
- Ink form rollers transfer ink from the last distribution rollers on to the printing plate. (Wikipedia, 2013)
- The printing plate transfers the ink to the offset cylinder (typically called the blanket cylinder) usually covered with a rubber “blanket.” (Wikipedia, 2013)
- The paper is then pressed against the blanket cylinder by the impression cylinder, transferring the ink onto the paper to form the printed image. (Wikipedia, 2013)

## **Sheet-fed offset**

### Sheet-fed offset press

Sheet-fed refers to individual sheets of paper or rolls being fed into a press via a suction bar that lifts and drops each sheet onto place. A lithographic ("litho" for short) press uses principles of lithography to apply ink to a printing plate, as explained previously. Sheet-fed litho is

commonly used for printing of short-run magazines, brochures, letter headings, and general commercial (jobbing) printing. In sheet-fed offset, “the printing is carried out on single sheets of paper as they are fed to the press one at a time.” Sheet-fed presses use mechanical registration to relate each sheet to one another to ensure that they are reproduced with the same imagery in the same position on every sheet running through the press. (Wikipedia, 2013)

Perfecting press: A perfecting press, also known as a duplex press, is one that can print on both sides of the paper at the same time.[16] Web and sheet-fed offset presses are similar in that many of them can also print on both sides of the paper in one pass, making it easier and faster to print duplex. (Wikipedia, 2013)

Offset duplicators: Small offset lithographic presses that are used for fast, good quality reproduction of one- and two-color copies in sizes up to 12” by 18”.[12] Popular models were made by A.B. Dick, Multilith, and the Chief and Davidson lines made by A.T.F./Davidson. Offset duplicators are made for fast and quick printing jobs; printing up to 12,000 impressions per hour. They are able to print business forms, letterheads, labels, bulletins, postcards, envelopes, folders, reports, and sales literature. (Wikipedia, 2013)

Feeder system: The feeder system is responsible for making sure paper runs through the press correctly. This is where the substrate is loaded and then the system is correctly set up to the certain specifications of the substrate to the press. (Wikipedia, 2013)

Printing/inking system: The Printing Unit consists of many different systems. The dampening system is used to apply dampening solution to the plates with water rollers. The inking system uses rollers to deliver ink to the plate and blanket cylinders to be transferred to the substrate.

The plate cylinder is where the plates containing all of the imaging are mounted. Finally the blanket and impression cylinders are used to transfer the image to the substrate running through the press. (Wikipedia, 2013)

Delivery system: The delivery system is the final destination in the printing process while the paper runs through the press. Once the paper reaches delivery, it is stacked for the ink to cure in a proper manner. This is the step in which sheets are inspected to make sure they have proper ink density and registration. (Wikipedia, 2013)

Slur: Production or impact of double image in printing is known as 'slur'. (Wikipedia, 2013)

## **Web-fed offset**

Web-fed refers to the use of rolls (or "webs") of paper supplied to the printing press. Offset web printing is generally used for runs in excess of five or ten thousand impressions. Typical examples of web printing include newspapers, newspaper inserts/ads, magazines, direct mail, catalogs, and books. Web-fed presses are divided into two general classes: "cold" or "non-heatset," and "heatset" offset web presses; the difference being how the inks that are used dry. Cold web offset printing dries through absorption into the paper, while heatset utilizes drying lamps or heaters to cure or "set" the inks. Heatset presses can print on both coated (slick) and uncoated papers, while coldset presses are restricted to uncoated paper stock, such as newsprint. Some coldset web presses can be fitted with heat dryers, or ultraviolet lamps (for use with UV-curing inks). It is also possible to add a drier to a cold-set press. This can enable a

newspaper press to print color pages heatset and black and white pages coldset. (Wikipedia, 2013)

Web offset presses are beneficial in long run printing jobs, typically press runs that exceed ten or twenty thousand impressions. Speed is a determining factor when considering the completion time for press production; some web presses print at speeds of 3,000 feet per minute or faster. In addition to the benefits of speed and quick completion, some web presses have the inline ability to cut, perforate, and fold. (Wikipedia, 2013)

Heat set web offset: This subset of web offset printing uses inks which dry by evaporation in a dryer typically positioned just after the printing units. This is typically done on coated papers, where the ink stays largely on the surface, and gives a glossy high contrast print image after the drying. As the paper leaves the dryer too hot for the folding and cutting that are typically downstream procedures, a set of "chill rolls" positioned after the dryer lowers the paper temperature and sets the ink. The speed at which the ink dries is a function of dryer temperature and length of time the paper is exposed to this temperature. This type of printing is typically used for magazines, catalogs, inserts and other medium-to-high volume, medium-to-high quality production runs. (Wikipedia, 2013)

Cold set web offset: This is also a subset of web offset printing, typically used for lower quality print output. It is typical of newspaper production. In this process, the ink dries by absorption into the underlying paper. A typical coldset configuration is often a series of vertically arranged print units and peripherals. As newspapers seek new markets, which often imply higher quality (more gloss, more contrast), they may add a heatset tower (with a dryer) or use UV (ultraviolet)

based inks which "cure" on the surface by polymerisation rather than by evaporation or absorption. (Wikipedia, 2013)

## **Web-fed versus sheet-fed**

Sheet-fed presses offer several advantages. Because individual sheets are fed through, a large number of sheet sizes and format sizes can be run through the same press. In addition, waste sheets can be used for make-ready (which is the testing process to ensure a quality print run). This allows for lower cost preparation so that good paper is not wasted while setting up the press, for plates and inks. Waste sheets do bring some disadvantages as often there are dust and offset powder particles that transfer on to the blankets and plate cylinders, creating imperfections on the printed sheet. (Wikipedia, 2013)

Web-fed presses, on the other hand, are much faster than sheet-fed presses, with speeds in excess of 20,000 cut-offs per hour. (Cut-off is the paper that has been cut off a reel or web on the press. The length of each sheet is equal to the cylinder's circumference.) The speed of web-fed presses makes them ideal for large runs such as newspapers, magazines, and comic books. However, web-fed presses have a fixed cut-off, unlike rotogravure or flexographic presses, which are variable. (Wikipedia, 2013)

## **Inks**

Offset printing uses inks that, compared to other printing methods, are highly viscous. Typical inks have a dynamic viscosity of 40–100 Pa·s. There are many types of paste inks available for utilization in offset lithographic printing and each have their own advantages and

disadvantages. These include heat-set, cold-set, and energy-curable (or EC), such as ultraviolet- (or UV-) curable, and electron beam- (or EB-) curable. Heat-set inks are the most common variety and are "set" by applying heat and then rapid cooling to catalyze the curing process. They are used in magazines, catalogs, and inserts. Cold-set inks are set simply by absorption into non-coated stocks and are generally used for newspapers and books but are also found in insert printing and are the most economical option. Energy-curable inks are the highest-quality offset litho inks and are set by application of light energy. They require specialized equipment such as inter-station curing lamps, and are usually the most expensive type of offset litho ink.

Letterset inks are mainly used with offset presses that do not have dampening systems and uses imaging plates that have a raised image. (Wikipedia, 2013)

Waterless inks are heat-resistant and are used to keep silicone-based plates from showing toning in non-image areas. These inks are typically used on waterless Direct Imaging presses. (Wikipedia, 2013)

Single Fluid Inks are newer ink that uses a process allowing lithographic plates on a lithographic press without using a dampening system during the process. (Wikipedia, 2013)

## **Letterpress printing**

Letterpress printing is a technique of relief printing using a printing press. A worker composes and locks movable type into the bed of a press, inks it, and presses paper against it to transfer the ink from the type which creates an impression on the paper. (Wikipedia, 2013)

In practice, letterpress also includes other forms of relief printing with printing presses, such as wood engravings, photo-etched zinc "cuts" (plates), and linoleum blocks, which can be used alongside metal type in a single operation, as well as stereotypes and electrotypes of type and blocks.[1] With certain letterpress units it is also possible to join movable type with slugs cast using hot metal typesetting. (Wikipedia, 2013)

Letterpress printing was the normal form of printing text from its invention by Johannes Gutenberg in the mid-15th century until the 19th century and remained in wide use for books and other uses until the second half of the 20th century. Letterpress printing remained the primary way to print and distribute information until the twentieth century, when offset printing was developed, which largely supplanted its role in printing books and newspapers. More recently, letterpress printing has seen a revival in an artisanal form. (Wikipedia, 2013)

## **Ink types**

Nearly all types of ink can be placed into two categories:-

- Standard printing inks- Web offset inks (heat set and non-heat set), sheet fed ink, soybean based ink, process ink for color printing and others. ([www.npes.in](http://www.npes.in))
- Specialty inks- Metallic, fluorescent, security, phosphorescent and others. ([www.npes.in](http://www.npes.in))

## **Components of a Printing Ink**

Traditional textbooks in printing technology divided the components of printing inks into three parts: vehicle, pigment and binder. In this report, one more component will be added to the mix, additives. . (John Henry, Letter press commons)

### Vehicle

The vehicle of an ink is the component which allows the ink to flow, and allows ink to spread and transfer from roller to roller and from roller to plate (in the case of letterpress, whatever raised surface is used as an image carrier). Traditionally vegetable oils have been used as the vehicle in inks. Linseed oil, the expressed oil from the flax seed has had the longest history in this role. With the advent of petroleum refining, mineral distillates have reduced the role of linseed oils in inks, but most conventional inks for letterpress use have at least some linseed or other vegetable oil in the vehicle component. Soya bean oils have been used for some time as an alternative for linseed oil, as they share similar characteristics. Whatever is used as a vehicle must have some drying characteristics which can be altered or controlled to provide the proper “curing” of the ink on the various surfaces upon which printed images must be applied. (John Henry, Letter press commons)

### Pigment

The major role of pigment is that of color and opacity in a printing ink. Combinations of various pigments may be used to provide the vast range of colors which can be printed. White and black pigments are used in colored inks to provide varying tints (lighter) and shades (darker) of the base pigments. (John Henry, Letter press commons)

Pigments used in printing inks have changed through the years due to new technologies, availability of material, and increasing knowledge of their effect on people and the environment. One pigment which is still widely used in printing inks is carbon black. The source of this pigment has also changed over the years, but has always been the product of burning something to create a black substance or “soot”. (John Henry, Letter press commons)

Pigments are chosen for their color appearance, but also for various properties they possess for resistance to ultraviolet rays, heat, solvents, water, etc. You will notice that inks can vary a good deal in cost for different colors as the pigments which color them vary greatly in the raw materials cost. Black is generally the least expensive of the ink colors as carbon black is an inexpensive colorant. Some materials which could prove useful as pigments are not suitable as they may react to the resins and varnishes used in inks, and the color can be greatly affected by contact with those other chemical components. (John Henry, Letter press commons)

One example of a pigment which lost favor in recent history is chrome yellow. The process used in its production was hazardous to the employees involved as well as to the general environment. Chrome yellow is a lead chromate, and lead as a pigment component has been gradually excised from the printer’s palette as it has from the house painter’s. Lead also was used extensively in other colors to lighten them, and has been primarily replaced with titanium dioxide and zinc compounds. (John Henry, Letter press commons)

### Binders

Resins used in printing inks serve primarily as “binders”. This means that they serve to bind together the other components, and allow them all to come together to make a film which lies

on top of the paper. The resins also serve to provide an adherence to the material upon which the inks are printed. The type of resin used is used quite often to describe the type of ink, and provides the basis of many discussions and expression of opinion as to what is the best ink type for letterpress printers to use. In the three most typically used inks, the resins used are; alkyd (oil-based), rubber and acrylic. There are other types of resin which can be used for specific characteristics, but these three mentioned are the most frequently appearing in letterpress formulations and in the offset-litho inks used by letterpress printers. (John Henry, Letter press commons)

### Additives

Additives and modifiers are used in printing inks to “dial in” the characteristics of the ink to make it more suitable for the job at hand. For instance wax can be added to increase the rub resistance of an ink used for packaging applications. Most inks for letterpress printing come ready-to-print without need for additives to be added. Some printers do, however, like to “tweak” their ink for various reasons, and a discussion of the additives which can be added can be valuable to the printer for troubleshooting ink problems on the press. (John Henry, Letter press commons)

There are three major additives which can assist the printer in tailoring ink to the stock or to the nature of the image being printed. The most often used of the additives is a drying agent. This most generally reacts with the oxygen in the air to crosslink the resins used in the ink, and helps to form a tough layer of ink on the surface of the substrate. It generally takes very little of

this additive to do a good job. Too much can actually inhibit the crosslink action. The driers used most often are salts of cobalt and manganese. (John Henry, Letter press commons)

Another oft-used additive by letterpress printers is magnesium carbonate (chalk). The chalk changes the “length” of the ink and is used to modify the varnish to make it “shorter”. This means that it assists with combating the tendency of the ink to “string out” as the ink film is separated, and allows the ink to be applied easily by the rollers to the very surface of the image and upon printing, to allow the ink film to break once the print is made and the plate begins to back away from the substrate, forming a more distinct edge to the image. Magnesium carbonate can also be used to add opacity to an ink, although addition of opaque white ink is more generally used for this application and is much better suited for that purpose . (John Henry, Letter press commons)

Gel Reducer is a product which reduces the “tack” of an ink. It finds use when printing on very soft paper stock which tends to “pick”. Picking is when the paper fibers are pulled away as the plate or type pulls away from the paper stock. The ink is tacky enough to separate fibers from the paper and these fibers can get mixed in with the ink or will tend to fill small open areas in the image, requiring frequent cleaning during a run. (John Henry, Letter press commons)

## **What Type of Ink Will Work Best?**

Most modern letterpress printers utilize inks which have been put on the market primarily as inks for offset lithography. There are some specialized suppliers who have tailored an ink line for letterpress printing, but the majority of modern letterpress printers use offset litho inks for

their production. This is perfectly fine as the ink composition and, for the most part, the physical specs for the ink vary little from what would be specified for letterpress printing inks. .

(John Henry, Letter press commons)

In general, the inks designed for small offset presses and duplicators work well and have the required body and tack for use in letterpress without modification. Some of the inks designed for high-speed web and sheet-fed offset litho presses have less body and lower tack than would be ideal for letterpress. That is not to say these high-speed inks would not work, they just may require a bit more modification by the press operator to work as well. One of the advantages of these high-speed inks, however, is that the pigments are generally more finely ground and the ratio of pigment to vehicle may be higher. (John Henry, Letter press commons)

## **Company Overview**

Toka Ink Bangladesh Ltd is a joint venture company of Bangladesh and Japan formed in 1992 with 49% equity participation of T & K Toka Co. Ltd of Japan and 51 % equity participation by a group of experienced printers and ink distributor in Bangladesh. Memorandum of understanding (MOU) was signed in May 14, 1992. Their first commercial operation started in July 01, 1993 and Inaugural Day was August 29, 1993. Their total capital is 1, 26, 00000 (One Crore & twenty Six lacs).

Toka Ink Bangladesh Ltd is situated in its own 40,000 sq. ft factory and laboratory premises in Tatki, Rupganj, Narayanganj, just 30 minutes drive away from Motijheel Commercial Area, Dhaka. Right from its inception, Toka Ink Bangladesh Ltd has been in the field of production of

high quality printing ink. Starting off with the trade mark of “Bengal Tiger” registered under the Trademarks Act 1940, the company now has a multiple range of printing inks and also shades of ink as per customer specification and conforming to international standards.

Toka Ink Bangladesh Ltd has grown and firmly established itself as a well respected manufacturer and supplier of high quality offset printing inks and varnishes to the specialist printing and packaging industry in Bangladesh. The company has a domestic market spread throughout Bangladesh and also undertakes export marketing. At present the company exports its products to Nepal only but currently negotiating with other countries in this regard.

Keeping in view the technological developments taking place in this sector and the constant requirement and demand of its valued customers from all over Bangladesh, the company has in its products line four ranges of printing inks mainly SG(Super gloss), HG(High grade), MG(Medium grade), and EG( Economic grade)series, which are normally available in the local market. Beside the normal products, Toka Ink Bangladesh Ltd can produce all shades of offset cold set inks to meet the customers’ demand or specific requirement. All Toka Grade and range of inks are manufactured with modern innovation and formulation technology from T&K Toka Co. Ltd Tokyo, Japan and is prepared to suit all types of papers and boards commonly used in our region.

T&K Toka Co. LTD, mother concern of Toka Ink Bangladesh Ltd established in 1942. Its initial name was Toka Shikiso Chemical Laboratory and in January 1991 the company changed its name to T&K Toka Co. Ltd. It is a well reputed and established company in Japan. Among the ink manufacturer in Japan, its rank is 04 and its global rank is 07. As a UV Ink manufacturer, its global rank is No. 01. T& K means Technology & Kindness. They always offer the excellent products by deploying the front running technology. This principle of “Technology & Kindness” is alive in the hearts of every employee.

T& K Toka Co. Ltd has seven sister concerns namely Korea Special Ink Industries Ltd, Toka Ink International Hong Kong Ltd, Cemani Toka Indonesia, United Ink Production Co. Ltd, Saudi Arabia, Hanghou Toka ink Chemical Co. Ltd, China, Toka Ink Guanghou Ltd, China & lastly Toka Ink Bangladesh Ltd. T& K Toka exports its products all over the world.

Total Number of Employees of Toka Ink Bangladesh Ltd is 65 (consolidated)

Toka Ink Bangladesh Ltd is the first ISO 9001: 2008 & ISO 14001-2005 (Environmental) certified company in this sector in Bangladesh. It is a quality conscious company. To further improve effectiveness and efficiency, it use a comprehensive and cost effective method, ISO Documentation Management System to enable the tracking of quality management process

## History of Toka

Mar 1947	Toka Shikiso Chemical Laboratory established	
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Dec 1949	Restructured to Toka Shikiso Chemical Industry Corporation	P.T. Cemani-Toka (Indonesia)	
May 1958	Separating varnish and resin department and set up Fujikasei Kogyo Co.,LTD.		
Nov 1965	Constructed Saitama Factory in Iruma Gun of Saitama		
Aug 1969	Establishment of Hong Kong Branch	Korea Special Ink Industrial Co., Ltd	
Mar 1971	Established a joint venture in Jakarta, Indonesia: P.T. Cemani-Toka Company	(Korea)	
Jan 1975	For disposal of industrial and trade waste, set up Miyoshi Sangyo Co.,Ltd.		
Apr 1979	Established Korea Special Ink Industrial Co., Ltd in Seoul, Korea	Toka Ink International (Hong Kong) Ltd.	
Oct 1985	Changed Hong Kong Branch into Oversea Affiliated Company. Establishment of Toka Ink International (Hong Kong) Ltd.		
Dec	Established a joint venture company in		

1988	Hangzhou, China: Hangzhou Toka Ink Chemical Co., Ltd.	Hangzhou Toka Ink Chemical Co., Ltd. (China · Hangzhou)
Jan 1989	To enhance sales at Tohoku region, set up Tohoku Toka Shikiso Co.,Ltd.	
Nov 1990	Constructed administrative building in Saitama Building.	
Jan 1991	Changed company name to T&K TOKA	
May 1992	Established a joint venture in Dacca, Bangladesh: Toka Ink (Bangladesh) Ltd.	Toka Ink (Bangladesh) Ltd.
Nov 1995	Established a joint venture company in Guangzhou, China: Toka Ink Guangzhou Ltd.	
Aug 1997	be listed on the JASDAQ exchange [Japan Association of Securities Dealers Automated Quotations]	 Toka Ink Guangzhou Ltd.
Sep 2000	Established a joint venture in Jedda, the Kingdom of Saudi Arabia: United Ink Production Co., Ltd.	
Dec	Going public at JASDAQ Stock Market	

2004		
Feb 2011	Merging with Fujikasei Kogyo Co.,LTD.	

### **Products offered by T & K Toka are as follows:-**

- UV Inks
- Sheet-fed Offset Inks
- Web Offset Inks
- Gravure Inks
- Flexographic Inks
- Aqueous Varnishes
- Metal Paints
- Additives
- Primers
- Chemicals

In Toka Ink Bangladesh Limited, the inks that they offer are Sheet-fed Offset inks and Web Offset inks.

### **Environmental Policy**

T&K, “Technology & Kindness”, being their founding business principle, they have always strived, by deploying the front running technology and putting their heart into the services, to offer products that satisfy our customers in the fields of ink (T&K TOKA), and synthetic resin (Fuji Kasei Kogyo). As an implementation of this T&K gives a great consideration to environmental protection and has laid out following basic policies towards that end.

- Conserve the resources and energy through efficient use.
- Promote recycling and the reduction of waste.
- Control the material that takes a toll on the environment. Reduce the burden on the environment and develop products that are environmentally friendly through the whole product life cycle.
- Implement Green purchase (give priority to environmentally friendly products and producers).
- Work continuously to improve environment and to prevent pollution.
- Not only observe the environmental related laws, regulations and conventions, but also enact self-governing standards and promote environmental protection activities.
- All employees shall take active part in environmental protection.

## **Material procurement**

T& K Toka co. Ltd, Tokyo, Japan, is the main supplier of Toka Ink Bangladesh Ltd. It supplies basic raw materials from its different overseas project such as Hanghou Toka & Guanghou Toka, China. They also get their chemicals and raw materials from china’s chemical and pigment manufacturing company. At times Toka Ink Bangladesh Ltd. procures chemicals and raw

materials from China, South Korea, Thailand & India. Very rarely they procure raw materials from local market.

### **Awards / Certificates:**

- DITF (Dhaka International Trade Fair) best performer award.
- Nepal International Trade Fair- Best quality products award.

### **Objective of the company**

Toka Ink Bangladesh Ltd has developed suitable objectives to fulfill the requirements of the current business circumstances. These are as follows:-

- Their main objective is to serve the customer with best quality products.
- Consistent product quality.
- Production loss will be reduced by 0.10% annually.
- Sales target to be increased 2% annually
- Market complaints to be decreased by 1% by taking prompt corrective and preventive measures.
- Machine breakdown time to be reduced by 1% annually by corrective or preventive maintenance.
- Provide training to at least two people annually for acquiring modern technology and innovation from Japan.

## Company's market share and competitors in Bangladesh

At present Toka has 60% of the total market. Their annual domestic demand is 2500 tonnes of ink. Their local competitors are Fuji ink, Toyo ink, Salehin ink, Kamal ink, Royal ink, Taj ink etc. Their foreign competitors who market their products in Bangladesh are Daihan ink (South Korea), Hindustan Ink (India) & Micro ink (India), Peony (China), Prite (China) etc.

## Competitive and Manufacturing Advantage

Toka is doing very well compared to its competitors because of the following reasons:

- It is basically a Japanese firm.
- It is run by efficient Japanese management. TQM, QC circle, Kaizen, 5S are being implemented here.
- It has its own brand reputation.
- It does not compromise with Quality.
- Toka is an international Brand in ink manufacturing arena.
- Toka ink is made by Japanese technical collaboration.
- Its machines and equipment are international standard.
- It has advanced technology.
- Its basic raw material is supplied by mother concern after necessary testing and assuring quality.
- Its laboratory is equipped with state of the art equipments.
- It has the capacity for short time bulk production by sophisticated machineries.
- Toka has quick problem solving capacity by its efficient technologists.

- Its mother concern has state of the art research institute with 150 technologists. They are always engaged in research and innovation works. If they invent any new ink, they provide Toka Ink Bangladesh the new type of ink.
- Whenever they face any sort of difficult situation which is beyond their capacity to solve, then the Japanese technologists come and solve the problem. This is also their extra advantage.
- Toka has the capacity to manufacture ink with competitive price by restructuring its existing formulation without harming its quality.
- From time to time its technicians go abroad to get acquainted with the latest innovation. They believe it is also one of their competitive advantages.
- Their technicians are always engaged in trying to make cheaper and quality ink and always engage in comparative study with different brands in the local market.

## **Distributors**

The company delivered its products by its own vehicle to Sole distributor. Dealers, sub dealers and the retailers collect it from sole distributor.

Moreover, TIBL has been delivering its products directly to its big customers like Prothom Alo and Daily Star by its own vehicle.

## **SWOT Analysis of the company**

### Strengths of the company

- An efficient, visionary and forward looking CEO.
- An efficient management.
- An efficient, skilled, well educated and well trained work force.
- Well developed and visionary policies
- A sound financial status.
- An efficient marketing department.

### Weakness of the company

- Cannot take bold and aggressive decision to diversify the business.
- Cannot take collective efforts with the government to halt influx of smuggled goods in local market.
- Cannot motivate enough consumers to use original goods instead of foreign goods which may create job opportunities and save state foreign exchange.
- Cannot motivate Japanese partner to further invest in Bangladesh in other fields.

### Opportunities of the company

- Being a Japanese firm, it has the opportunity to use its brand over other brands.
- It has the opportunity to attract more talented people and train them up for future.

- It has the opportunity to motivate other Japanese to invest in other fields in Bangladesh.

### Threats of the company

#### Internal threat:-

- Technical Fault.
- Leakage of company confidential documents.
- Leakage of confidential formulation and technology.
- Intentionally contaminate the products.
- Transferring their technology to their competitors.
- Rebellious activities by dishonest employees.
- 

#### External threat:-

- Smuggled goods flooding into the local market.
- Duty free foreign finished products.
- NBR policy which may hinder the growth of local manufacturers and creation of jobs.
- Excessive competition in the same field among the limited consumers.
- Fall of GDP.
- Political unrest.

## **Environmental Safety Measures**

Toka Ink Bangladesh Ltd is committed to carryout activities to continually improve environmental performance by institutionalizing pollution prevention and are committed to ensure-

- Optimal uses of natural resources like water, air, and energy compliance with environmental legislation and other requirements.
- Minimizing generation of toxic and packaging waste.
- Reduction of air pollution due to production process and
- Using efficient method to dispose all waste water
- Taking efficient measures to prevent soil pollution

### **Expansion in Toka Ink Bangladesh factory**

In the last few years, the volume of activities has increased in TOKA Ink Bangladesh Limited. To ease the problems of storing the inventories and also the working place, expansion of factory premises was undertaken during this period and had completed to make new shade covering 2,700 sft(251 sqm) just adjacent to the western side of the existing factory. In addition, construction of a building o at the first floor of the existing factory was also undertaken.

In line with the policy of Balancing, Modernizing, Revamping and Expansion, arrangement of procuring new machinery was undertaken accordingly. Few types of machinery from China had been ordered and are expected to be commissioned early next year. In addition the management has decided to set up a semi-automated plant in the factory to produce metallic cans required to packaging our products.

## **Customer Service and Maintenance of Standards**

Toka continue to comply strictly to the Quality Management Standard as per ISO 9001:2008 and being a green campaigner, they also maintain the Environment Management System vide ISO 14001:2004. They strongly maintain their commitment to stay close to their valued clients. In today's intensely competitive market situation all organizations are striving hard to acquire market by way of rendering after sales services to its clients. In addition to attending the complaints of the clients, they also offer free and exclusive advices to their valued clients who seek their help and cooperation to overcome their printing difficulties and problems.

## **Recommendation**

In my opinion, the following changes should be made in the company. They are as follows:-

- They need to establish a "Market Research Cell" for promotion of their products to tap the untapped domestic market as well as international market.
- They need to establish a "Customer Complain Cell", which will receive customer complaints and promptly encounter the complaints.
- They have to develop a "Research and development" cell which will only do research and development.
- Toka needs to establish a "Business Diversification Cell" which will work in other fields such as Gravure ink, UV Ink, Flexo ink , Fluorescence ink, Vegetable oil based ink, water based ink and other low cost ink etc . In Bangladesh they only produce offset Ink.

- Toka should set up an “Ink Technology Institute”. In Bangladesh there is no institute to study ink technology. In co operation with Japanese partner, they should try to establish an institute so that fresh ink technologists can come out from the institute.

- They need to transfer technical people to marketing to enhance sale volume.

Toka needs to increase the training of technical personnel under ATOS program with no cost involvement of the company seeking it. Training is a absolutely necessary because employees need to be updated especially in the technical and production department.

## **Conclusion**

Publication and commercial printing is a growing business in Asia, fuelled by developing markets such as China and India. Opening up of these economies has ushered in ample opportunities for demand expansion.

Technological advancements have revolutionized the printing inks industry with printing presses making use of faster and highly automated equipment. Environment friendly inks such as vegetable oil based inks and water-based inks are gaining popularity, given the growing concerns over ecological pollution. (Printing Inks Market, Mike King, 11 June 2012)

Our country’s demand is increasing towards Gravure ink which is necessary for printing on plastic product covers. Therefore very soon Toka is planning to market Gravure ink in the market simultaneously with Offset ink. In addition, the demand for Web based ink is also increasing, so Toka has decided to increase their production capacity from 2500 tonnes to much

more. They also have plans to do market research on other fields such as UV Ink, Flexo ink, Fluorescence ink, Vegetable oil based ink, and water based ink and other low cost ink.

With their continued efforts in creating a base of strong relationship between themselves and their customers, they have been able to hold their market share in local field and earned brand loyalty from its users.

Unfortunately, introduction of low priced inks, particularly web inks by some manufacturers from abroad and also steady competition from their local manufacturers are making some difficulties in their operations. Thus they need to continue to reinforce their efforts to meet the needs and expectations of their customers and their timely requirements. Their management's perseverance and loyalty combined with motivations of their employees will surely continue to differentiate ourselves from competitors through product development and efficient services within affordable price. They believe in teamwork and networking and they believe that in future they will meet the challenges with their strengths and technological capabilities to maintain their positions the leader company in their line of business.

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