

# **Proposal for Ecofriendly Super High Speed Printing Machine & Universal Inks Project**



# Content

1

**Introduction of the Project**

2

**Introduction of the Products**

3

**Business Background**

4

**Marketing Strategy**

# 1. Introduction of the Project

## 1-1 Business Direction

- We focus on the Digital Textile Dyeing Business as our Business Direction which is a charged issue worldwide as Eco-friendly business.
- We concentrate on production of the top quality raw materials of Textile Dyeing Products, which all the relevant Enterprises including Textile Dying Companies, Sewing Factories, Textile Design Companies can do maximize their profits.

## 1-2 R&D Present Status

- Super high speed Natural Inks
- Ecofriendly Ceramic Inks
- Printing LED Inks
- Other Special Inks

# 1. Introduction of the Project

## 1-3 Business Structure (Profit-making Structure)

- The super high speed inks is the After Market Business as a business structure for manufacturing the super high speed dyeing machine and super high speed inks.

The After Market Business means the very necessary consumption market when the products are sold out. For an example, Auto Parts, Pure water Filter, Blades, Ball Point Pen and Sharp Pen are represented as the After Market products.

- When a super high speed printer is sold, it creates the profit even once, but the sales profits for the Nano Inks occurs every month continuously.

## 2. Introduction of Products

### 2-1 Super High Speed Printing Machine

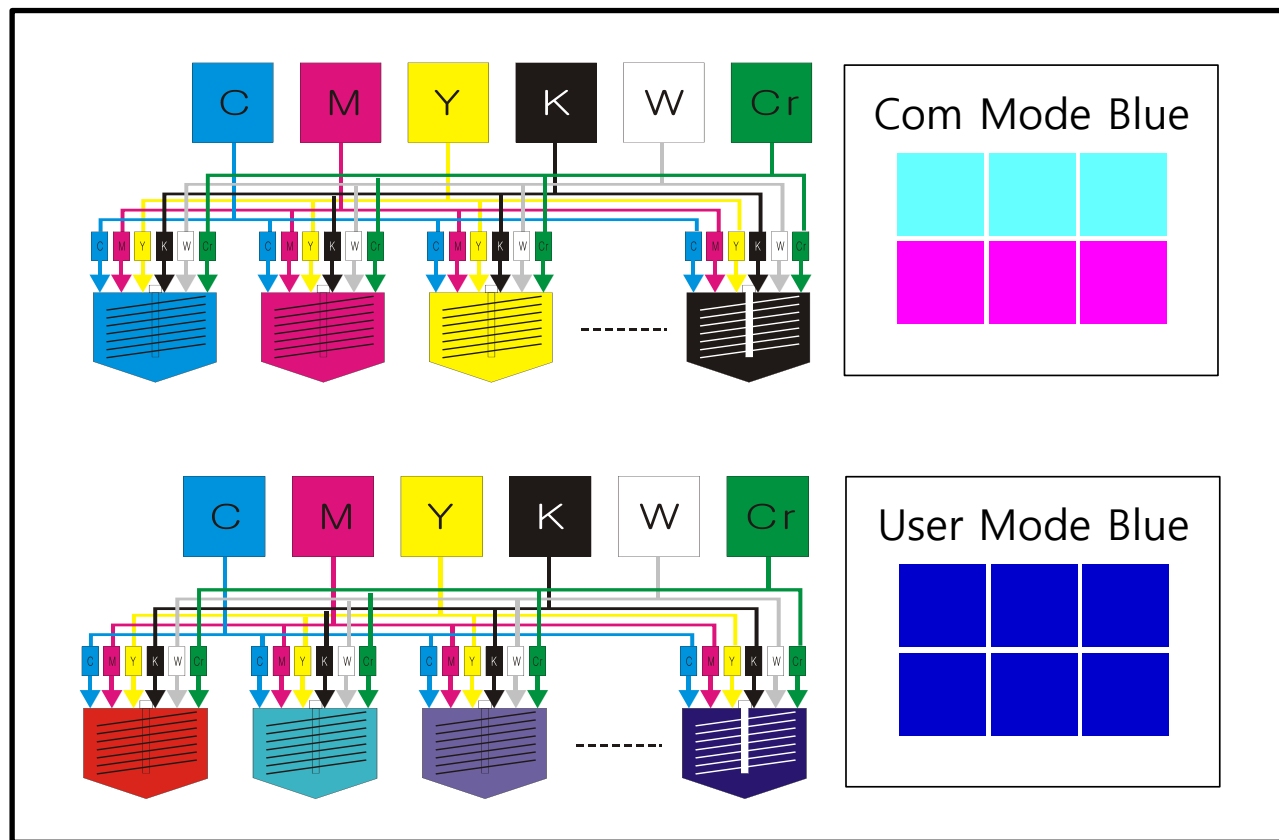
- Our Ecofriendly Super High Speed Printing Technology was applied the Screen Matrix Printing Technology which was developed in 2000 by our company.
- And, it is a Ecofriendly Innovative Technology which saves all the costs with **average 8,000 yards' fast printing speed** and low Dyeing Cost and ,additionally, which reduces the production procedures and whose economy is excellent and which does not occur any waste waters.



## 2. Introduction of Products

### 2-2 Super High Speed Printing Machine

- Can supply with color mixing technologies that the customers desire in addition to all the colors built in the computer.



## 2. Introduction of Products

### 2-3 Super High Speed Printing Machine

- Is the technology that can run multiple jetting 1 to 8 times per pixel. The more the jetting times are, the better the colors and printing quality gets.

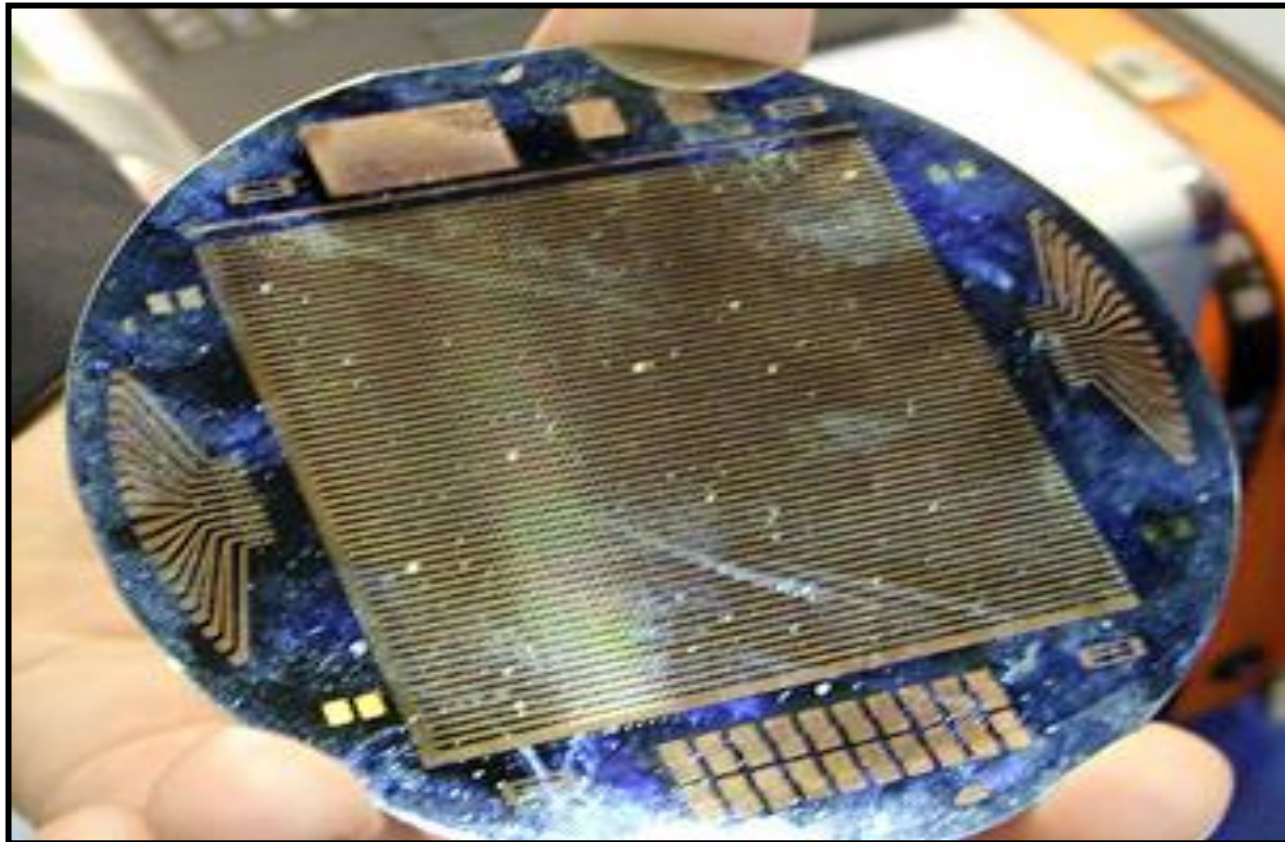
	1	2	3	4	5	6	7	8	...	960
1										
2						1				
3					2	8	2			
4				2	3	8	3	2		
5						8				
6						8				
7						8				
8						8				
...						8				
960										



## 2. Introduction of Products

### 2-4 Super High Speed Printing Machine

- Is Super Precision Technology which can accumulates maximum 921,600 nozzles in 6cm x 6cm structure possibly.





## 2. Introduction of Products

### 2-5 Super High Speed Inks

- Is the inks which can be printed with only one kind of Dye Ink on such various kinds of Textiles as chemical fibers, cottons, silks, wools, and linen fabrics.
- Is the inks which realize an excellent Fastness practically even if it is cleaned right after printing.
- The consumption of this Ecofriendly Nano Dye based Inks will be constantly occurred accordingly to sales of the Super High Speed Printing Machine, as the Ecofriendly Nano Dye Inks is the specially compounded dye ink which can be used only for our Ecofriendly Printing Machine.



## 3. Business Environments

### 3-1 Market Environment

- The Ecological Issues are accelerated gradually worldwide, specially, China is now in very serious situation for contaminated dyeing waste water caused by the existing Textile Dyeing Process. Accordingly, the new Textile Dyeing Methods are very necessarily required, which might not produce any dyeing waste waters.



Figures which shows the contaminated streams by the contaminated dyeing waste waters caused by the existing Textile Dyeing Process(China)

## 3. Business Environments

### 3-2 Market Environment

- Since Korea enhanced the regulation for the contaminated dyeing waste waters of the existing Textile Dyeing manufacturers, The new Ecofriendly Dyeing Method is very necessarily required at this present time. .

A 14 2013년 8월 13일 화요일 **중소·의료**

# 정부, 구리·납 등 수질유해물질 배출 공장 시설폐쇄 명령

## ‘규제 날벼락’에 염색업체 존폐기로

경기 포천에서 의류용 섬유를 염색하는 K섬유는 공장 문을 닫아야 할 위기를 맞았다. 직원수가 130명인 이 회사는 그동안 법 규정대로 폐수 정화처리를 해왔으나 지난달 원폐수(정화처리하기 직전의 폐수)에서 특정수질유해물질이 검출됐기 때문이다. 이 회사 공장은 특정수질유해물질 25가지 중 한 가지라도 나오면 폐쇄 조치 행정처분을 받을 수 있는 폐수 3종 배출사업장이다.

◆**환경부·경기도, 공장폐쇄 명령**  
수질유해물질이 포함된 원폐수 유출에 대한 환경부와 지방자치단체의 단속 및 시설폐쇄 규제로 염색가공업계가 어려움에 빠졌다. 발단은 환경부가 지난해 11월부터 폐수 1종 배출사업장 318곳에 대해 특정수질유해물질 배출 전수조사를 실시하면서다. 조사 대상 사업장의 52%인 163개 업체가 배출한 원폐수에서 구리·납 등 특정수질유해물질이 검출됐다. 경기도는 ‘수질오염물질신고 미이행’을 이유로 업체 고발 및 폐쇄 명령을 진행 중이다. 지난달부

업체 “20년째 말 없다가 갑자기 법 바뀌 단속 행정처분 유예해 달라”  
경기도에만 1070곳 몰려

터 폐수 3종 배출사업장에 대한 원폐수 수질 조사도 벌이고 있다. 염색가공업체들 대부분은 경기도에 몰려 있다. 한국섬유산업연합회에 따르면 경기도 내 섬유 염색가공업체는 1070개로 전국 염색가공업체의 절반이 넘는다. 경기도는 유해물질이 포함된 원폐수를 방류한 섬유 염색가공업체들에 행정처분을 거쳐 시설 폐쇄 조치 등 중징계를 내릴 계획이다.

◆**업체 “탁상행정” 반발**  
해당 업체들은 환경부와 경기도의 이 같은 조치에 강력히 반발하고 있다. 환경 규제의 근거 조항이 2008년 새로 만들어진 것이고, 환경부와 경기도가 이에 대해 자체

특정수질유해물질	
정의	사람의 건강, 재산이나 동·식물의 생육에 직접 또는 간접으로 위해를 줄 우려가 있는 수질오염물질
종류	구리, 비소, 수은, 시안, 납, 유기인 등 25종
관리	하천·호수 등 공공수역 인근 지역에 대한 특정수질유해물질 배출시설의 입지를 사전에 금지 설치가 제한되는 곳 이외 지역에 입지를 허용하되 기준을 설정해 배출 최소화
변경 허가	인허가 물질 이외의 다른 특정수질유해물질이 검출됐을 때 변경허가를 받아야 함

지표·수질 및 수생태계 보전에 관한 법률 제2조 제8호

히 알려주지도 않은 채 규제를 하고 있다는 것이다. 환경부는 ‘배출 시설 중 원료, 부원료, 제조공법이 변경돼 특정수질유해물질이 새로 발생되는 시설은 변경허가를 해야 한다’고 2008년 변경 고시했다.

한 업체 관계자는 “1991년 6월 제정된 배출시설 설치허가 업무처리 요령에는 특정수질유해물질에 대한 처리규정이 없었다”며 “지금까지 20년 넘게 제조공법 등에 아무런 변화가 없었는데도 정부가 법을 바꿔 특정수질유해물질이

검출된 업체에 대해 ‘시설 변경허가 신고를 하지 않았기 때문에 시설 폐쇄를 하겠다’고 말하는 것은 탁상행정”이라고 비난했다.

또 다른 염색업체 사장은 “(폐수시설) 허가 당시부터 최근까지 해당 지자체가 지도점검을 할 때도 원폐수의 특정수질유해물질과 관련해서는 단 한번의 언급도 없었다”며 “갑작스럽게 규제를 하고 공장을 폐쇄하라고 하면 우리는 어떡하나”고 하소연했다.

◆**섬산연 “행정처분 유예해야”**  
정명효 경기섬유산업연합회장은 “그동안 염색가공업체들끼리 막대한 자금을 들여 집단화단지를 조성하고 공동으로 폐수를 처리해왔다”며 “바뀐 환경규제에 따라 특정수질유해물질을 관련 업체들이 스스로 처리할 수 있도록 행정처분을 유예해야 한다”고 주장했다.

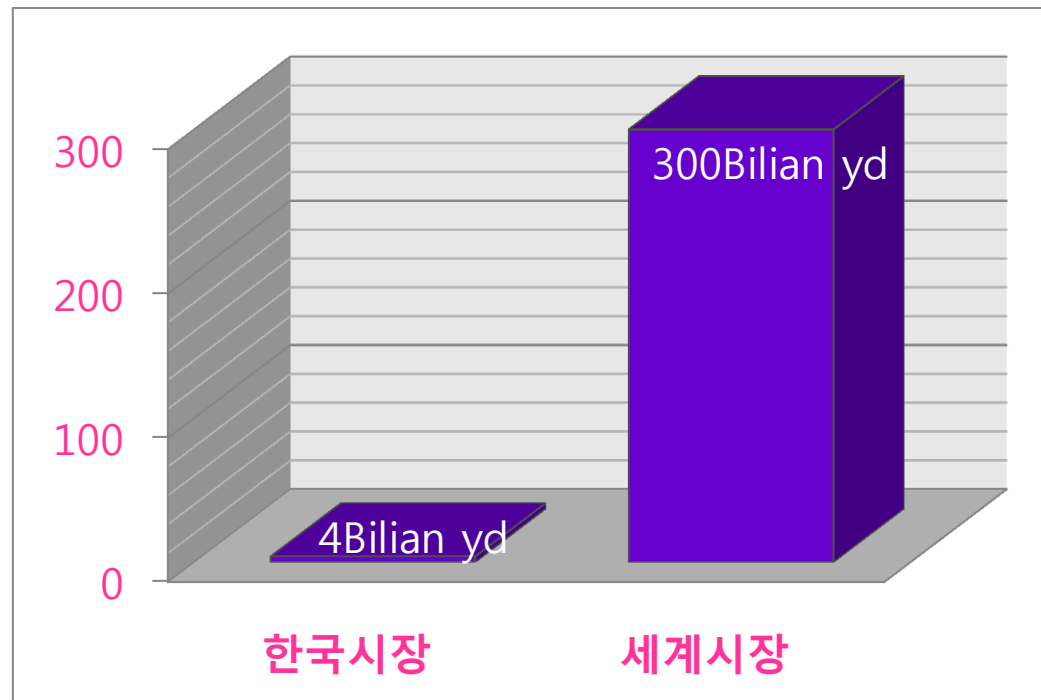
이에 대해 경기도 관계자는 “우리도 관련 법을 보완해야 할 필요성을 느끼고 있긴 하지만 규제를 만드는 기관이 아니어서 마땅한 방법이 없다”고 말했다.

은정진기자 silver@hankyung.com

## 3. Business Environments

### 3-3 Market Size

- According to statistical data issued by Korea Institute of Industrial Technology (KITECH), the volume of production of the Dyeing Textiles is about 400 million yards in Korea, 3 billion Yards worldwide. Calculating with quantities of the Dyeing machines which runs 1 million yards yearly basis, it is estimated the figures about 400 machines in Korea and 30,000 machines for worldwide.





### 3. Business Environments

#### 3-4 Analysis of the Competitors

- Comparison for the Printing and Dyeing Technology

Description	Existing Textile Dye Industry	Ecofriendly Super High Speed Printing Technology
Production Speed	Available with large facilities and many labors	Impossible for comparison of 8,000 yards per hour.
Printing Quality	Effected by production Speed, machines, technical skill, degree of difficulty	Complete Colorful Precise Printing and Dyeing by super precise jetting and sensor
Fastness	Big difference depending upon Dye quality	Excellence for wash fastness and sunshine after printing
Occurrence of Contaminated Waster water	Gigantic Occurrence of Contaminated Dyeing waster water	No occurrence of any contaminated waste water

### 3. Business Environments

#### 3-5 Analysis of the Competitors

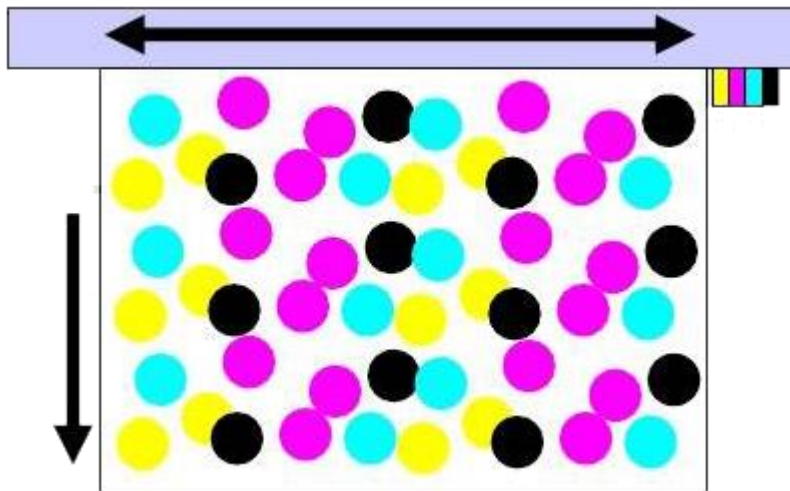
- Comparison for Process

	Digital Wide Format Printer	Super High Speed Printer
Pretreatment	Emission of Pre-coating Chemical Contamination of Textiles	Nil
Output Process	Print Speed 10~20yd/h Printing on the Textiles, no economical	Print Speed 8,000yd/h Direct printing on the Textiles
Post Treatment	Heated steam process, Water Cleaning Process, Emission of the contaminated dyeing waste water	Nil

### 3. Business Environments

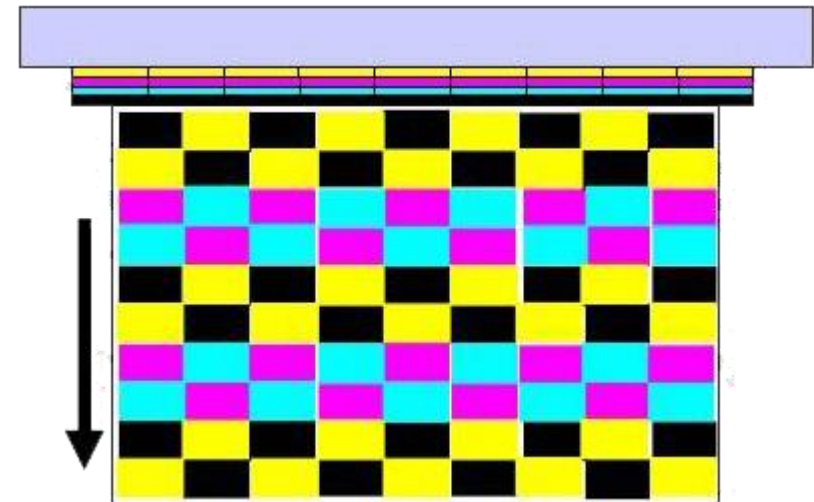
#### 3-6 Competitiveness for the printing quality

Digital Textile Printing Machine



Since there are spaces between each drop s, it is hard to maintain the color quality constantly even if the same solution Dyes are used.

Super High Speed Printer



It is possible to have high speed printouts because we use the Color Algorithm we developed and we can do make an excellent and a good quality dye products



### 3. Business Environments

#### 3-7 Price Competitiveness

- Super High Speed Printing Technology may look very similar to the existing Digital Textile Printer which use the same Inkjet Method. But, since we take complete different Printout mechanism, our Super High Speed Printing Technology can do replace the disadvantages of the technologies which DTP has for Print Speed, Printing Costs, Printing Quality and etc, and, additionally, it is a new innovative technology which is most competitive against the existing Dip Dyeing Method.

#### 3-8 Comparison Sheets for installation of the existing printers based on Print Speed, 8000 yards

Existing Dyeing Method	Digital Textile Printing Method	Super High Speed Dyeing Method
\$10,000,000	\$10,000,000	\$3,500,000

## 3. Business Environments

### 3-9 The evidence for our Sales Plans

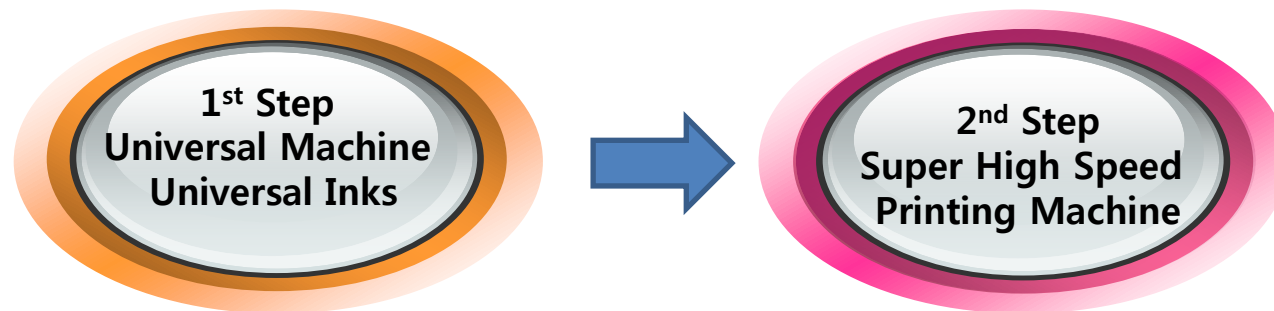
- According to the Chinese Knowledge's Center's data, the production volumes of textiles targeted reduction of the contaminated dyeing waste water from the Dyeing Manufacturers more than 201 companies has become about 380 million Yards (230 million yards for 60% for Chemical component Textiles)
- 230 million yd/1,000 million yd – The market size is 2,300 printers

序号	省(区)	企 业 名 称	产 能(万米)
1	天津	天津市宁河县染整厂	2500
		:	
84	浙江	杭州萧山闻堰漂染有限公司	17000
		:	
173	河南	河南省唐河县丰源纺织印染（集团）有限公司	20000
		:	
201	陕西	咸阳昌龙纺织有限公司	550

## 4. Marketing Strategy

### 4-1 Basic Strategy

- We can preoccupy the market and lead the market by completion of development of the technology that can meet the reality of the existing Dyeing Industries. We will maximize its value added by Dyeing Process QSS System for Industrial use and Personal use.
- First Step to pursue stabilization of the business Second Step: to take the necessary steps to process the Super High Speed Dyeing Project step by step.



### 4-2 Advantage of the Strategy

- It is not to adventure the new market, but to replace the existing market into the advanced new technology. Therefore, it effects saving the marketing cost so much.