Plastics Training Board
塑膠業訓練委員會

VTC

PLASTICS INDUSTRY MANPOWER SURVEY REPORT
塑膠業 · 人力調查報告書
2013

MANPOWER SURVEY REPORT 2013 PLASTICS INDUSTRY 塑膠業2013年度人力調查報告書

2013 Manpower Survey Report
Plastics Industry

Plastics Training Board

Vocational Training Council

塑膠業
2013 年人力調查報告

職業訓練局
塑膠業訓練委員會

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Report on the 2013 Manpower Survey of the Plastics Industry

Objective and Coverage of the Survey

The Plastics Training Board conducted a manpower survey during the period from 15 July to 14 September 2013 to collect up-to-date information on the technical manpower of the plastics industry with a view to assessing its current and future manpower requirements and making recommendations to meet these requirements.

2. The survey covered a sample of 952 establishments, including 780 from the Plastics Manufacturing and Trading Sector and 172 from the Plastics Manufacturing Services Sector. It was the nineth manpower survey in which the scope had been expanded to cover the Plastics Trading Sector and the Plastics Manufacturing Services Sector. The effective response rate was 96.9%. The data collected were statistically grossed up to reflect the overall manpower situation of the plastics industry at the time of the survey.

Survey Findings

3. The survey revealed that at the time of survey in 2013, a total of 10 701 employees (i.e. those employed in the principal jobs of the plastics industry as specified in the manpower survey report) were employed in the plastics industry. The distribution of the workforce by job level is:

Job Level	Number of Employees	Percentage of Total Number of Employees
Technologist	4 363	40.7%
Technician	4 248	39.7%
Craftsman	471	4.4%
Operative	831	7.8%
Unskilled	788	7.4%
Total	10 701	100.0%

4. The distribution of employees by job level and by sector is given below:

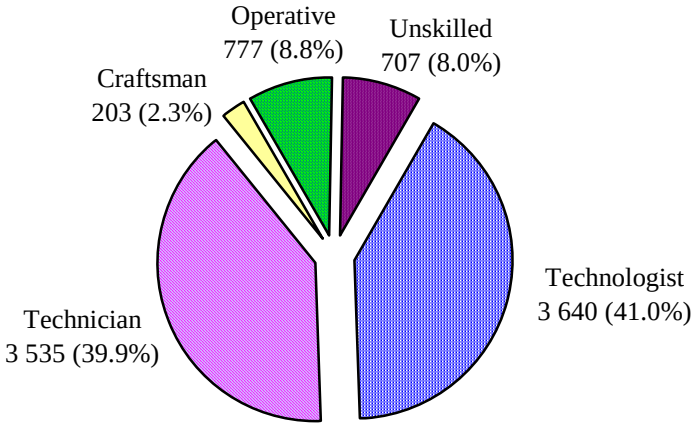
Table A: Distribution of Employees by Job Level and by Sector

Job Level	Sector A Manufacturing & Trading Sector			Sector B Manufacturing Services Sector	All Sectors
	Manufacturing	Trading	Total		
Technologist	156	3 484	3 640	723	4 363
Technician	223	3 312	3 535	713	4 248
Craftsman	144	59	203	268	471
Operative	684	93	777	54	831
Unskilled	332	375	707	81	788
Total	1 539	7 323	8 862	1 839	10 701

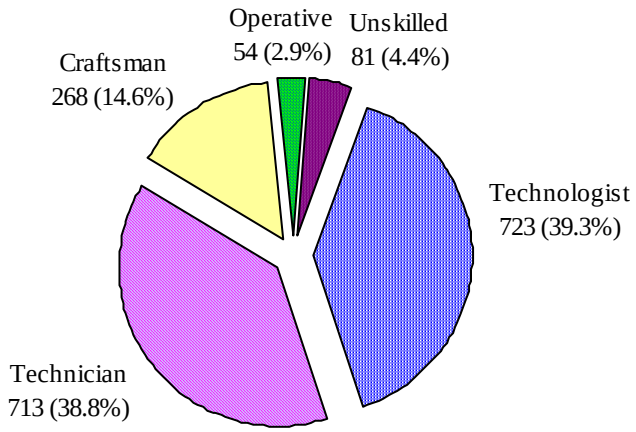
5. Figure 1 shows the manpower structure and the distribution of employees by sector and by job level.

Figure 1 : Manpower by Job Level

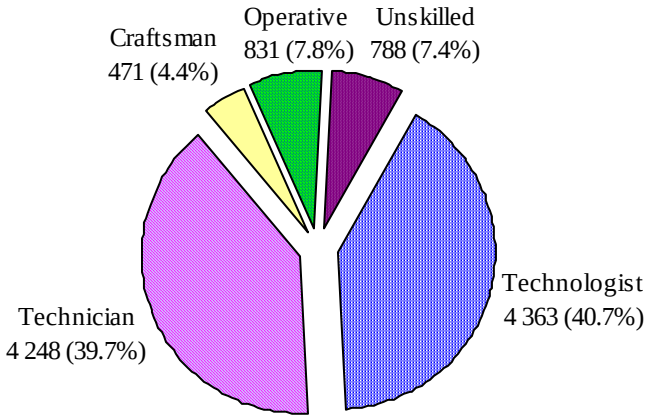
Sector A : Manufacturing and Trading Sector (8 862 employees)



Sector B : Manufacturing Services Sector (1 839 employees)



All Sectors : 10 701 employees



6. At the time of the survey, there were 16 persons receiving various forms of training. Of these, 3 and 13 were at the technologist and technician level respectively.

7. Employers reported a total of 118 vacancies, representing about 1.1% of the workforce. Of these, 18 were at the technologist level, 54 at the technician level, 7 at the craftsman level, 20 at the operative level and 19 at the unskilled level.

8. According to employers, 46 employees had been promoted to higher level jobs between 2012 and 2013. During the same period, 932 technologists, 529 technicians and 27 craftsmen had worked for more than six months outside Hong Kong. They represented 21.4%, 12.5% and 5.7% of the workforce at the respective job levels.

9. Employers anticipated that as at June 2014, the plastics industry would be employing a total of 10 834 employees, indicating a very mild growth in the total workforce is expected in the year ahead.

10. Employers also reported that a total of 398 616 Mainland workers were employed in their operations in Guangdong Province. Among them, 4 545 were Mainland engineers. Employers also anticipated that by June 2014, they would be employing 4 695 Mainland engineers in their Guangdong operations, representing an increase of about 3.3% of the workforce at that job level. It should be noted that many respondents in this survey either had no idea, or were unsure of the manpower figures in their Mainland operations. Hence, the above figures may not be accurate.

11. It is the nineth time that the scope of the survey has been expanded to cover the plastics trading sector as well as the plastics manufacturing services sector in which a substantial number of technical manpower are employed. The distribution and comparison of manpower by skill level and by sector in 2011 and 2013 are shown in Table B below:

Table B : Distribution and Comparison of Manpower by Skill Level and By Sector (Figures from the 2011 Survey shown in bracket)

Job Level	Plastics Manufacturing & Trading Sector			Plastics Manufacturing Services Sector	All Sectors
	Manufacturing	Trading	Total		
Technologist	156 (152)	3 484 (3 310)	3 640 (3 462)	723 (635)	4 363 (4 097)
Technician	223 (194)	3 312 (3 042)	3 535 (3 236)	713 (416)	4 248 (3 652)
Craftsman	144 (195)	59 (88)	203 (283)	268 (103)	471 (386)
Operative	684 (763)	93 (92)	777 (855)	54 (52)	831 (907)
Unskilled	332 (313)	375 (443)	707 (756)	81 (47)	788 (803)
Total	1 539 (1 617)	7 323 (6 975)	8 862 (8 592)	1 839 (1 253)	10 701 (9 845)

Future Manpower Demand

12. Based on the survey findings, the Training Board has projected the additional number of technical workers likely to be required by the industry to cover both growth and wastage at the three skill levels for the next four years as below:

Skill Level	Recommended Annual Intake
Technologist	198 - 242
Technician	188 - 230
Craftsman	14 - 18

13. To cope with the developing needs of the plastics industry, the Training Board urges employers to provide proper on-the-job training, apprenticeship training, and to make use of other training schemes such as the Engineering Graduate Training Scheme, New Technology Training Scheme, Trade Testing and Certification Scheme to develop and upgrade their technical workforce. Employers are also encouraged to sponsor their workers to attend various full-time, part-time training courses offered by the Council's Hong Kong Institute of Vocational Education, Pro-Act Training and Development Centre (Precision Engineering) in order to up-grade their technical knowhow in the plastics industry.

14. With most of the production facilities located at Pearl River Delta (PRD) region and the large workforce of Mainland workers employed by industrialists of the plastics industry, there is a huge demand for training for both Hong Kong and Mainland workers there. The Pro-Act Training and Development Centre (Precision Engineering) offers training programmes especially on areas relating to the plastics injection moulding technology, CNC machining and CAD/CAM technologies, plastics materials knowledge and engineering drawing standards in PRD region for operations set up by Hong Kong employers, on a full-cost recovery basis, in order to provide pro-active support to Hong Kong employers and to meet their training needs there.

Business Outlook

15. The global economic environment is expected to be improved with growth gradually accelerating in the developed as well as emerging countries. The US looks the strongest and most resilient among the traditional markets though there are concerns over the possible withdraw of massive monetary easing. The EU is also showing initial signs of recovery in view of the recent stabilisation of the debt crisis. The more favourable external environment should in general have a beneficial effect on the plastics industry of Hong Kong on the days to come.

16. Suppliers in the global plastics industry are looking for a better future after a few years of global economic malaise marked with narrow margins and weak demand. The trade people expect the outlook to gradually improve as the global economics begin to response to the fiscal measures being adopted. The situation in Europe may take longer to stabilize but some early signs of growth recovering in the US are seen. The plastics industry

enters a stage of steady growth.

17. Despite the fact that the American and European markets are still the major export markets of Hong Kong plastics industries, the importance of the Asian and other emerging markets has been increasing. Since Hong Kong enterprises' development in such markets is still at an elementary stage, more efforts could be put in these areas.

18. Although Origin Equipment Manufacture (OEM) is still the predominant operation mode of Hong Kong plastics establishments, more and more manufacturers provide the designs and make the products using the designated brands provided by the customers (ODM), and produce and sell the products using their owned brands (OBM). Developing branded products is a strategy to add value which is being adopted by an increasing number of Hong Kong companies.

19. Most Hong Kong plastics companies, especially those with production activities concentrated in the PRD region, have found it increasingly challenges to operate in Mainland China over recent years. Their difficulties largely stem from higher labour, raw material and compliance costs, the problems of labour shortages and government initiatives aimed at upgrading the industrial structure of Guangdong. The enterprises have the pressure to improve their competitiveness through product innovation or by upgrading their manufacturing process.

20. China will continue to adopt measures of minimum wage and wage payment protection system. Labour cost will rise steadily which puts extra pressure on the plastics industry. Although this will encourage enterprises to move towards automation, transformation and upgrade, it will on the other hand force the companies to speed up their pace of relocation to other inland provinces in China and Southeast Asian countries.

21. In addition of the labour cost, the rise of overall production costs on the Mainland China continues to be an issue for many Hong Kong plastics manufacturers. Food prices increased by an average of 4% in 2013. With most Hong Kong manufacturers operating on the Mainland especially in the PRD obliged to provide dormitories as well as meals to migrant workers, higher food prices would obviously have an impact on overall operating cost. On the other hand, the increases in gasoline and diesel prices due to new price mechanism of Mainland China will inevitably act to push up transportation costs.

22. RMB appreciation has long been a major challenge for Hong Kong manufacturers operating on the Mainland. China has continued with its reform of the RMB exchange rate mechanism and has allowed greater flexibility in its movement. The fluctuations of the RMB exchange rate will remain one of factors affecting Hong Kong plastics enterprises.

23. China's plastic industry has experienced a mode of extensive growth featuring capacity expansion for a long time. Over-capacity associated with repetitive construction

usually leads to diminishing returns because thousands of SME plastics product producers will unavoidably fall in the vicious cycle of price competition to survival in the market. The plastics enterprises should be well aware of the trend and get them onto intensive growth track and to be niche players.

24. At the close of the Third Plenary Session of the 18th CPC Central Committee in November 2013, the Decision on Major Issues Concerning Comprehensively Deepening Reforms was announced. Among the many policies set out in the Decision, Mainland China will ease its "one-child policy" and allow couples to have two children if one of the parents is an only child. It is believed that the policy will bring about a positive impact on stimulating consumption and boost the demand for baby products and toys.

25. Although the operating environment of the PRD is more and more difficult, most enterprises do not intend to move production base out of the PRD because this region has comprehensive supporting facilities for industries and they find it hard to manage a factory that is too far from Hong Kong.

26. The rising concern on environment is giving impetus to recycling systems and green materials. Biopolymers and bioplastics offer solutions for global problems and their demand is expected to be largely increased in the coming years.

27. Despite the ever-increasing demand for high-tech items, the enthusiasm for back-to-basics items is not probably to be diminished significantly in the toys market. In other words, the sales of traditional toy items including dolls, construction sets and wheeled toys should continue to expand with a more moderate pace.

28. As Hong Kong manufacturers deemed more able to meet the stringent overseas regulatory requirements' on safety and health of plastic products, the relocation of production and sourcing from Mainland China to other production bases are not an easy task for overseas buyers. As such, competitors from Asia pose less of a threat to Hong Kong toy suppliers than they present in other industries.

29. Some enterprises of plastics industry have already tapped into or are considering exploring domestic market of Mainland China. However, the main reasons for those enterprises which have not yet engaged or will not engage in domestic sales are lack of sales channels, unclear laws and regulations, keen competition, and lack of experienced talent and developed branding.

30. Business-to-Consumer (B2C) is an overwhelming trend on the Mainland China which offers wonderful opportunities for Hong Kong enterprises who would like to participate in the domestic sales. It is essential for an enterprise to see its B2C business as a necessary part of the overall business strategy. B2C is expected to grow faster in the near future and offer more room to Hong Kong companies.

31. Facing the increase of production cost and negative impacts of lowering prices by buyers, delayed payments from clients and fierce competition, Hong Kong enterprises continuously adopt strategies on expanding overseas and Mainland markets and strengthening internal control through upgrading their facilities, improving technological knowhow enhancing the added value of their products, and streamlining their production processes.

SECTION I

INTRODUCTION

The Plastics Training Board

1.1 The Plastics Training Board of the Vocational Training Council is required by its terms of reference to determine the manpower and training needs of the plastics industry and to make recommendations to the Council for the development of training facilities to meet such needs. The Plastics Training Board comprises members nominated by major trade associations, trade unions, professional bodies, educational/training institutions and government departments. Membership and Terms of Reference of the Plastics Training Board is at Appendix I and II respectively.

The Manpower Survey

1.2 In pursuance of its terms of reference, the Training Board conducted a survey of the plastics industry during the period from 15 July to 14 September 2013 to collect up-to-date manpower information with a view to assessing the industry's manpower structure and training needs. The survey was carried out with the assistance of the Census and Statistics Department (C & SD).

1.3 The following information was collected from the survey:

(i) the number of employees as at 28 June 2013;

(ii) the number of existing vacancies;

(iii) the forecast number of employees as at June 2014;

(iv) the number of employees at present under training;

(v) the average monthly income of employees; and

(vi) employers' views on the preferred education, training mode and training period of employees by job level.

1.4 Employers were also requested to provide information on the number of technologists, technicians and craftsmen who had been deployed to work outside Hong Kong for more than 6 months during the 12 months prior to the survey.

1.5 Employers were further asked to provide information on the number of Mainland workers working in operations in Guangdong Province under their control, the number of Mainland engineers and their forecast number after 12 months in such operations. Information of the future direction of their companies in terms of relocation / transformation / upgrade and development of new markets were also gathered.

Scope of the Survey

1.6 The survey covered the following sectors of the plastics industry:

I. Sector A : Plastics Manufacturing and Trading

(i) Manufacture of plastic toys (HSIC 324300);

(ii) Manufacture of plastic domestic utensils (HSIC 222200);

(iii) Manufacture of plastic case and parts (HSIC 222400);

(iv) Manufacture of plastic bags (except handbags) (HSIC 222300);

(v) Manufacture of plastic products not elsewhere classified (HSIC 222901, 222902, 222999);

(vi) Import & export of toys (HSIC 451444, 451445, 452444, 452445); and

(vii) Import & export of plastic products (HSIC 451451, 452451)

(Note: HSIC denotes Hong Kong Standard Industrial Classification.)

II. Sector B : Plastics Manufacturing Services

Testing centres, major plastic resin suppliers and design firms of plastic products. (These firms are not classified under the HSIC system).

1.7 The majority of the plastics manufacturing firms had been re-classified as plastics trading firms by the C & SD after the shifting manufacturing facilities outside Hong Kong in the 1990's. Ever since the 1997 manpower survey, the Training Board combined the plastics manufacturing sector and the plastics trading sector into the plastics manufacturing and trading sector.

Sampling Methodology

Plastics Manufacturing Sector

1.8 According to the information provided by the C & SD, there were 408 establishments in the plastics manufacturing sector at the first quarter of 2013. In view of the limited resources available, a stratified random sampling method was adopted to select 211 establishments for surveying.

Plastics Trading Sector

1.9 Since it was unlikely that trading firms with employment size below 5 would employ technical staff, it was decided the survey should only cover firms with employment size of 5 or above. For the plastics trading sector, a total of 1 928 establishments with size of 5 or above were recorded by the C & SD. A stratified random sampling method was used to select 569 establishments as samples for the 2013 manpower survey.

Plastics Manufacturing Services Sector

1.10 There was no specific classification for the plastics manufacturing services sector under the existing Hong Kong Standard Industrial Classification (HSIC) System. Reference was made to the information provided by the Hong Kong Productivity Council in selecting testing centres, major resin suppliers and design firms of plastics products to be covered in the survey. As a result, a total of 172 establishments were selected.

Overall

1.11 Based on the above methodology, a total of 952 establishments were selected for the survey to cover all sectors of the plastics industry.

Method of the Survey

1.12 About one week before the survey, a covering letter from the Chairman of the Plastics Training Board together with the survey questionnaires and relevant supporting documents (Appendix III) were sent to the selected establishments. During the fieldwork, interviewers from the C & SD contacted the establishments to answer queries and assist in the completion of questionnaire if required. They might also visit the selected companies by appointment to collect the completed questionnaires.

1.13 After the survey, the completed questionnaires were checked and, where necessary, verified with the respondents before being processed by the C & SD. The collected data from the plastics manufacturing and trading sector were statistically grossed up and the data from the plastics manufacturing services sector were added together to give the overall picture of the manpower situation of the plastics industry at the time of the survey.

Response to the Survey

1.14 Of the 952 establishments, 651 supplied the required information. A total of 280 establishments had either closed, moved, merged with other establishments, employed no technical manpower or no longer engaged in work related to the plastics industry. The remaining 21 establishments had declined to supply any information. The effective response rate was 96.9%.

Statistical Data

1.15 This report presents the findings of the survey, the Training Board's forecast of the manpower needs of the plastics industry and recommendations on measures to meet these needs. In the report, the terms "workforce", "employees" refer to the total number of persons (excluding trainees and apprentices) employed in the 36 principal jobs of plastics and related disciplines in the plastics industry; the term "trainees" includes all trainees receiving any form of training and apprentices undergoing an apprenticeship.

Principal Jobs

1.16 The list of 36 principal jobs adopted in the survey of the plastics industry and their job descriptions are shown in Appendix IIIC.

SECTION II

SUMMARY OF SURVEY FINDINGS

Number of Employees Employed

2.1 The survey revealed that at the time of survey in 2013, a total of 10 701 employees were employed in the principal jobs of the plastics industry in Hong Kong. Their distribution by job level is:

Job Level	Number of Employees	Percentage of Total Employed
Technologist	4 363	40.7%
Technician	4 248	39.7%
Craftsman	471	4.4%
Operative	831	7.8%
Unskilled	788	7.4%
Total	10 701	100.0%

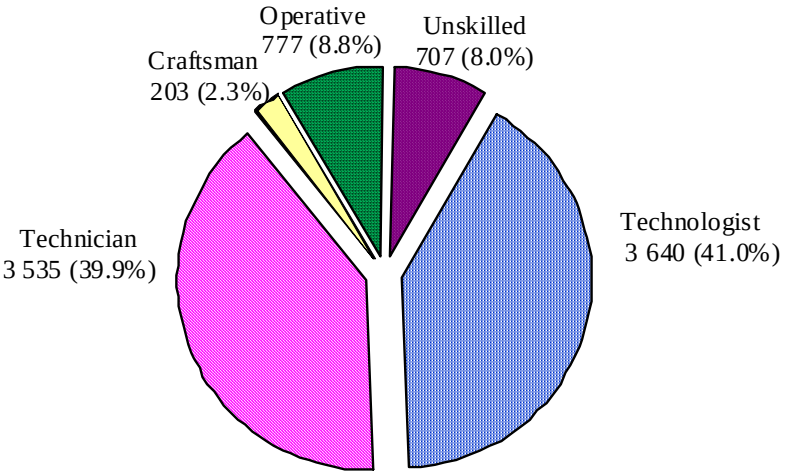
2.2 The distribution of employees by job level and by sector is given in Table A and Figure 1 below:

Table A: Distribution of Employees by Job Level and by Sector

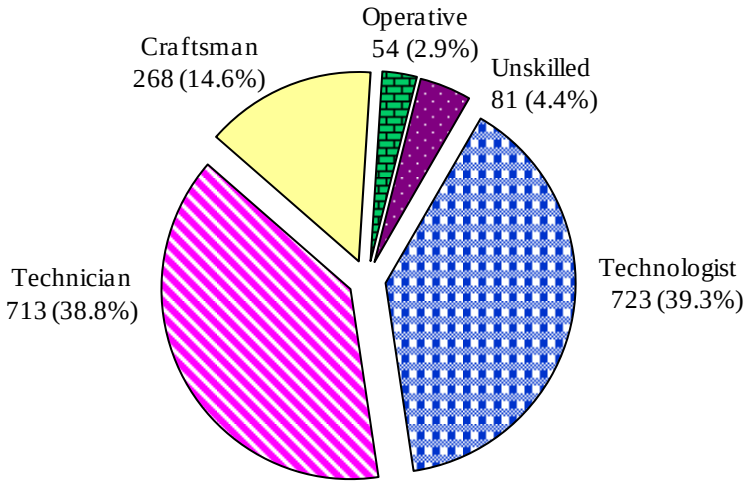
Job Level	Sector A Manufacturing & Trading Sector			Sector B Manufacturing Services Sector	All Sectors
	Manufacturing	Trading	Total		
Technologist	156	3 484	3 640	723	4 363
Technician	223	3 312	3 535	713	4 248
Craftsman	144	59	203	268	471
Operative	684	93	777	54	831
Unskilled	332	375	707	81	788
Total	1 539	7 323	8 862	1 839	10 701

Figure 1 : Manpower by Job Level

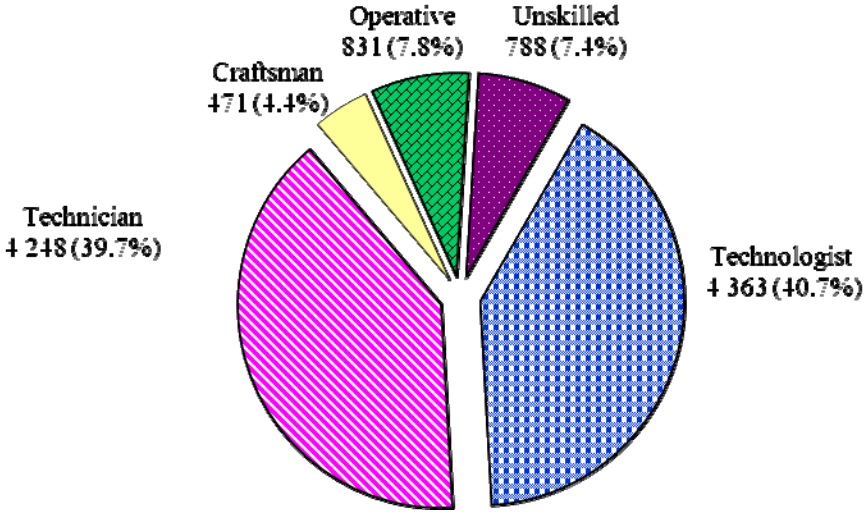
Sector A : Manufacturing and Trading Sector (8 862 employees)



Sector B : Manufacturing Services Sector (1 839 employees)



All Sectors : 10 701 employees



Number of Trainees

2.3 At the time of the survey, there were 16 trainees and their distribution by job level is given in Table B below.

Table B: Distribution of Trainees by Job Level

Job Level	Number of Trainees	Percentage of Total Employed at the Same Level
Technologist	3	0.1%
Technician	13	0.3%
Craftsman	0	0.0%
Operative	0	0.0%
Total	16	0.1%

Vacancies

2.4 Employers reported a total of 118 vacancies, representing about 1.1% of the total workforce at the time of the survey:

Table C: Distribution of Vacancies by Job Level

Job Level	Number of Vacancies	Percentage of Total Employed at the Same Level
Technologist	18	0.4%
Technician	54	1.3%
Craftsman	7	1.5%
Operative	20	2.4%
Unskilled	19	2.4%
Total	118	1.1%

Number of Vacancies at Time of Survey and Forecast of Number of Employees as at June 2014

2.5 Of the 118 vacancies, 18 were at the technologist level, 54 at the technician level, 7 at the craftsman level, 20 at the operative level and 19 at the unskilled level. The comparison of vacancies with existing workforce by job level is shown in Figure 2.

2.6 According to employers' forecast, the industry would be employing a total of 10 834 employees of the five job levels as at June 2014. A comparison of employment situation at time of survey and the employers' forecast of number of employees as at June 2014 by job level is shown in Table D and Figure 3.

Table D: Comparison of Existing Employment Situation and Employers' Forecast in the Number of Employees as at June 2014

Job Level	No. of Employees as at 28 June 2013 (a)	No. of Vacancies as at 28 June 2013 (b)	No. of Employees and Vacancies as at 28 June 2013 (a) + (b)	Employers' Forecast of No. of Employees as at June 2014 (c)	Employers' Expected Changes in Manpower {(c) ÷ [(a) + (b)] – 1}x 100%
Technologist	4 363	18	4 381	4 381	0%
Technician	4 248	54	4 302	4 302	0%
Craftsman	471	7	478	478	0%
Operative	831	20	851	851	0%
Unskilled	788	19	807	822	1.9%
Total	10 701	118	10 819	10 834	0.1%

Figure 2: Comparison of Vacancies with Existing Workforce by Job Level

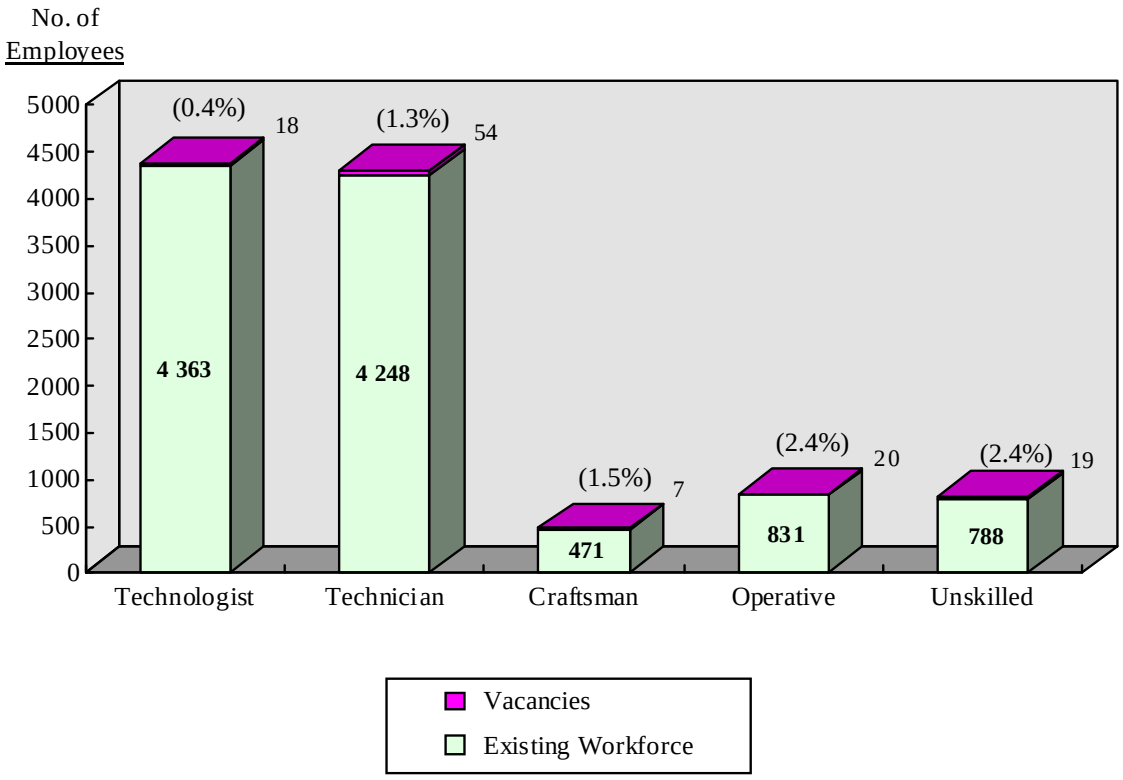
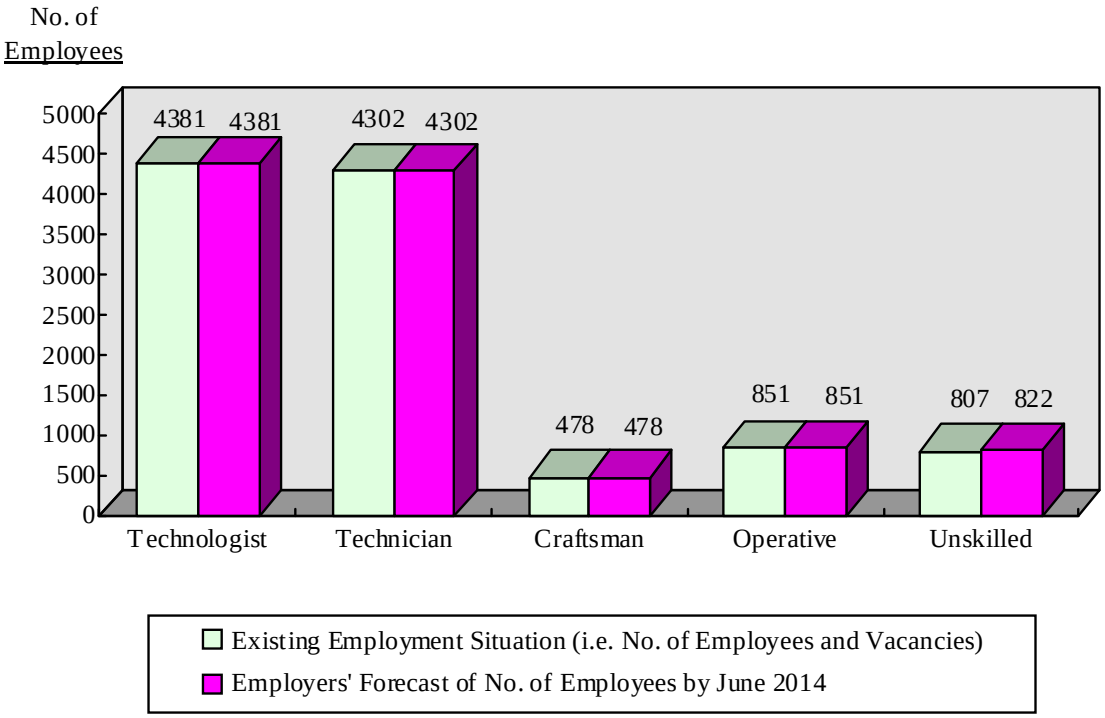


Figure 3: Comparison of Existing Employment Situation and Employers' Forecast in the Number of Employees as at June 2014



Monthly Income Range of Workers

2.7 There was a revision in monthly income ranges in this survey due to the adjustment of the Statutory Minimum Wage. The distribution of employees by monthly income ranges by job level is detailed in Table E below, and by principal job in Table 4 of Appendix IV.

Table E: Distribution of Employees by Monthly Income Range by Job Level

Job level	Under $7,501	$7,501-$10,000	$10,001-$15,000	$15,001-$20,000	$20,001-$25,000	Over $25,000	Unspecified	Sub-total
Technologist	0	2	84	812	1 375	1 422	668	4 363
Technician	8	62	1 209	1 702	292	162	813	4 248
Craftsman	12	34	146	30	6	2	241	471
Operative	29	282	344	15	0	0	161	831
Unskilled	133	358	230	2	0	0	65	788
Total	182	738	2 013	2 561	1 673	1 586	1 948	10 701

Preferred Education, Training Mode and Training Period of Employees

2.8 The views of employers on the preferred education, training mode and training period for their employees at the technologist, technician and craftsman levels are given in Table F below:

Table F: Employers' Views on Preferred Education, Training Mode and Training Period

Job Level	Preferred Education	Preferred Training Mode	Preferred Training Period
Technologist	University Degree / Higher Diploma	On-the-job training	from (2 - 3 years) to 4 years or above
Technician	Higher Diploma / Diploma / Higher Certificate	On-the-job training	from (2 - 3 years) to (3 - 4 years)
Craftsman	Secondary 5 - 7 / Secondary 4 or below	On-the-job training	from (1 - 2 years) to (3 - 4 years)

Number of Internal Promotions

2.9 In the twelve months prior to the survey, a total of 46 employees were promoted to higher level jobs. The distribution of these employees in each job level is shown in Table G below:

Table G: Internal Promotion within the Establishments

Promotion From	No. of Employees Promoted	% of Employees at the Promoted Level
Technician to Technologist	23	0.5%
Craftsman to Technician	15	0.4%
Operative to Craftsman	8	1.7%
Total	46	-

Technical Staff Working Outside Hong Kong

2.10 In the twelve months ending June 2013, 932 technologists, 529 technicians and 27 craftsmen had worked for more than 6 months outside Hong Kong. Distribution among the sectors of the plastics industry is shown in Table H below. They represented 21.4%, 12.5% and 5.7% of the total workforce at the respective job levels.

Table H: Technical Staff Working Outside Hong Kong

	Technologist	Technician	Craftsman
Plastics Manufacturing and Trading Sector	908	526	27
Plastics Manufacturing Services Sector	24	3	0
All Sectors	932	529	27

Workers Working in Operations in Guangdong Province

2.11 At the time of the survey, employers reported a total of 398 616 Mainland workers were employed in their operations in Guangdong province. Among them, 4 545 were engineers. Employers also forecasted the number of such engineers will be increased to 4 695 by June 2014, representing an increase of about 3.3% of the workforce at that job level. It should be noted that many respondents in this survey either had no idea, or were unsure of the manpower figures in their Mainland establishments. Hence, the above figures may not be accurate.

Total Number of Persons Employed by the Plastics Industry in Hong Kong

2.12 At the time of the survey, a total of 17 548 persons of other disciplines were employed by the plastics industry in Hong Kong. They were mainly clerical workers and logistic support workers. Altogether, the plastics industry employed a total of 28 249 persons (i.e. 10 701 in plastics and related disciplines and 17 548 in other disciplines) in Hong Kong at the time of the survey.

Future Development of Companies

2.13 The development of the companies in the next three years had been asked in the survey. A total of 90 establishments had indicated that they would transform or upgrade their businesses in the coming three years. The direction of transformation or upgrade are given in Table I below:

Table I: Direction of Transformation or Upgrade of the Businesses*

	Origin Equipment Manufacture	Origin Design Manufacture	Origin Brand Manufacture	Others#
Number of Establishments	37	31	30	13

* The companies could select more than one direction.

Other directions included developing retail / wholesale / export business and electronic products.

2.14 In addition, 15 companies had expressed that they would relocate their manufacturing bases / factories in the coming three years. Thirteen of them would relocate to the PRD, Mainland while one each would move to Southeast Asian countries and Hong Kong.

2.15 A total of 106 companies had indicated that they would develop new markets in the coming three years. The countries / regions of new markets to be developed by them are shown in Table J below:

Table J: Countries / Regions of New Markets to be Developed*

	Mainland China	BRIS (Brazil, Russia, India & South Africa)	Europe and America	Middle East	Southeast Asia
Number of Establishments	27	52	31	9	11

* The companies could select more than one country / region.

Statistical Tables

2.16 The detailed manpower statistics of the plastics industry by sector, by job level and by principal job including number of trainees, vacancies and employers' forecast number of employees as at June 2014 are tabulated in Tables 1, 2 and 3 of Appendix IV.

SECTION III

CONCLUSIONS

General

3.1 The Training Board has examined the survey findings and considers that the figures generally reflect the actual employment situation of the plastics industry at the time of the survey.

3.2 Starting from the manpower survey in 1997, the scope of the survey has been expanded to cover the plastics trading sector as well as the plastics manufacturing services sector which employs a substantial number of technical manpower. The distribution and comparison of manpower by job level and by sector in 2011 and 2013 are shown in Table 3.A below:

Table 3.A : Distribution and Comparison of Manpower by Job Level and by Sector (Figures from the 2011 Survey shown in bracket)

Job Level	Plastics Manufacturing & Trading Sector			Plastics Manufacturing Services Sector	All Sectors
	Manufacturing	Trading	Total		
Technologist	156 (152)	3 484 (3 310)	3 640 (3 462)	723 (635)	4 363 (4 097)
Technician	223 (194)	3 312 (3 042)	3 535 (3 236)	713 (416)	4 248 (3 652)
Craftsman	144 (195)	59 (88)	203 (283)	268 (103)	471 (386)
Operative	684 (763)	93 (92)	777 (855)	54 (52)	831 (907)
Unskilled	332 (313)	375 (443)	707 (756)	81 (47)	788 (803)
Total	1 539 (1 617)	7 323 (6 975)	8 862 (8 592)	1 839 (1 253)	10 701 (9 845)

Changes in Manpower in various Sectors of the Plastics Industry

3.3 The plastics manufacturing sector embraces three main branches, viz. toys, utensils/cases and parts, as well as other miscellaneous products. The survey reveals that the workforce of the plastics manufacturing sector had slightly declined from 1 617 workers in 2011 to 1 539 workers in 2013; representing a shrinkage of about 4.8% over the past two years. The manpower changes by job level and by branch of the plastics manufacturing sector are shown in Table 3.B below:

Table 3.B : Manpower Changes by Job Level and by Branch of the Plastics Manufacturing Sector

Job Level	Branch 1 (Manufacture of Plastic Toys)		Branch 2 (Manufacture of Plastic Domestic Utensils, Cases and Parts)		Branch 3 (Manufacture of Plastic Bags (except Handbags), Plastic Products not elsewhere classified)		Total in the Plastics Manufacturing Sector	
	2011	2013	2011	2013	2011	2013	2011	2013
Technologist	14	10	31	37	107	109	152	156
Technician	15	20	48	40	131	163	194	223
Craftsman	22	8	38	46	135	90	195	144
Operative	127	30	115	93	521	561	763	684
Unskilled	44	16	64	77	205	239	313	332
Total	222	84	296	293	1 099	1 162	1 617	1 539

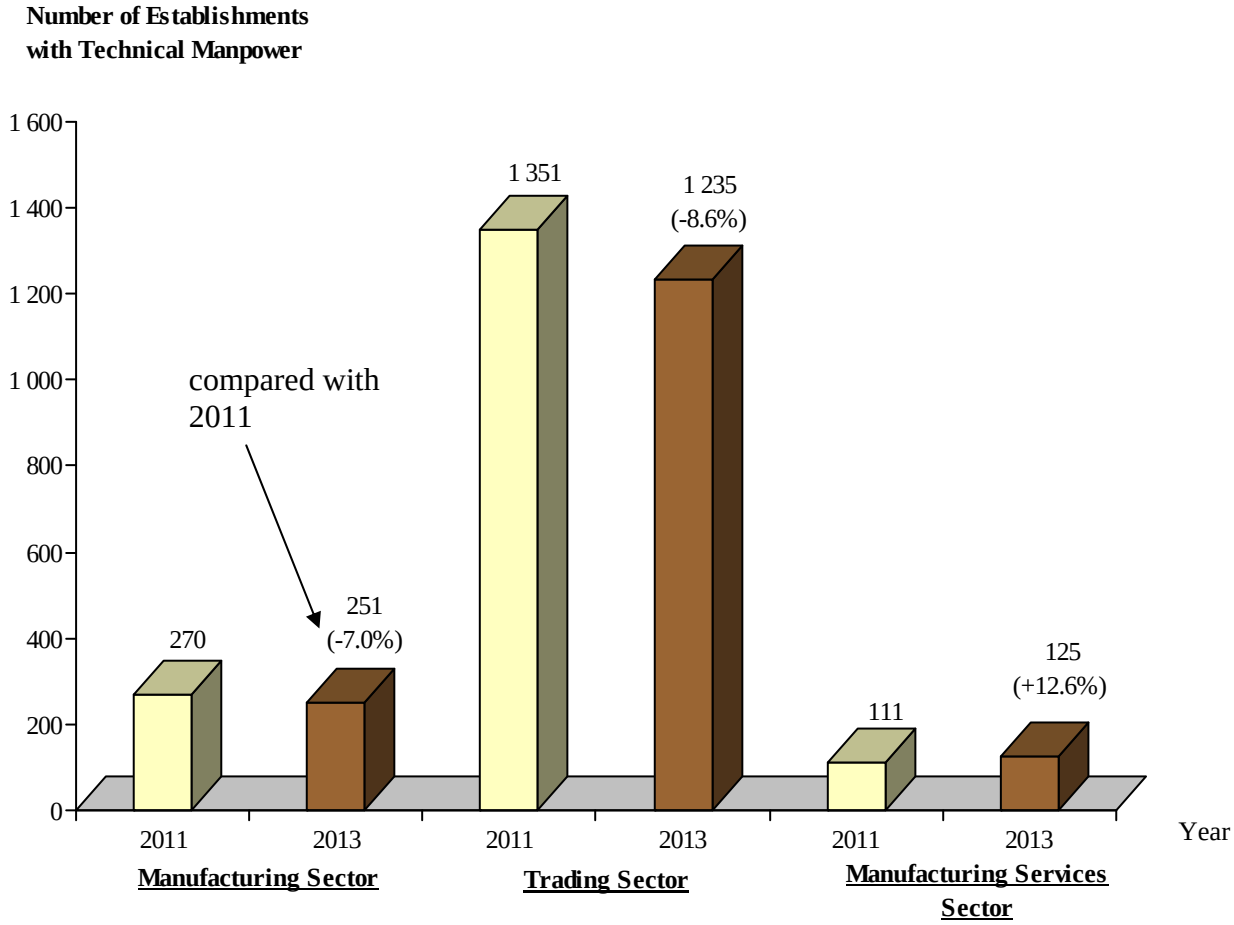
3.4 The Training Board considers that the manpower shrinkage in the plastics manufacturing sector is directly related to the decreasing number of establishments in that sector. During the time of survey (i.e. July to September of 2013), there were 251 establishments employing technical manpower in the plastics manufacturing sector. Compared with the figure of two years ago, i.e. 270 establishments in 2011, a 7.0% drop was found (Figure 3.A). The decline could be attributed to the following:

(i) More and more manufacturing firms which employed a certain number of technical manpower were re-classified as trading firms according to the practice of C & SD after knowing their production facilities and production work had been shifted outside Hong Kong.

(ii) About 90% of the establishments in the plastics manufacturing sector belong to small-sized business. Some of them failed to survive the global business downturn in recent years.

(iii) Many owners of these small-sized establishments had been entering their retirement ages. Without finding suitable successors, their business had to cease.

Figure 3.A : Estimated Number of Establishments of the Plastics Industry Employing Technical Manpower in 2013



3.5 The plastics trading sector comprises two main branches – import & export of toys and import & export of plastics products. This sector is the major employer of technical manpower in the plastics industry as it employs about 75.5% of the workforce of the plastics industry at the technologist, technician and craftsman levels. Compared with the figures in 2011, the present survey shows that the total workforce of the plastics trading sector has a steady growth (5%) over the past two years. It is also observed that the workforce at the technologist level records a 5.3% increase, from 3 310 in 2011 to 3 484 in 2013. The workforce at technician level shows an 8.9% increase, from 3 042 in 2011 to 3 312 in 2013. At the craftsman level, the workforce drops 32.9%, from 88 in 2011 to 59 in 2013. The manpower changes by job level and by branch of the plastics trading sector are shown in Table 3.C below:

Table 3.C : Manpower Changes by Job Level
and by Branch of the Plastics Trading Sector

Job Level	Branch 4 Import & Export of Toys		Branch 5 Import & Export of Plastic Products		Total in the Plastics Trading Sector	
	2011	2013	2011	2013	2011	2013
Technologist	2 440	2 489	870	995	3 310	3 484
Technician	2 346	2 546	696	766	3 042	3 312
Craftsman	53	51	35	8	88	59
Operative	66	69	26	24	92	93
Unskilled	229	197	214	178	443	375
Total	5 134	5 352	1 841	1 971	6 975	7 323

3.6 The Training Board considers that the above changes in manpower of the plastics trading sector were mainly due to the following:

(i) The Hong Kong operations mainly involved in work relating to product design and development, project engineering and logistic support for operations in Mainland China. As such work requires technical staff of higher calibre, more employees at technician or higher levels were required.

(ii) It has been a trend that Hong Kong students are now receiving more educations before leaving school. The supply of craftsmen diminished while there were more and more Higher Diploma graduates entering the technician level market. Due to the sufficient supply, the workforce at technician level increased, as being reflected in the survey.

(iii) Although employers also welcomed technologists, many of them were looking for candidates with problem-solving techniques and system integration knowledge which could only be accumulated through years of working experience. Fresh graduates might not meet the expectation of employers. The workforce at technologist level remained stable.

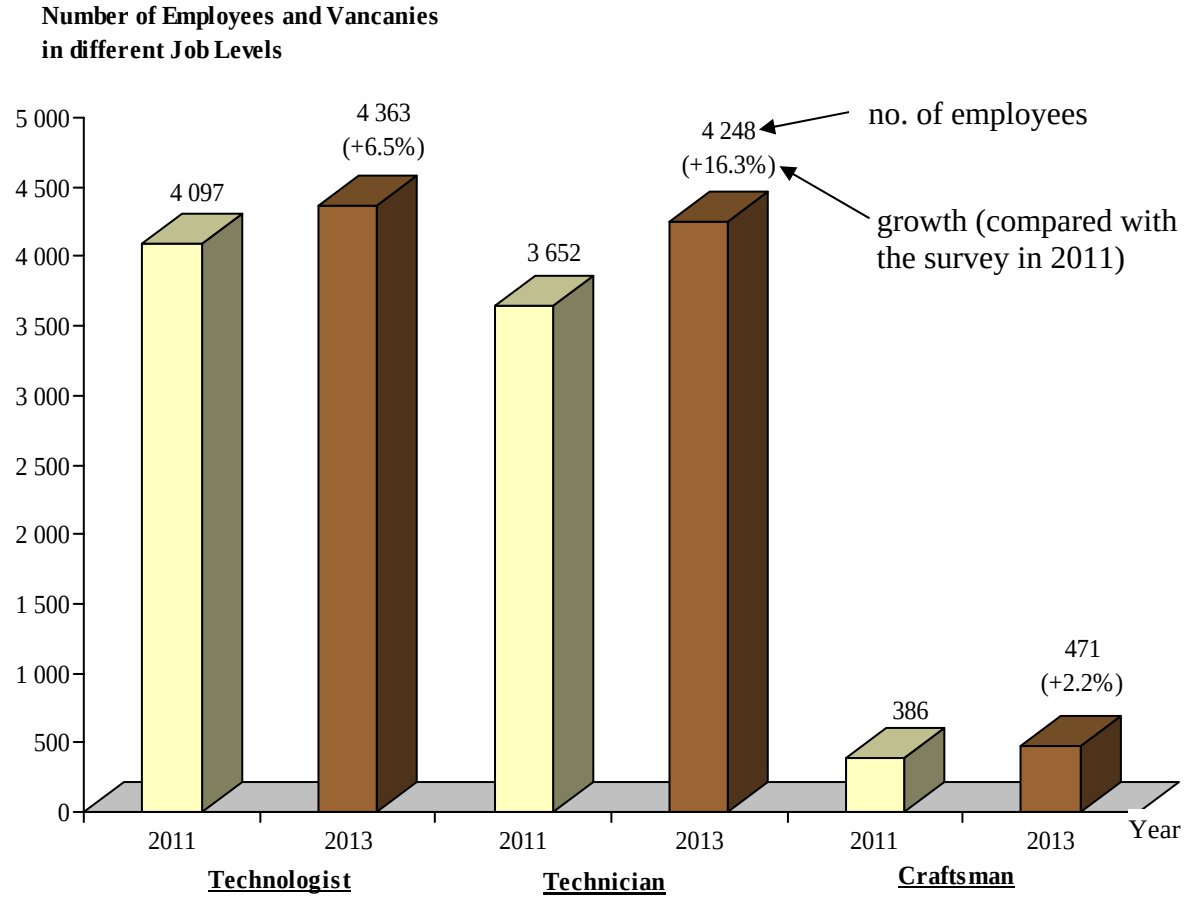
(iv) After the massive relocation of production facilities outside Hong Kong over the past three decades, craftsman level jobs have been largely taken over by Mainland local workers. The 33% drop of manpower at this job level is not surprising.

3.7 The plastics manufacturing services sector takes up 17.2% of the workforce in the plastics industry. Its workforce rose 46.8% in the past two years (i.e. from 1 253 in 2011 to

1 839 in 2013). The number of technologists and technicians grew 13.9% and 71.4% respectively, compared with the figures in 2011. The number of craftsmen employed in this sector increased from 103 in 2011 to 268 in 2013.

Manpower Analysis by Job Level

Figure 3.B : Comparing the Number of Employees at Different Job Levels in 2011 and 2013



3.8 The overall technologist workforce recorded an increase of 6.5% over the past two years. Among the 9 principal jobs at technologist level, manufacturing / industrial engineer and Q.C. / Q.A. engineer were relatively stable (changed within -1.4%). The number of project engineer, technical services engineer and moulding engineer increased by 19.8%, 29.2% and 128.9% respectively. However, the manpower of product engineer (plastics), CAD, CAM or CAE engineer / tooling engineer, electronics / electrical engineer and costing engineer each dropped 7.2%, 12.9%, 28.6% and 41%. Nowadays, technologists are expected to have a wide exposure and knowledge on the whole manufacturing process, instead of merely specializing in one particular technical area.

3.9 At the technician level, the overall workforce of the industry recorded an increase of 16.3% over the past two years. Continuing their growing over the past years, the number of Q.C. / Q.A. technician, production planner and laboratory / materials technician kept on increasing by 3.6%, 39.2%, 74.6% respectively from 2011 to 2013. These increases were particularly prominent in the “Plastics Trading” and “Plastics Manufacturing Services” sectors

which reflected that toys and plastics products manufacturers were investing more resources to strengthen product testing and environmental packaging in order to comply with safety / environmental regulations of overseas markets. Contrary to the overall manpower increase, the survey recorded drops in the number of other 7 jobs ranging from 3.5% to 25.7%. The declines in these principal jobs could be attributed to the fact that Hong Kong employees' plant-floor technical jobs have been gradually taken over by Mainland workers.

3.10 At the craftsman level, the overall workforce recorded an increase of 22.0% during the past two years. The number of leader, pattern / model / prototype maker and quality control inspector increased by 2.6%, 64% and 89.9% respectively while the other 4 jobs dropped between 25% and 78%. After the massive relocation of production facilities outside Hong Kong over the past three decades, craftsman level jobs have been largely taken over by Mainland workers.

Business Outlook

3.11 The global economic environment is expected to be improved with growth gradually accelerating in the developed as well as emerging countries. The US looks the strongest and most resilient among the traditional markets though there are concerns over the possible withdraw of massive monetary easing. The EU is also showing initial signs of recovery in view of the recent stabilisation of the debt crisis. The more favourable external environment should in general have a beneficial effect on the plastics industry of Hong Kong on the days to come.

3.12 Suppliers in the global plastics industry are looking for a better future after a few years of global economic malaise marked with narrow margins and weak demand. The trade people expect the outlook to gradually improve as the global economics begin to response to the fiscal measures being adopted. The situation in Europe may take longer to stabilize but some early signs of growth recovering in the US are seen. The plastics industry enters a stage of steady growth.

3.13 Despite the fact that the American and European markets are still the major export markets of Hong Kong plastics industries, the importance of the Asian and other emerging markets has been increasing. Since Hong Kong enterprises' development in such markets is still at an elementary stage, more efforts could be put in these areas.

3.14 Although Origin Equipment Manufacture (OEM) is still the predominant operation mode of Hong Kong plastics establishments, more and more manufacturers provide the designs and make the products using the designated brands provided by the customers (ODM), and produce and sell the products using their owned brands (OBM). Developing branded products is a strategy to add value which is being adopted by an increasing number of Hong Kong companies.

3.15 Most Hong Kong plastics companies, especially those with production activities concentrated in the PRD region, have found it increasingly challenges to operate in Mainland

China over recent years. Their difficulties largely stem from higher labour, raw material and compliance costs, the problems of labour shortages and government initiatives aimed at upgrading the industrial structure of Guangdong. The enterprises have the pressure to improve their competitiveness through product innovation or by upgrading their manufacturing process.

3.16 China will continue to adopt measures of minimum wage and wage payment protection system. Labour cost will rise steadily which puts extra pressure on the plastics industry. Although this will encourage enterprises to move towards automation, transformation and upgrade, it will on the other hand force the companies to speed up their pace of relocation to other inland provinces in China and Southeast Asian countries.

3.17 In addition of the labour cost, the rise of overall production costs on the Mainland China continues to be an issue for many Hong Kong plastics manufacturers. Food prices increased by any average of 4% in 2013. With most Hong Kong manufacturers operating on the Mainland especially in the PRD obliged to provide dormitories as well as meals to migrant workers, higher food prices would obviously have an impact on overall operating cost. On the other hand, the increases in gasoline and diesel prices due to new price mechanism of Mainland China will inevitably act to push up transportation costs.

3.18 RMB appreciation has long been a major challenge for Hong Kong manufacturers operating on the Mainland. China has continued with its reform of the RMB exchange rate mechanism and has allowed greater flexibility in its movement. The fluctuations of the RMB exchange rate will remain one of factors affecting Hong Kong plastics enterprises.

3.19 China's plastic industry has experienced a mode of extensive growth featuring capacity expansion for a long time. Over-capacity associated with repetitive construction usually leads to diminishing returns because thousands of SME plastics product producers will unavoidably fall in the vicious cycle of price competition to survival in the market. The plastics enterprises should be well aware of the trend and get them onto intensive growth track and to be niche players.

3.20 At the close of the Third Plenary Session of the 18th CPC Central Committee in November 2013, the Decision on Major Issues Concerning Comprehensively Deepening Reforms was announced. Among the many policies set out in the Decision, Mainland China will ease its "one-child policy" and allow couples to have two children if one of the parents is an only child. It is believed that the policy will bring about a positive impact on stimulating consumption and boost the demand for baby products and toys.

3.21 Although the operating environment of the PRD is more and more difficult, most enterprises do not intend to move production base out of the PRD because this region has comprehensive supporting facilities for industries and they find it hard to manage a factory that is too far from Hong Kong.

3.22 The rising concern on environment is giving impetus to recycling systems and green materials. Biopolymers and bioplastics offer solutions for global problems and their demand is expected to be largely increased in the coming years.

3.23 Despite the ever-increasing demand for high-tech items, the enthusiasm for back-to-basics items is not probably to be diminished significantly in the toys market. In other words, the sales of traditional toy items including dolls, construction sets and wheeled toys should continue to expand with a more moderate pace.

3.24 As Hong Kong manufacturers deemed more able to meet the stringent overseas regulatory requirements' on safety and health of plastic products, the relocation of production and sourcing from Mainland China to other production bases are not an easy task for overseas buyers. As such, competitors from Asia pose less of a threat to Hong Kong toy suppliers than they present in other industries.

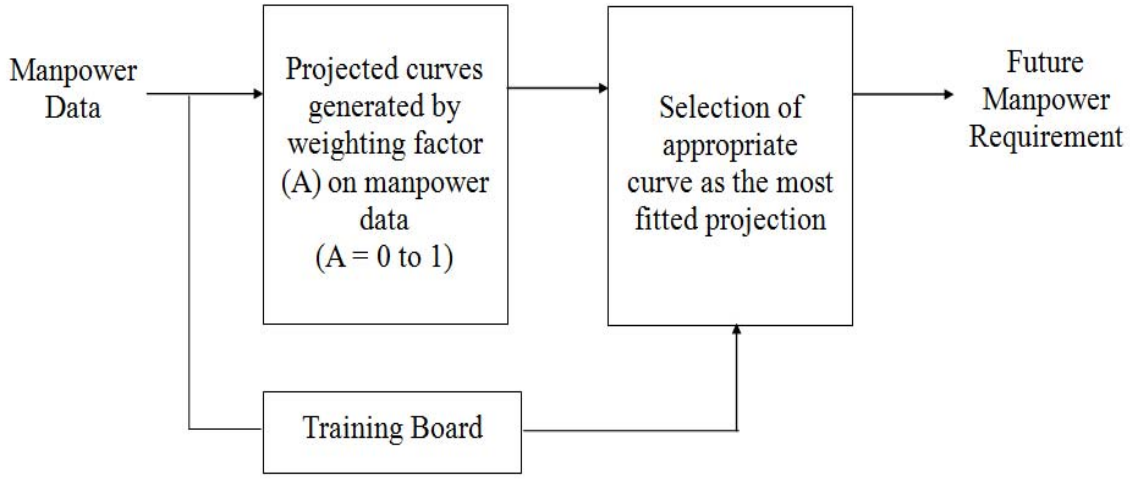
3.25 Some enterprises of plastics industry have already tapped into or are considering exploring domestic market of Mainland China. However, the main reasons for those enterprises which have not yet engaged or will not engage in domestic sales are lack of sales channels, unclear laws and regulations, keen competition, and lack of experienced talent and developed branding.

3.26 Business-to-Consumer (B2C) is an overwhelming trend on the Mainland China which offers wonderful opportunities for Hong Kong enterprises who would like to participate in the domestic sales. It is essential for an enterprise to see its B2C business as a necessary part of the overall business strategy. B2C is expected to grow faster in the near future and offer more room to Hong Kong companies.

3.27 Facing the increase of production cost and negative impacts of lowering prices by buyers, delayed payments from clients and fierce competition, Hong Kong enterprises continuously adopt strategies on expanding overseas and Mainland markets and strengthening internal control through upgrading their facilities, improving technological knowhow enhancing the added value of their products, and streamlining their production processes.

Future Manpower Demand

3.28 Prior to the 1997 manpower survey, the Adaptive Filtering Method (AFM) was adopted to generate a set of projections on the industry's future manpower demand. The AFM is a 'curve fitting' method for trend analysis. It is illustrated in the following diagram:

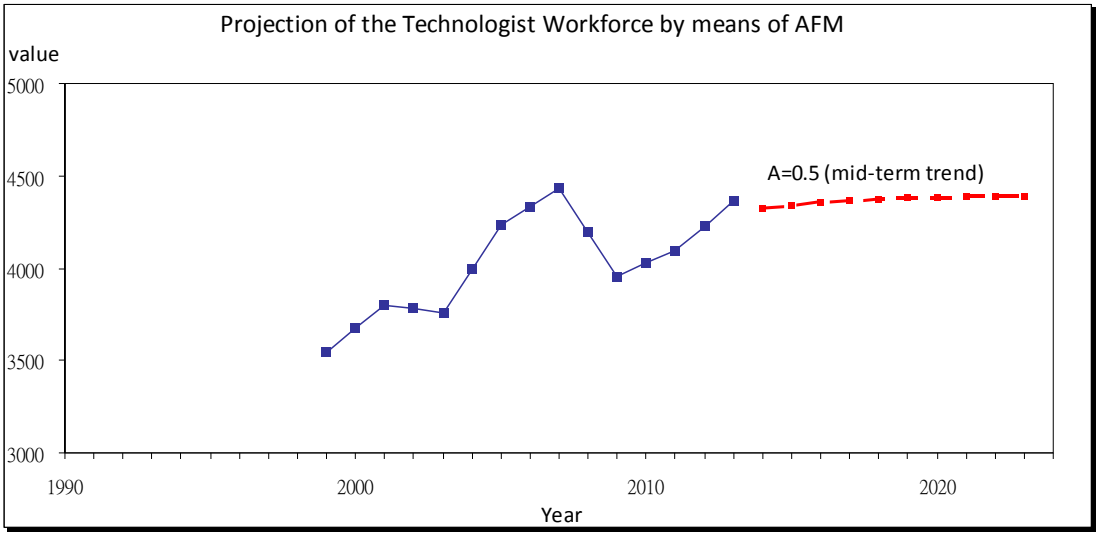


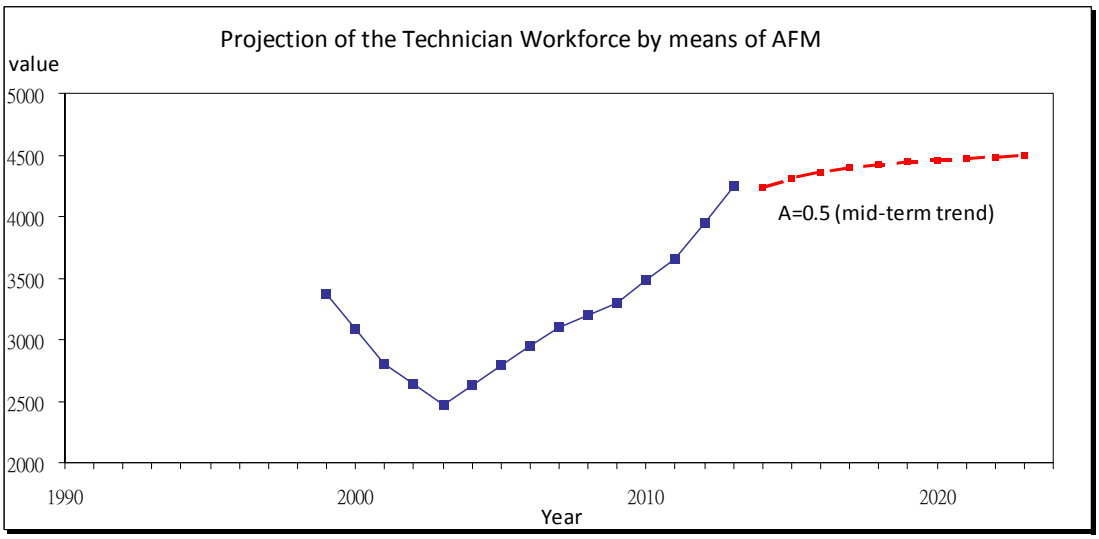
Past survey data are weighted. Weighting factor (A) controls whether a long term trend or a short term trend is favoured. The higher the value of (A), the heavier the weighting of the recent survey data (i.e. bias to the short term trend). The Training Board considers factors such as market trends, technological developments, and other social-economical changes in order to select an appropriate value of (A), hence to decide the manpower projection of a job level.

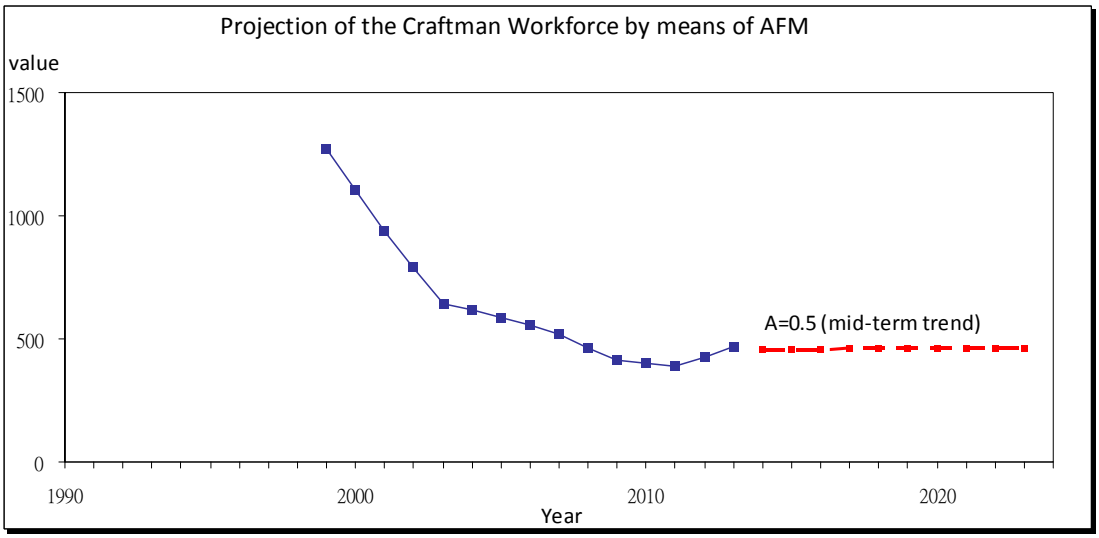
3.29 Starting from the 1997 manpower survey, the Training Board decided that the survey scope should be expanded and that the plastics manufacturing and trading sector should be viewed jointly in assessing the future trend and manpower demand. Since the survey scope changed, the AFM was no longer applicable. Instead, reference was made to employers' one-year forecast to project the future manpower requirements of the industry. This methodology was adopted for future manpower projections in the manpower surveys conducted in 1997, 1999, 2001, 2003 and 2005.

3.30 In the attempt to adopt the Labour Market Analysis (LMA) approach to generate manpower projections for the plastics industry, proper correlation could not be established after testing relevant key determinants of the plastics industry. It was concluded that the LMA approach was not applicable for manpower projections for the present survey. As the present survey was the nineth survey after the scope revision and that the AFM was considered to be a trend analysis projection method which should be more scientific when compared with the employers' one-year forecasts method, the Training Board therefore decided that the AFM be adopted for the manpower projection of the present survey. The projections are illustrated in the following graphs:

Figure 3.C : Projection of Workforce at Different Job Levels with AFM







3.31 To assist the Training Board in establishing the wastage rates (i.e. workers leaving the industry due to reasons of retirement, emigration, changing employment to other fields) for technologists, technicians and craftsmen, a small scale postal Survey on the Reasons of Resignation of Technical Employees in the Plastics Industry had been conducted some years ago. After evaluation on the findings of the survey, the Training Board decided that wastage rates of 5% for technologists, 4% for technicians and 4% for craftsmen be adopted for manpower projection.

3.32 Based on the decisions mentioned in paragraphs 3.30 and 3.31, the Training Board's estimates of the average annual training demand for workers by the industry to cover both growth and wastage at the three job levels for the next four years are given in Table 3.D below:

Table 3.D : Average Annual Training Demand for Workers for the Next Four Years (2014 – 2017)

Job Level	Average Annual Demand
Technologist	198 - 242
Technician	188 - 230
Craftsman	14 -18

A breakdown of the figures into various principal jobs of the plastics industry is given at Appendix V.

3.33 In view of the fact that there are some employees serving in other industries and whose work will be closely related to the plastics field, the Training Board has decided that these manpower should also be made known to the public in the present report. As such manpower has been surveyed by the Metals Training Board and the Electronics and Telecommunications Training Board through their respective manpower surveys, a list showing the number of these workers together with the recommended average annual training demand of these workers proposed by the respective Training Boards is given at Appendix VI.

3.34 The Training Board will conduct another manpower survey in 2015 to update the manpower statistics and review the training requirements of the industry.

Manpower Demand and Supply Analysis

3.35 At the technologist level, the average annual training demand for additional employees with mechanical/manufacturing engineering background is 224 - 274 (i.e. excluding the electronics/electrical engineers in the plastics industry but including the manufacturing/production/industrial engineers from the metals industry and the manufacturing/quality assurance engineers from the electronics industry).

3.36 Based on the information provided by local tertiary institutions and the Vocational Training Council, the planned output of fresh graduates (including First Degree graduates and Higher Diploma graduates) in the mechanical/manufacturing/industrial engineering discipline is summarised in Table 3.E below. It is estimated that there would be some 1 634 fresh graduates in 2014 and 1 241 in 2015 qualified to join the plastics and other industries at the technologist level. Anyway, it should be noted that some employers prefer to recruit higher diploma fresh graduates for technician level jobs. Besides, in recent years, about 30% to 40% of Higher Diploma graduates opt to pursue further studies and obtain First Degree before entering the job market. So, the actual number of fresh graduates entering technologist-level jobs should be smaller than the number shown in Table 3.E.

Table 3.E : Supply of Fresh Graduates at Technologist Level in Mechanical/Manufacturing/Industrial Engineering

Institutions	Award	Estimated No. of Graduates	
		2014	2015
Local Universities	Degree	1 084	925
	Higher Diploma	40	36
Hong Kong Institute of Vocational Education	Higher Diploma - Mechanical Engineering	310	210
	Higher Diploma – Electrical and Mechanical Services	70	20
	Higher Diploma - Product Design Engineering	50	20
	Higher Diploma - Product Testing	80	30
	Total	1 634	1 241

3.37 Apart from further studies or emigration, the above fresh graduates can join many industries such as metals, electronics, electrical and services industries other than the plastics. To attract the right calibre of graduates to work in the plastics industry, employers are encouraged to offer attractive terms of employment and provide a good career prospect for these young graduates. Employers are also advised to provide relevant on-the-job and off-the-job training for these graduates in order to upgrade their technical knowledge and skills and to promote a life-long learning culture in their companies.

3.38 At the technician level, supervisors/foremen are usually promoted from experienced leaders or craftsmen, and those electronics/electrical engineering technicians and laboratory/materials technicians are recruited from course graduates of other disciplines. After

including those manufacturing/industrial engineering technicians required by the metals industry and the manufacturing/quality assurance technicians required by the electronics industry, the forecast demand for technicians with mechanical/manufacturing/industrial engineering background for the plastics and other industries would be 209 - 256 each year.

3.39 The supply of fresh technician graduates in the mechanical/manufacturing/ industrial engineering discipline is based on the information collected from the Youth College of the Vocational Training Council. The planned output is shown in Table 3.F below. A total of some 150 fresh technician graduates would be available in 2014 and 100 in 2015 to join the plastics and other industries.

Table 3.F : Supply of Fresh Graduates at Technician Level in Mechanical/Manufacturing/Industrial Engineering

Institutions	Award	Estimated No. of Graduates	
		2014	2015
Youth College	Diploma in Vocational Education – Computer-aided Product Engineering	60	30
	Diploma in Vocational Education – Mechanical Engineering	90	70
	Total	150	100

3.40 Similar to the technologists, the technician graduates could join other related industries apart from further studies. The Training Board urges employers to offer good employment terms, career prospect and continual training and up-grading opportunities in order to attract more graduates to join the plastics industry.

3.41 At the craftsman level, mould / die and tool makers and pattern / model / prototype makers are the trades which require graduates completing mechanical or related craft courses. Including those related craftsmen from the metals and electronics industries, the forecast demand for these jobs is 36 - 46 per year.

3.42 Starting from 2009/2010, secondary school Form 3 leavers could enrol in the Diploma in Vocational Education (DVE) Programme offered by the Youth College of the Vocational Training Council. DVE is a flexible, credit-based programme which prepares students for either employment or further studies. Upon satisfying the credit requirements for a specific award, students will be awarded with the Basic Craft Certificate (BCC), Technician Foundation Certificate (TFC) or DVE award. Holders of BCC can fill the craftsman-level vacancies of the plastics industry while TFC holders can fill the technician-level vacancies. Table 3.G lists the number of secondary school Form 3 leavers enrolled into the DVE programmes related to Mechanical/Manufacturing/Industrial Engineering. Assuming that on average, students opting for the BCC award complete their studies in one year, part of the DVE

intakes in 2013 and 2014 can join the plastics industry as craftsmen in 2014 and 2015. Compared with the projected annual training demand of craftsmen in Table 3.D, it is noted that as long as not less than 10% of the DVE students in Computer-aided Product Engineering stream and Mechanical Engineering stream opt for the BCC award and enter the plastics industry, there is sufficient supply of craftsmen in 2014 and 2015.

Table 3.G : Intakes of Secondary School Form 3 Leavers of DVE Programme related to Mechanical/Manufacturing/Industrial Engineering

Institutions	Programme	Intakes	
		2013	2014
Youth College	Diploma in Vocational Education – Computer-aided Product Engineering	90	60
	Diploma in Vocational Education – Mechanical Engineering	150	140
	Total	240	200

3.43 Trainees from the DVE – Mechanical Engineering stream receive general skill training in the mechanical trade and some of them would take up employment in electrical and mechanical/building services sectors. Employers are encouraged to take on these trainees and provide further in-service training to them to become qualified craftsmen.

SECTION IV

RECOMMENDATIONS

4.1 For more than two decades, one of the most important development of the plastics industry is the relocation and setting up of production facilities in the PRD region. In fact, PRD has become the manufacturing base for Hong Kong firms for all industries including the plastics industry. Firms in Hong Kong are now pursuing the new role as the development and logistic control centres for supporting the PRD operations. Apart from concentrating its effort on marketing and financial activities, the Hong Kong operations are also transforming into innovative design centres, creating both its own brands and designing for its overseas customers. The plastics industry is also making significant contribution to other related industries by supplying plastics parts and components for their products. The continuous progress and development of the plastics industry through upgrading its technical capabilities is no doubt of vital importance to the further development of other related industries. The Training Board is of the view that in addition to investing in advanced technologies such as advanced machinery and software for the development and manufacture of high value-added new products for the global markets, employers of the industry also need an adequate supply of well-trained manpower to sustain its further growth and development.

Annual Intake of Trainees

4.2 At the time of the survey, there were 16 persons receiving various forms of training. Of these, 3 and 13 were at the technologist and technician level respectively.

4.3 Based on the survey data gathered since 1999 and the AFM, the Training Board recommends the plastics industry to embark on a manpower training programme of a scale set out in Table 4.A below:

Table 4.A : Recommended Number of Trainees to be Taken on Annually for the Next Four Years (2014 to 2017)

Job Level	Recommended Annual Intake
Technologist	198 - 242
Technician	188 - 230
Craftsman	14 - 18

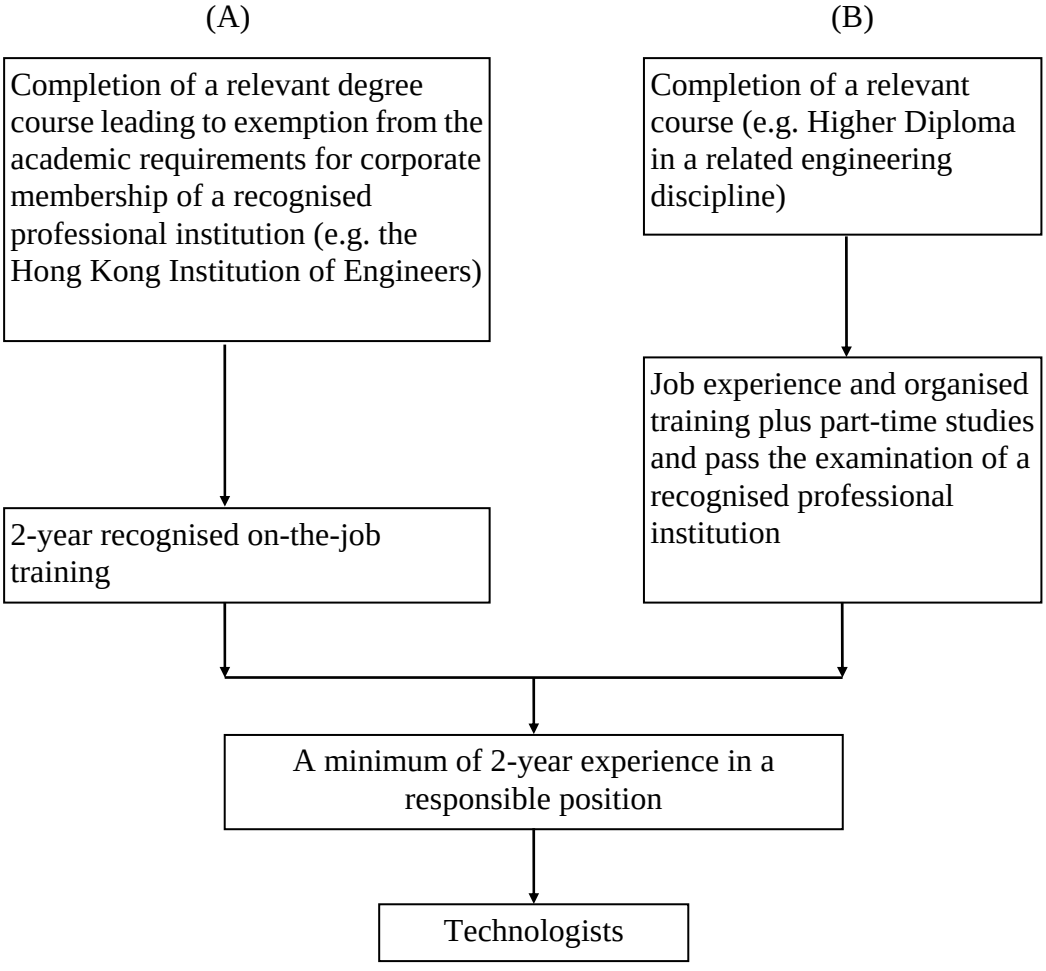
A breakdown of the figures in Table 4.A into various principal jobs is given at Appendix V.

4.4 For manpower planning at the company level, employers are requested to note that the number of trainees set out in Table 4.A, when expressed in terms of existing manpower, represents an average annual intake of about 5.0%, 4.9% and 3.4% respectively of the number of technologists, technicians and craftsmen presently employed.

Training of Technologists

4.5 A technologist is a person who has the qualification and experience equivalent to those required for corporate membership of a professional institution. He/she should be able to use his/her knowledge and skill to initiate practical development work and be competent in analysing and solving a wide range of technical problems. Furthermore, he/she should be able to assume personal responsibility for the development and application of engineering principles, exercise original thinking and judgement, follow progress in his/her branch of technology, apply modern management techniques and supervise and develop his/her subordinates.

4.6 Technologists play an important role in bringing about improvements in management and technological innovations. The Training Board recommends that technologists should be trained via one of the following two routes:



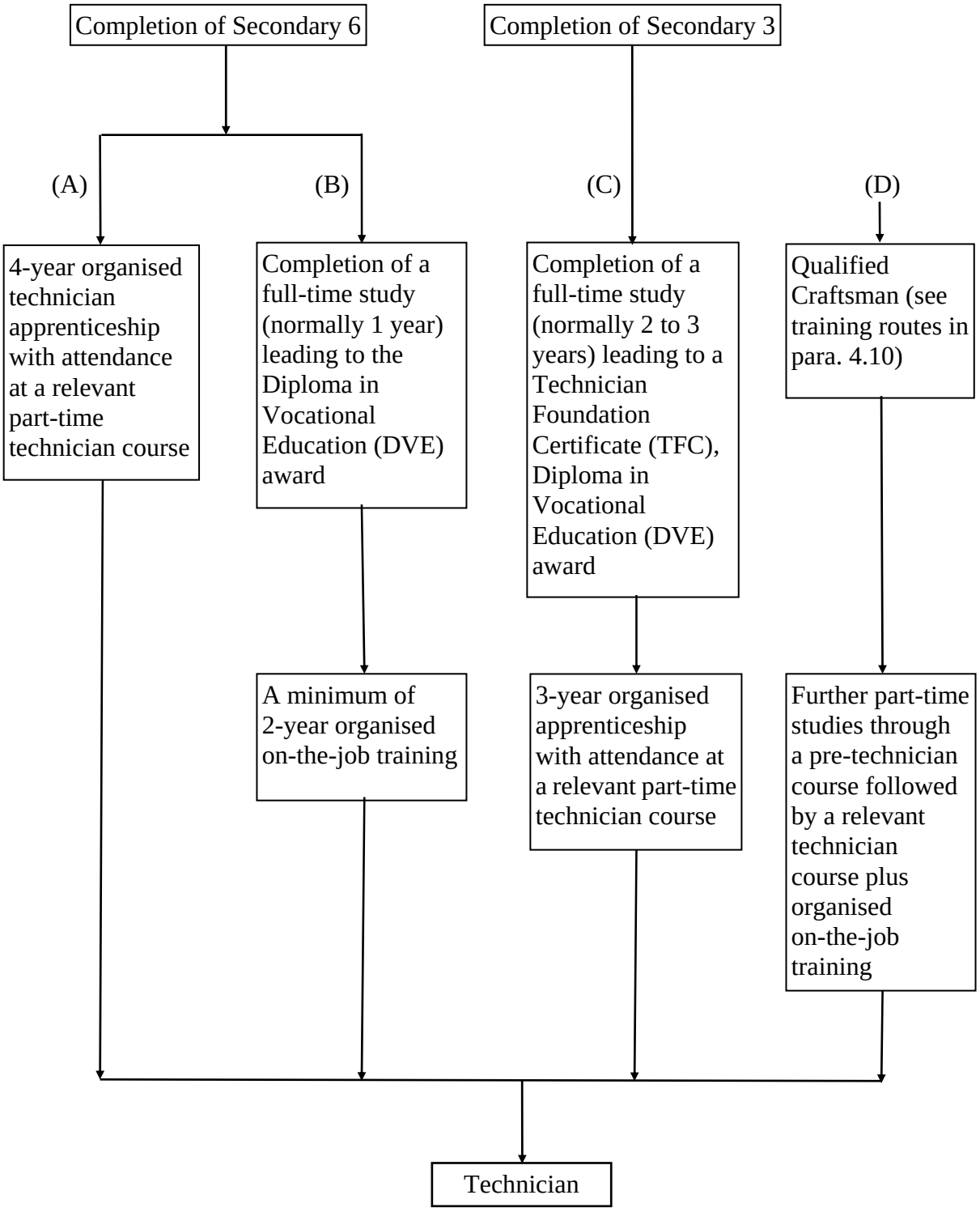
The Engineering Graduate Training Scheme

4.7 To bring about more well-structured practical training opportunities in local industries for engineering graduates, the Committee on Technologist Training of the Vocational Training Council is operating a subsidised training scheme to provide engineering graduates with 18 months' practical training of a standard acceptable for corporate membership of the Hong Kong Institution of Engineers. Each trainee under the scheme is granted a subsidy through his/her employer as part of his/her salary and his/her training progress is monitored by the Committee. The Technologist Training Unit of the Council operates a free placement service to help employers recruit graduates and graduates obtain training opportunities. The Unit also offers assistance to employers on all matters concerning the training of engineering graduates. The Training Board strongly recommends employers to participate in the scheme, and to make use of the service of the Technologist Training Unit.

Training of Technicians

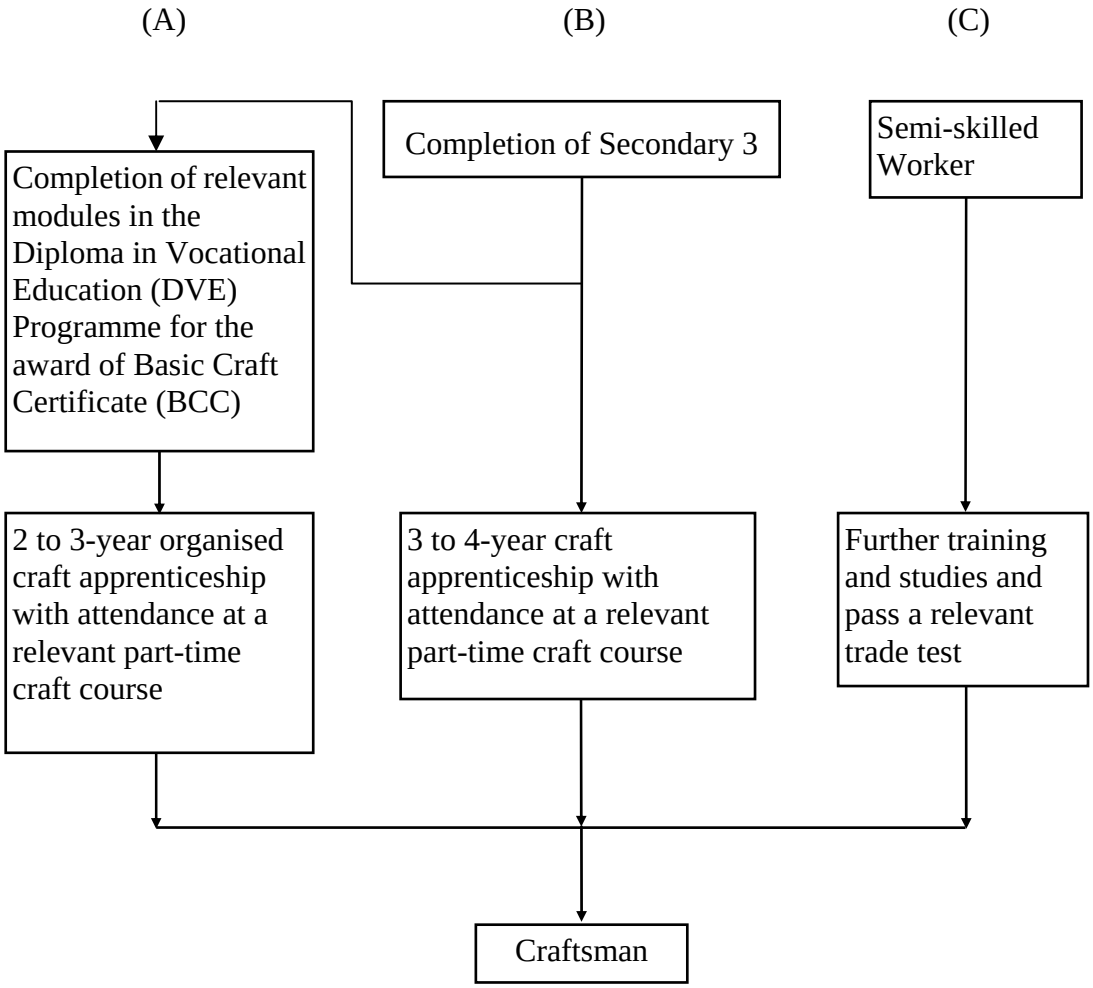
4.8 A technician is a person whose education, practical training and experience enable him/her to apply proven techniques and procedures to carry out technical tasks under the supervision of a technologist. The four normal routes for training technicians are outlined in the diagram of the next page.

4.9 The Hong Kong Institute of Vocational Education (IVE) established in 1999 by revamping the technical colleges and technical institutes of the Vocational Training Council offers courses at Higher Diploma, Diploma and Certificate levels. The Diploma in Vocational Education course also provides training at technician level for secondary school leavers. In addition, many of the IVE and Pro-Act Training and Development Centre (Precision Engineering) courses are relevant and useful to technical staff and apprentices engaged in the plastics industry. Such courses are offered in full-time, part-time day-release or part-time evening modes for the workforce of the industry.


Completion of Secondary 6
Completion of Secondary 3
(A)
(B)
(C)
(D)
4-year organised technician apprenticeship with attendance at a relevant part-time technician course
Completion of a full-time study (normally 1 year) leading to the Diploma in Vocational Education (DVE) award
Completion of a full-time study (normally 2 to 3 years) leading to a Technician Foundation Certificate (TFC), Diploma in Vocational Education (DVE) award
Qualified Craftsman (see training routes in para. 4.10)
A minimum of 2-year organised on-the-job training
3-year organised apprenticeship with attendance at a relevant part-time technician course
Further part-time studies through a pre-technician course followed by a relevant technician course plus organised on-the-job training
Technician

Training of Craftsmen

4.10 A craftsman is a skilled worker who is able to apply his/her skills to a wide range of jobs within his/her trade. A craftsman requires not only practical skills but also related theoretical knowledge so that he/she can adapt himself/herself to advances in technology. The three common routes for training craftsmen are:



4.11 The Training Board recommends route (A) not only because the training period is shorter but also because holders of the Basic Craft Certificate have undergone training in basic skills and would be productive soon after the start of their apprenticeship. They would also be more adaptable to the industrial environment as well.

4.12 The craftsman job "Plastics Machine Setter" is usually promoted from experienced moulding machine operator who has either completed relevant short courses in machine setting or acquired the necessary skills through many years of working experience. On the other hand, Secondary 6 leavers are recruited as "Quality Control Inspectors" as they can acquire technical knowledge and skills related to the inspection job for plastics products and related components through on-the-job training and other relevant part-time courses.

Technical Education and Training Institutions

4.13 A wide range of full-time, part-time day-release and part-time evening training courses relevant to the plastics industry are being offered by several tertiary institutions and the Hong Kong Productivity Council. Simultaneously, a great variety of relevant part-time up-grading courses are also offered by the IVE, and the Pro-Act Training and Development Centre (Precision Engineering) of the Vocational Training Council. Employers are encouraged to make full use of the training facilities in these institutions and sponsor their employees to attend relevant courses for upgrading their technical knowledge and skills. In addition, seminars and workshops organised by these bodies not only help employers absorb new technologies but also train up their technical staff in such areas.

4.14 To cope with the developing needs of the plastics industry, it is vital for in-service workers of the industry to embark on a life-long learning philosophy during their working life. It is also of equal importance that employers recognise such a need and support their employees to undertake/participate in up-grading courses, training programmes, workshops and seminars for the acquisition of advanced technologies.

Development and Training Centre of the Vocational Training Council

4.15 The Training Board has been charged with the responsibility to provide advice on matters relating to the development of training services of the Pro-Act Training and Development Centre (Precision Engineering) which has been established since July 2000 by merging the former Plastics Industry Training Centre and the Precision Tooling Training Centre. Located at the VTC Kowloon Bay Complex, the Pro-Act Training and Development Centre (Precision Engineering) and the Youth College offer the following course for generating new-entrants for the industry:

Course Title	Level	Duration
Diploma in Vocational Education – Computer-aided Product Engineering	Technician	1 to 3 years

4.16 Apart from the above full-time courses, the Pro-Act Training and Development Centre (Precision Engineering) also offers a wide range of full-time, part-time day-release and part-time-evening training courses for in-service workers of the plastics industry with the purpose of developing the local workforce to cope with the development of a knowledge-based economy in Hong Kong. Training courses cover various areas such as CNC machining technology, design and manufacture of precision moulds and dies, product design/development, CAD/CAM/CAE, product/process information management, product testing/evaluation, quality control, material development/selection, process development/selection, product and project engineering.

4.17 In response to the training needs of the Small and Medium Enterprises (SMEs) of the plastics industry, the Pro-Act Training and Development Centre (Precision Engineering) continues offering the training programme in CAD/CAM/CAE technology for SMEs with the objective of assisting the SMEs to train up their technical staff in the application of advanced CAD/CAM/CAE softwares effectively. Trainees on the programme will receive practical training both at the Pro-Act Training and Development Centre (Precision Engineering) and at the employers' workplace.

4.18 The Training Board strongly urges employers to give full support to the training centres by recruiting their apprentices and trainees from these centres and sending their in-service workers to attend the relevant up-grading courses for enhancing their technical competence in their work.

Related Training Services of the Vocational Training Council

4.19 The Vocational Training Council offers services to help employers organise their training schemes including:

(i) The statutory **Apprenticeship Scheme,** through which technicians and craftsmen are effectively trained to meet the needs of the industry.

(ii) The **Engineering Graduate Training Scheme,** which helps engineering students and graduates complete their professional training as engineers.

(iii) The voluntary **Trade Testing and Certification Scheme,** which is for the purpose of ascertaining and recognizing the standards of skilled workers. Since 2013, the Plastics Training Board has been conducting trade test for Certified Plastics Technician (Product Design).

(iv) The **New Technology Training Scheme** provides financial assistance to local companies up to a maximum of 50% of the training cost for their employees to be trained in new technologies. The Scheme covers various types of training mode including overseas training courses or working attachment; local training courses; and tailor-made local training courses/working attachments for individual companies.

4.20 The Training Board recommends employers to contact the Vocational Training Council for assistance in setting up training schemes and recruiting trainees.

Training Programmes in Pearl River Delta (PRD)

4.21 With most of the production facilities located at PRD, the plastics industry is employing a workforce of about 400 000 Mainland workers. Among them, about 4 500 are engineers. At the same time, employers are also posting some 900 technologists and 500 technicians to their PRD operations for more than 6 months in a year as detailed in paragraphs 2.10 and 2.11. These figures indicate that there is a huge demand for training for both Hong Kong and Mainland workers in the PRD region. The Pro-Act Training and Development Centre (Precision Engineering) has offered training programmes especially on areas relating to the plastics injection moulding technology, CNC machining and CAD/CAM technologies, plastics materials knowledge and engineering drawing standards in the PRD region for operations set up by Hong Kong employers, on a full-cost recovery basis, in order to provide pro-active support to Hong Kong employers and to meet their training needs there.

Remarks

4.22 It should be emphasised that this survey covered the major sectors of the plastics industry only. Reader can refer to Section 1.6 for the scope of the survey. The employment figures in this report do not include any other manufacturing branches which are outside of the survey scope, e.g. auto-parts, clocks and watches, electricity and electronics, furnishing, etc. The Training Board is fully aware that nowadays, plastics are used in virtually every industry sectors. Anyway, due to the constraints in resources, the survey scope needs to be confined to those sectors which employ the largest number of technical manpower of the plastics industry.

塑膠業 **2013** 年人力調查報告摘要

調查目的和範圍

塑膠業訓練委員會於 2013 年 7 月 15 日至 9 月 14 日期間進行人力調查，蒐集塑膠業技術人力的最新資料，以便評估業內目前和未來的人手需求，並提出回應需求的建議。

2. 調查樣本覆蓋 952 間業內機構，包括以下公司類別：780 間塑膠製造及貿易公司、172 間塑膠製造服務公司。這是自從本會擴大調查範圍，將塑膠貿易和塑膠製造服務類別納入後的第九次人力調查，有效回應率為 96.9%。所得數據按統計學方式倍大，以反映期內塑膠業的整體人力情況。

調查結果

3. 2013 年調查顯示，調查期內業內共有 10 701 名僱員（人力調查報告所界定塑膠業主要職務的僱員）。按技能等級人力分布如下：

技能等級	僱員人數	佔僱員總數百分率
技師	4 363	40.7%
技術員	4 248	39.7%
技工	471	4.4%
操作工	831	7.8%
非技工	788	7.4%
總數	10 701	100.0%

4. 業內各技能等級僱員在各類別機構的分布情況如下：

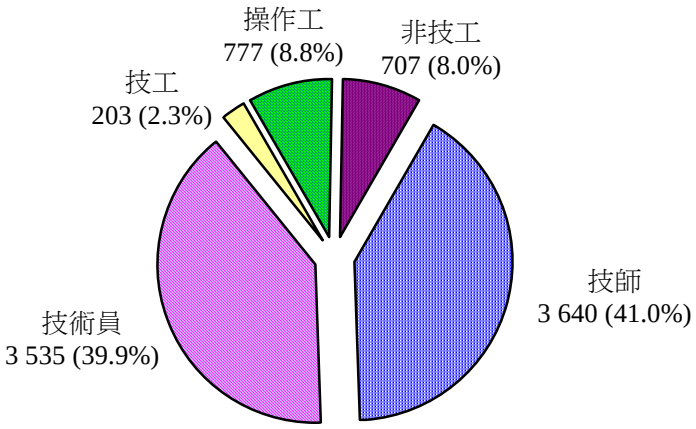
表 A： 各類別機構不同技能等級僱員分布情況

技能等級	類別 A 塑膠製造及貿易			類別 B 塑膠製造服務	所有類別
	塑膠製造	貿易	總數		
技師	156	3 484	3 640	723	4 363
技術員	223	3 312	3 535	713	4 248
技工	144	59	203	268	471
操作工	684	93	777	54	831
非技工	332	375	707	81	788
總數	1 539	7 323	8 862	1 839	10 701

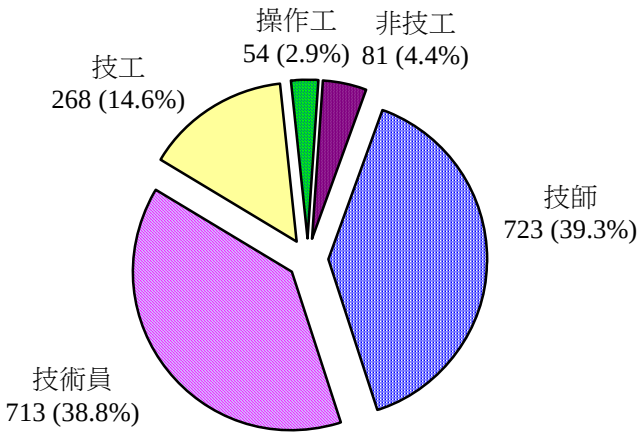
5. 圖 1 按機構類別及技能等級顯示人力結構及僱員分布情況：

圖 1: 各技能等級人力

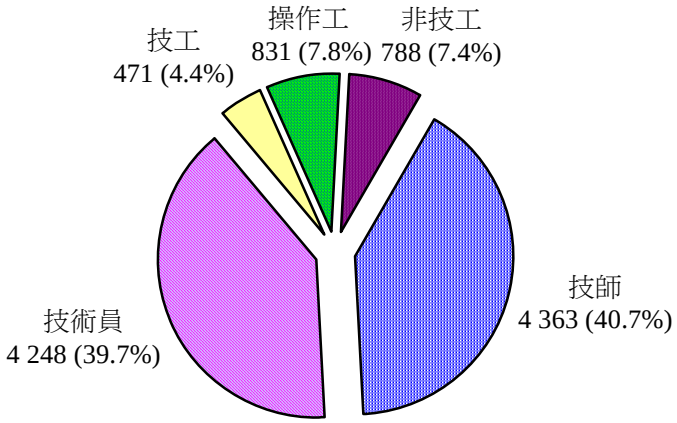
類別 A ： 塑膠製造及貿易 （8 862 名僱員)



類別 B : 塑膠製造服務 （1 839 名僱員）



所有類別 ： 10 701 名僱員



6. 調查期間，共有 16 人接受各類形式的訓練，其中 3 人屬技師級，13 人屬技術員級。

7. 僱主填報共有 118 個空缺，佔總人力 1.1%。其中 18 人屬技師級，54 人屬技術員級，7 人屬技工級，20 人屬操作工級，19 人屬非技工級。

8. 僱主填報，共有 46 名僱員在 2012 年至 2013 年間得到晉升。同期，共有 932 名技師、529 名技術員、27 名技工在香港以外地區工作超過 6 個月，各佔有關技能等級人力的 21.4%、12.5% 、5.7% 。

9. 僱主預期至 2014 年 6 月時，塑膠業總共會有 10 834 名僱員，表示預計來年業內人力僅有輕微增長。

10. 僱主亦填報共有 398 616 名內地員工受僱於廣東省的廠房工作，其中 4 545 人為內地工程師。僱主並預計至 2014 年 6 月時，廣東省的廠房將會僱用 4 695 名內地工程師，在該技能等級人力所佔比率上升約 3.3%。不過，須留意許多回覆機構對於內地廠房的人力數字並不知情，又或不太肯定；因此，上述數字未必準確。

11. 塑膠貿易以及塑膠製造服務機構技術僱員人數眾多，這是將這兩大類別納入調查範圍後的第九次人力調查。2011 年與 2013 年各類機構所聘用各技能等級的人力比較見下表 B：

表 B： 各技能級及各機構類別人力分布及比較
（括弧內為 2011 年人力調查數字）

技能等級	塑膠製造及貿易類別			塑膠製造服務類別	所有類別
	製造	貿易	總數		
技師	156 (152)	3 484 (3 310)	3 640 (3 462)	723 (635)	4 363 (4 097)
技術員	223 (194)	3 312 (3 042)	3 535 (3 236)	713 (416)	4 248 (3 652)
技工	144 (195)	59 (88)	203 (283)	268 (103)	471 (386)
操作工	684 (763)	93 (92)	777 (855)	54 (52)	831 (907)
非技工	332 (313)	375 (443)	707 (756)	81 (47)	788 (803)
總數	1 539 (1 617)	7 323 (6 975)	8 862 (8 592)	1 839 (1 253)	10 701 (9 845)

未來人力需求

12. 本會按調查結果推算業內可能需求的額外技術人手數目，為應付人力增長與流失，未來四年 3 個技能等級所須增加的人手如下：

技能等級	建議每年增加人手
技師	198 - 242
技術員	188 - 230
技工	14 - 18

13. 為配合塑膠業的發展需求，本會促請僱主為僱員提供合適的職內訓練、學徒訓練，並善用其他如工科畢業生訓練計劃、新科技培訓計劃、技能測驗與證書頒發計劃等，照顧技術僱員的發展和提升技術需要。為了讓僱員增進塑膠業的技術發展知識，本會亦鼓勵僱主資助僱員參加職業訓練局轄下香港專業教育學院、卓越培訓發展中心（精密工程）所開辦的各類全日制、兼讀制訓練課程，。

14. 業內生產設施多設於珠江三角洲地區，而且廠家亦聘用大量的內地員工，因此本港與內地員工的培訓需求甚是龐大。卓越培訓發展中心（精密工程）所辦的培訓課程，尤其是本港僱主在珠三角開設廠房所需的塑膠注模技術、電腦數控加工、電腦輔助設計／電腦輔助製造技術，塑膠料知識、工程繪圖標準，均以收回課程成本的形式開辦，主動為本港僱主提供支援，應付培訓需要。

業務前景

15. 環球經濟環境有望改善，先進國家以及新興國家的增長逐漸加快。傳統市場中，儘管有憂慮美國會撤消大規模的量化寬鬆政策，但美國的復蘇勢頭看似最強，亦最有韌力。歐盟國家近期債務危機喘定，復蘇迹象初現。外圍環境較為理想，應對本港塑膠業的未來發展有利。

16. 幾年以來，環球經濟低迷，利潤收窄，需求疲弱，全球塑膠產品供應商都期望業務前景好轉。業內人士期望各方推出的經濟措施能令全球經濟開始逐步改善，歐洲方面可能需較長時間始會穩定，但美國經濟已有初步迹象回復增長。塑膠業現踏入穩步增長階段。

17. 雖然歐美市場仍是本港塑膠產品的主要出口市場，亞洲國家和其他新興國家對業界亦愈來愈重要。香港企業在這些國家的發展尚在起步階段，可以多在這方面開拓市場。

18. 本港塑膠業現時仍以原設備製造*[OEM]*為主要的運作模式，不過，愈來愈多廠家提供設計服務並按客戶指定品牌生產製品*[ODM]*，並使用自家品牌製造和售賣產品*[OBM]*。 研發品牌產品可為產品增值，漸多本港公司採用此策略。

19. 本港大多數塑膠業公司，尤其於珠三角有生產線的公司，都感到近年在中國內地經營業務愈來愈不容易。困難主要在於勞工、原材料與遵守法規的成本都高漲，勞工短缺，政府銳意提升廣東省市的工業結構等，亦是問題所在。企業承受壓力，謀求產品創新又或改良製造工序，以改善競爭力。

20. 中國將繼續採納最低工資及工資保障制度。因此，勞工成本會漸漸上升，對塑膠業施加額外壓力。雖然這會鼓勵企業步向自動化生產，有助革新和改進，另一方面亦會迫使機構加快將廠房遷往其他內地省市和東南亞國家。

21. 勞工成本以外，內地整體生產成本上升，亦是許多香港塑膠業製造商要面對的問題。在內地經營業務的許多廠家，尤其在珠三角，都難免要為外地來的工人提供食宿，2013 年食品價格平均上升 4%，無疑對整體經營成本造成影響。另一方面，內地實行新的價格機制，汽油和柴油價格上升，亦推高了運輸成本。

22. 人民幣升值長久以來對內地經營的香港廠家都帶來重大挑戰。中國對人民幣匯率機制施行的改革措施，令人民幣可更靈活買賣。人民幣匯率的價格浮動，仍然是影響塑膠企業的一大因素。

23. 中國塑膠業經歷了大規模的增長，快速擴展。過量擴展業務再加上重複生產往往令回報減弱，數以千計的中小企塑膠產品製造商若要在市場上求存，無可避免地要陷入價格競爭這種惡性循環。企業東主須察悉這種趨勢，致力生產特色的製品，使業務重回蓬勃增長的路軌。

24. 十八屆三中全會於 2013 年 11 月閉幕，公布《關於全面深化改革若干重大問題的決定》。多項政策之中，其中一項關於中國內地將會放寬「一孩政策」，一對夫婦如其中一方為獨生子女，則可生育兩名孩童。相信這項政策將會帶來正面影響，刺激消費，並推動對嬰兒產品與玩具的需求。

25. 儘管珠三角的經營環境愈來愈困難，但因業務的配套設施完備，大部分企業無意遷移生產基地，認為如在太過遠離香港的地方開設廠房，會難於管理。

26. 社會對環保的關注提高，刺激起對循環再造系統及環保物料的需求。生物聚合物和生物塑膠能為環球關注的問題提供解決方案，可以預見未來這方面的需求會大增。

27. 雖然對高科技產品的需求有增無減，但返璞歸真的玩具仍有市場，不致大減。換言之，洋娃娃、積木、玩具車等傳統產品的銷售應會温和增長。

28. 由於香港廠家較能符合海外對塑膠產品的嚴格安全和健康標準，因此，海外買家並不輕易將生產廠房和貨源遷至其他生產基地。所以，與其他行業相比，亞洲的

競爭對手對香港玩具供應商所構成的威脅較小。

29. 部分企業已進軍或考慮打入內地的家用市場；其他未有或未打算打入內地的企業，原因主要是缺乏銷售渠道、對法規欠認識、競爭激烈、缺乏經驗人手和成熟品牌。

30. 中國內地盛行商家對客戶 *[B2C]* 的營商模式，為有意進入內地市場的香港企業提供大好機會。企業必須看見 B2C 的營商模式是整體業務策略中不可或缺的，這種營商模式將加快增長，為香港商家提供更大營利空間。

31. 面對生產成本上升，買家壓價、客戶延遲付款、激烈競爭等負面影響，香港企業一直採取策略擴展海外和內地市場，並透過改良設施、改善技術、提高產品的附加價值、精簡生產工序等，加強內部監控管理。

第一章

緒論

塑膠業訓練委員會

1.1 塑膠業訓練委員會隸屬職業訓練局。根據職權範圍，本會須負責調查塑膠業的人力及訓練需求，並向局方提出有關發展訓練設施建議，以配合業界需求。本會委員由主要商會、工會、專業團體、教育／培訓機構及政府部門提名出任。委員名單及職權範圍分別載於附錄1 及附錄2。

人力調查

1.2 本會按照職權範圍，於2013 年7月15日至9月14日期間進行塑膠業人力調查，蒐集最新人力資料，以評估業內人力結構及訓練需求。是次調查由政府統計處協助進行。

1.3 調查所收集的資料包括：

(i) 2013年6月28日時的僱員人數；
(ii) 現有空缺額；
(iii) 僱主預計在2014年6月時的僱員總數；
(iv) 目前受訓僱員人數；
(v) 僱員每月平均收入；以及
(vi) 僱主對各技能等級僱員宜有的教育程度、訓練方式及訓練期的意見。

1.4 是次亦請僱主填報調查前12個月內，派駐香港以外地區工作超過6個月的技師、技術員及技工人數。

1.5 調查亦請僱主提供所屬公司在廣東省機構的內地員工人數 （包括內地工程師數目），以及預計12個月後所聘用人手數目。亦有收集這些公司未來動向的資料，包括搬遷生產基地／業務轉型升級／拓展新市場。

調查範圍

1.6 是次調查涵蓋業內以下類別的機構：

I. 類別 A ： 塑膠製造及貿易

(i) 塑膠玩具製造 (HSIC 324300);

(ii) 塑膠家庭用具製造 (HSIC 222200);

(iii) 塑膠外殼及零件製造 (HSIC 222400);

(iv) 塑膠袋製造（手袋除外） (HSIC 222300);

(v) 其他塑膠產品製造 (HSIC 222901, 222902, 222999);

(vi) 玩具進出口 (HSIC 451444, 451445, 452444, 452445);

(vii) 塑膠製品進出口 (HSIC 451451, 452451)

（註：「HSIC」代表「香港標準行業分類」）

II. 類別 B ： 塑膠製造服務

測試中心、主要塑膠原料供應商、塑膠產品設計公司。（這些機構並未納入 HSIC 的分類。）

1.7 由於業界於九十年代已逐漸將生產設施遷離本港，政府統計處遂將大部分塑膠製造機構重新歸類為塑膠貿易機構。本會亦自1997 年人力調查起，將塑膠製造及塑膠貿易兩個類別，合併為塑膠製造及貿易類別。

抽樣方法

塑膠製造類別

1.8 根據政府統計處提供的資料，截至2013年第一季，塑膠製造機構共有408間。鑑於資源有限，本會採用分層隨機抽樣法，抽選出其中211間機構作為調查對象。

塑膠貿易類別

1.9 由於僱員人數少於5人的貿易公司甚少會僱用技術人員，本會決定只抽查有僱員5名或以上的機構。根據政府統計處的紀錄，符合此準則的塑膠貿易機構共有1 928間。本會同樣採用分層隨機抽樣法，抽選其中569間作為是次調查的對象。

塑膠製造服務類別

1.10 鑑於現時HSIC制度並不包括塑膠製造服務類別，本會遂參考香港生產力促進局所提供的資料，選出業內的測試中心、主要塑膠原料供應商及塑膠產品設計公司，納入調查範圍。最後，本會共選出172間機構為調查對象。

抽查機構總數

1.11 本會按上述的抽樣方法，合共選出952間機構為是次調查的對象，涵蓋業內所有類別。

調查方法

1.12 調查前約一星期，本會將主席函件、調查表及相關調查文件（見附錄3）一併寄給各選定機構。實地調查進行期間，政府統計處職員主動聯絡各選定機構，解答疑問，並於有需要時協助僱主填報資料；此外，亦有預約造訪各選定機構，收集已填妥的調查表。

1.13 調查結束後，負責人員仔細檢閱收回的調查表，並於有需要時與填覆機構核實資料，隨後交政府統計處處理。塑膠製造及貿易類別的資料其後以統計方法倍大，再加上塑膠製造服務類別所得的數字，以反映調查期間業內的整體人力狀況。

調查回應

1.14 在合共952間受訪機構中，651間提供所需資料，另有280間機構已結業、搬遷、與其他機構合併、並無聘用技術人員，或不再從事塑膠業相關業務；其餘21間則拒絕提供資料。是次調查的有效回應率為96.9 %。

統計數據

1.15　　本報告刊載是次人力調查的結果、本會對塑膠業的人力需求預測，以及應付此等需求的建議措施。報告內提及的「人力」及「僱員」均指從事塑膠業及相關範疇內36個主要職務的從業員總數（受訓者及學徒除外），而「受訓者」則指正在接受各種訓練的從業員，以及簽有學徒合約的登記學徒。

主要職務

1.16 是次人力調查所涵蓋的 36 個主要職務及相關工作說明載於附錄 3C。

第二章

調查結果概要

僱員人數

2.1 2013 年的調查顯示，調查期間本港共有 10 701 名僱員從事業內各主要職務。僱員分布情況如下：

技能等級	僱員人數	佔僱員總數百分率
技師	4 363	40.7%
技術員	4 248	39.7%
技工	471	4.4%
操作工	831	7.8%
非技工	788	7.4%
總數	10 701	100.0%

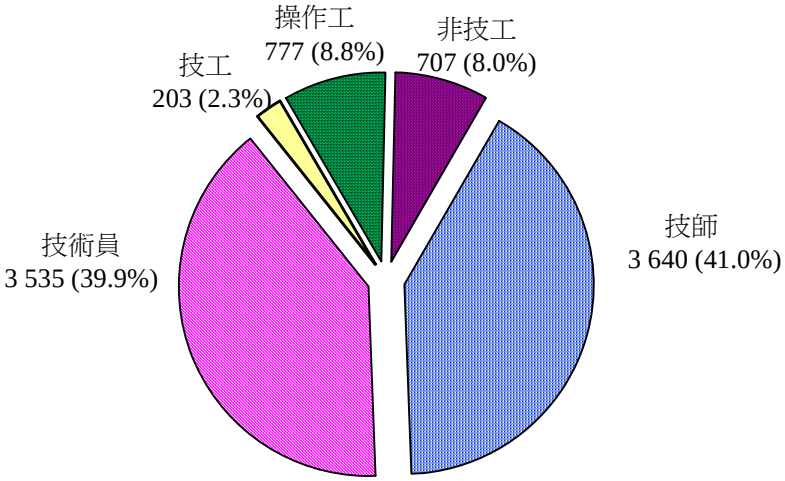
2.2 各類別機構不同技能等級僱員的分布情況見表 A 及圖 1：

表 A： 各類別機構不同技能等級僱員分布情況

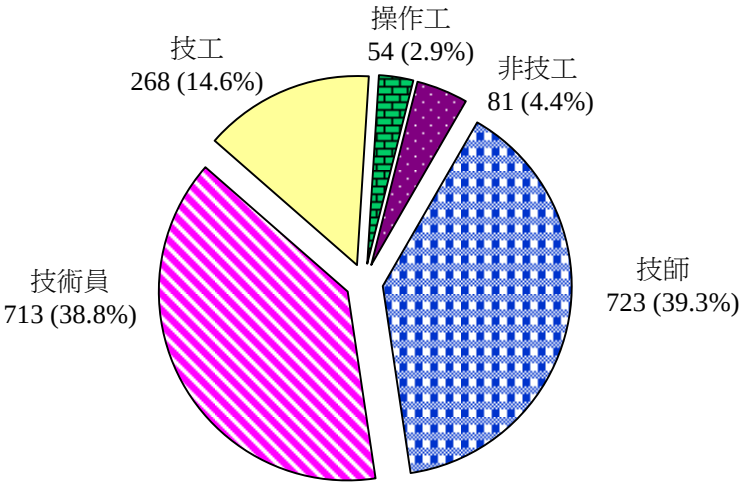
技能等級	類別 A 塑膠製造及貿易類別			類別 B 塑膠製造服務類別	所有類別
	製造	貿易	總數		
技師	156	3 484	3 640	723	4 363
技術員	223	3 312	3 535	713	4 248
技工	144	59	203	268	471
操作工	684	93	777	54	831
非技工	332	375	707	81	788
總數	1 539	7 323	8 862	1 839	10 701

圖 1： 各技能等級人力情況

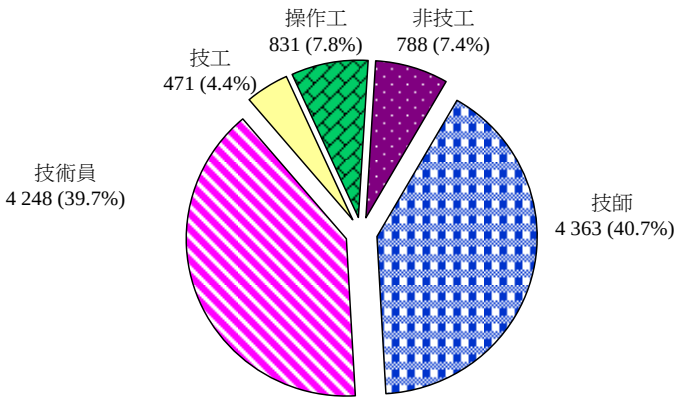
類別 A ： 塑膠製造及貿易類別 （8 862 人）



類別 B ：塑膠製造服務類別 （1 839 人）



所有類別： 10 701 人



受訓者人數

2.3 調查期間，業內共有受訓者 16 名，按技能等級分布的情況見表 B：

表 B： 各技能等級受訓者分布情況

技能等級	受訓者人數	佔同級僱員總數百分率
技師	3	0.1%
技術員	13	0.3%
技工	0	0.0%
操作工	0	0.0%
總數	16	0.1%

空缺數目

2.4 僱主填報共有 118 個業內空缺，佔調查期間僱員總數約 1.1% ：

表 C： 各技能等級空缺分布情況

技能等級	空缺數目	佔同級僱員總數百分率
技師	18	0.4%
技術員	54	1.3%
技工	7	1.5%
操作工	20	2.4%
非技工	19	2.4%
總數	118	1.1%

調查期間空缺數目
以及預計至 2014 年 6 月時僱員人數

2.5 業內 118 個空缺中，18 個屬技師級，54 個屬技術員級，7 個屬技工級，20 個屬操作工級，19 個屬非技工級。各技能等級現有僱員人數與空缺數目比較見圖 2。

2.6 僱主預測 2014 年 6 月時業內五個技能等級總共將有 10 834 名僱員。各技能等級調查時的人力狀況與僱主預測至 2014 年 6 月時的僱員人數比較見表 D 及圖 3。

表 D： 現時人力狀況
與僱主預測至 2014 年 6 月時僱員人數
比較

技能等級	2013 年 6 月 28 日時 僱員人數 (a)	2013 年 6 月 28 日時 空缺 (b)	2013 年 6 月 28 日時 僱員人數及空缺 (a) + (b)	僱主預測 2014 年 6 月時 僱員人數 (c)	僱主預期人力變化 {(c) ÷ [(a) + (b)] – 1}x 100%
技師	4 363	18	4 381	4 381	0%
技術員	4 248	54	4 302	4 302	0%
技工	471	7	478	478	0%
操作工	831	20	851	851	0%
非技工	788	19	807	822	1.9%
總數	10 701	118	10 819	10 834	0.1%

圖 2： 各技能等級空缺與現有人力比較

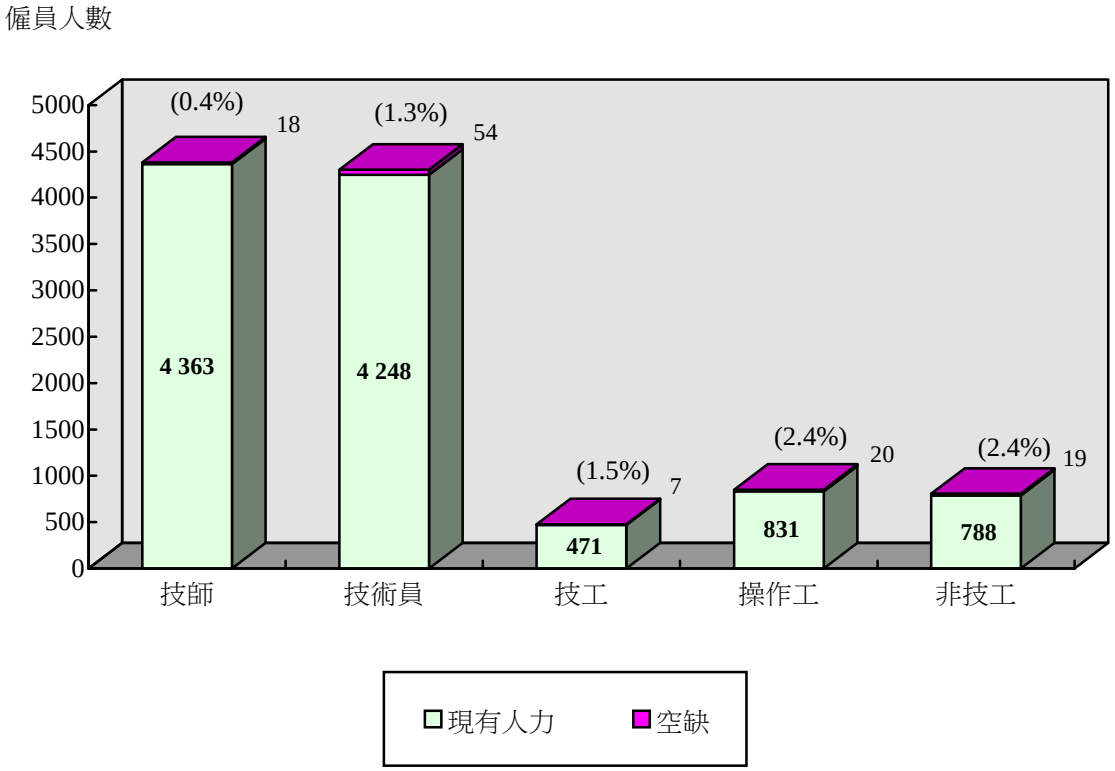
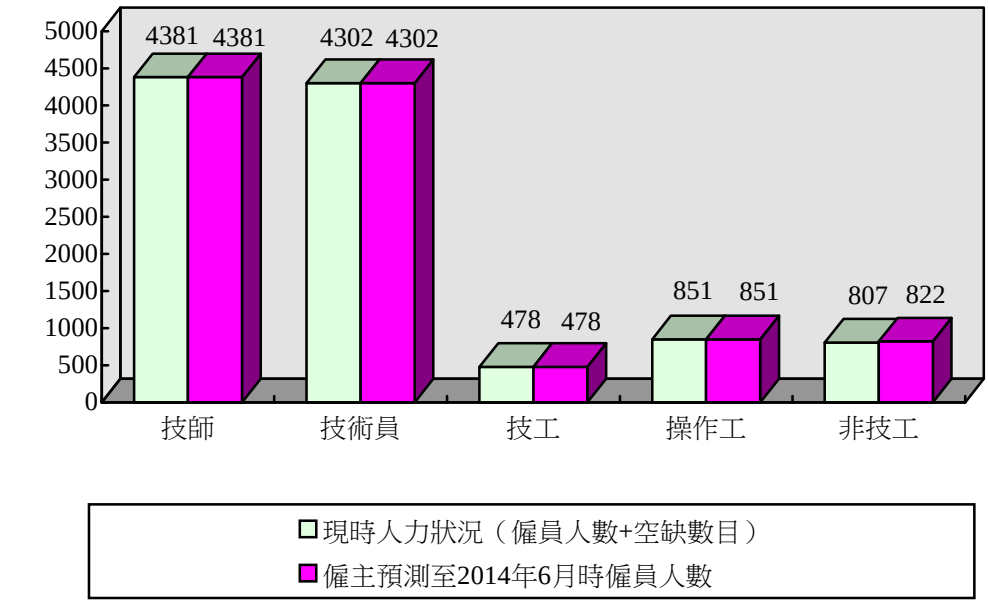


圖 3： 現時人力狀況與
僱主預測至 2014 年 6 月時僱員人數
比較



僱員每月收入幅度

2.7 隨着法定最低工資有所調整，是次調查亦修訂了僱員每月收入的幅度。各技能等級僱員每月收入幅度見表 E，按主要職務劃分情況見附錄 4 表四。

表 E： 各技能等級僱員每月收入幅度

技能等級	$7,501 以下	$7,501-$10,000	$10,001-$15,000	$15,001-$20,000	$20,001-$25,000	$25,000 以上	未列明	小計
技師	0	2	84	812	1 375	1 422	668	4 363
技術員	8	62	1 209	1 702	292	162	813	4 248
技工	12	34	146	30	6	2	241	471
操作工	29	282	344	15	0	0	161	831
非技工	133	358	230	2	0	0	65	788
總數	182	738	2 013	2 561	1 673	1 586	1 948	10 701

僱員宜有教育程度、訓練方式、訓練期

2.8 僱主對技師級、技術員級、技工級僱員宜有的教育程度、訓練方式、訓練期的意見見表 F ：

表 F： 僱員宜有教育程度、訓練方式、訓練期（僱主意見）

技能等級	宜有教育程度	宜有訓練方式	宜有訓練期
技師	大學學位／高級文憑	職內訓練	2-3 年或 4 年或以上
技術員	高級文憑／文憑／高級證書	職內訓練	2-3 年或 3-4 年
技工	中五至中七／中四或以下	職內訓練	1-2 年或 3-4 年

內部晉升人數

2.9 調查前 12 個月內，業內共有 46 名僱員獲晉升至較高職位，按各技能等級分布情況見表 G：

表 G：機構內部晉升人數

晉升情況	晉升人數	佔所晉升等級僱員人數百分率
由技術員晉升至技師	23	0.5%
由技工晉升至技術員	15	0.4%
由操作工晉升至技工	8	1.7%
總數	46	-

在香港以外地區工作的技術人員

2.10 截至 2013 年 6 月底前的 12 個月內，共有 932 名技師、 529 名技術員、27 名技工在香港以外地區工作超過 6 個月，分別佔所屬技能等級僱員總數的 21.4%、12.5%、5.7% 。這類僱員在業內兩類機構的分布情況見表 H。

表 H： 香港以外地區工作技術人員

	技師	技術員	技工
塑膠製造及貿易類別	908	526	27
塑膠製造服務類別	24	3	0
所有類別	932	529	27

在廣東省機構工作的員工

2.11 僱主填報在調查期間廣東省的機構總共有 398 616 名內地僱員，其中 4 545 人為工程師。僱主亦預測至 2014 年 6 月時，這些工程師會增至 4 695 人，在該技能等級人力所佔比率上升約 3.3%。不過，須留意許多回覆機構對於內地廠房的人力數字並不知情，又或不太肯定；因此，上述數字未必準確。

本港塑膠業僱員總數

2.12 調查期間，本港塑膠業共有 17 548 名僱員擔任其他範疇的職務，主要為文職人員及後勤支援人員。業內僱員合計總共 28 249 人(塑膠及相關職務為 10 701 人，其他職務為 17 548 人)。

業內機構未來發展

2.13 是次調查問及業內機構未來三年的發展計劃。共有 90 間機構表示會在未來三年將業務轉型或升級。表 I 為機構的業務轉型或升級方向：

表 I：業務轉型或業務升級方向*

	原設備製造	原設計製造	原品牌製造	其他#
機構數目	37	31	30	13

* 機構可填選多於一項

其他發展方向包括：開拓零售／批發／出口業務及電子產品

2.14 此外，有 15 間公司表示會在未來三年搬遷製造基地或廠房，其中 13 間會遷往珠三角區，另有一間會遷至東南亞國家，一間會遷回香港。

2.15 共有 106 間公司表示會於未來三年在其他國家或地區開拓新市場，見表 J：

表 J： 新市場國家／地區*

	中國內地	金磚國家（巴西、俄羅斯、印度、南非）	歐美	中東	東南亞
機構數目	27	52	31	9	11

*機構可填選多於一個國家／地區

統計表

2.16 至於塑膠業各類別機構各主要職務的人力統計數字（包括受訓者人數、空缺數目、僱主預測至 2014 年 6 月時的僱員總數），按技能等級劃分見附錄 4 表一、表二、表三。

第三章

結論

概況

3.1 本會審閱過是次調查的結果，認為其中的數字大致能反映調查期間塑膠業的實際就業情況。

3.2 自1997年的人力調查起，本會將調查範圍擴展至涵蓋塑膠貿易類別，以及僱用大量技術人員的塑膠製造服務類別。2011與2013年業內各類別不同技能等級的人力分布情況及比較見表3.A：

表 3.A： 各類別不同技能等級
人力分布及比較
（括號內為2011年調查數字）

技能等級	塑膠製造及貿易類別			塑膠製造服務類別	所有類別
	製造	貿易	總數		
技師	156 (152)	3 484 (3 310)	3 640 (3 462)	723 (635)	4 363 (4 097)
技術員	223 (194)	3 312 (3 042)	3 535 (3 236)	713 (416)	4 248 (3 652)
技工	144 (195)	59 (88)	203 (283)	268 (103)	471 (386)
操作工	684 (763)	93 (92)	777 (855)	54 (52)	831 (907)
非技工	332 (313)	375 (443)	707 (756)	81 (47)	788 (803)
總數	1 539 (1 617)	7 323 (6 975)	8 862 (8 592)	1 839 (1 253)	10 701 (9 845)

塑膠業各類別
人力變化

3.3 塑膠製造類別有三大分類：玩具、用具／外殼及零件、其他塑膠產品。是次調查顯示，塑膠製造類別的人力由2011年的1 617人稍微下降至2013年的1 539人，兩年來縮減約4.8 %。各分類不同技能等級的人力變化見表3.B：

表 3.B : 塑膠製造類別各分類
不同技能等級
人力變化

技能等級	分類 1 塑膠玩具製造		分類 2 塑膠家庭用具、外殼及零件製造		分類 3 塑膠袋（手袋除外）及其他塑膠產品製造		塑膠製造類別 人力總數	
	2011	2013	2011	2013	2011	2013	2011	2013
技師	14	10	31	37	107	109	152	156
技術員	15	20	48	40	131	163	194	223
技工	22	8	38	46	135	90	195	144
操作工	127	30	115	93	521	561	763	684
非技工	44	16	64	77	205	239	313	332
總數	222	84	296	293	1 099	1 162	1 617	1 539

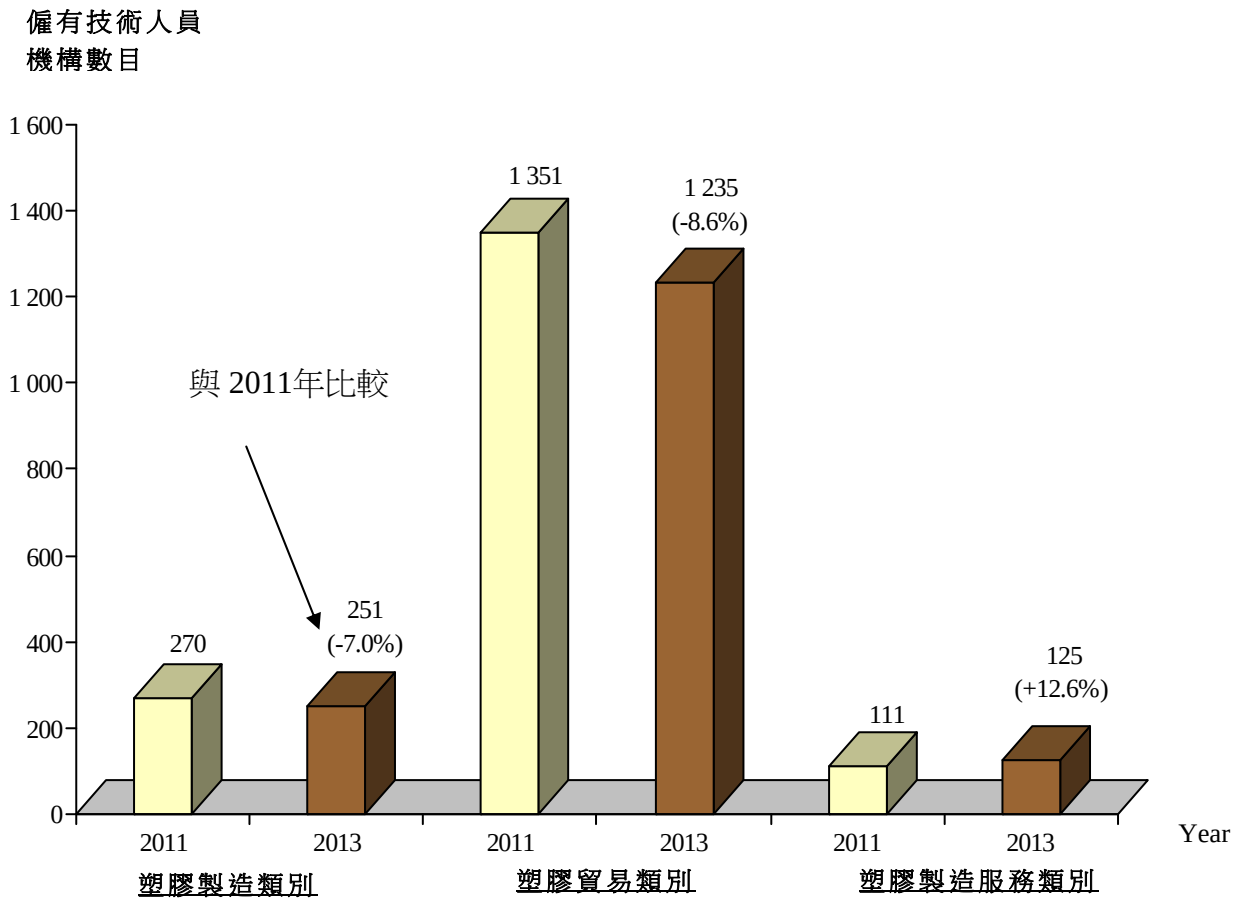
3.4 本會認為，塑膠製造類別的人力縮減與該類別的機構數目減少直接相關。調查期間（2013年7至9月），塑膠製造類別共有251間機構僱用了技術人員，較兩年前的數字（2011年為270間）減少7%（見圖3.A），原因可能是：

(i) 愈來愈多僱用一定數目技術人員的塑膠製造機構將生產設施及工序遷離香港，按政府統計處的分類方法，這些機構均重新歸類為塑膠貿易公司。

(ii) 約有90% 塑膠製造機構屬小型企業，當中有些因近年全球業務萎縮而倒閉。

(iii) 不少此類小型企業的東主已屆退休年齡，由於未能覓得合適的繼任人，只好結業。

圖3.A ： 2013年僱有技術人員
塑膠業機構估計數目



3.5 塑膠貿易類別有兩大分類：玩具進出口 、塑膠製品進出口，僱用最多技術人員，其技師、技術員、技工級僱員佔業內僱員總數約75.5 %。與2011年的數字比較，是次調查顯示，塑膠貿易類別的總人力於過去兩年穩步增長（增幅為5 %）。調查亦發現，技師級僱員由2011年的3 310人增至2013年的3 484人，增幅為5.3 %。技術員級僱員人數亦上升8.9 %，由2011年的3 042人至2013年的3 312人。至於技工級僱員，則由2011年的88人減至2013年的59人，減幅為32.9 %。塑膠貿易各分類不同技能等級的人力變化見表3.C：

表 3.C ： 塑膠貿易類別各分類
不同技能等級人力變化

技能等級	分類 4 玩具進出口		分類 5 塑膠製品進出口		塑膠貿易類別 人力總數	
	2011	2013	2011	2013	2011	2013
技師	2 440	2 489	870	995	3 310	3 484
技術員	2 346	2 546	696	766	3 042	3 312
技工	53	51	35	8	88	59
操作工	66	69	26	24	92	93
非技工程	229	197	214	178	443	375
總數	5 134	5 352	1 841	1 971	6 975	7 323

3.6 本會認為，塑膠貿易類別出現上述的人力變化的主要原因如下：

(i) 本港塑膠貿易業務主要從事產品設計及開發、策劃及統籌項目，以及為內地廠房提供後勤支援。由於此類工作需由幹練的技術人員擔任，所以需要更多技術員或更高職級的僱員。

(ii) 香港學生現時普遍接受更多教育才離校就業，因此技工的供應減少，而投身業界擔任技術員職級的高級文憑畢業生則愈來愈多。是次調查反映，由於人力供應充足，技術員級的僱員人數有所增加。

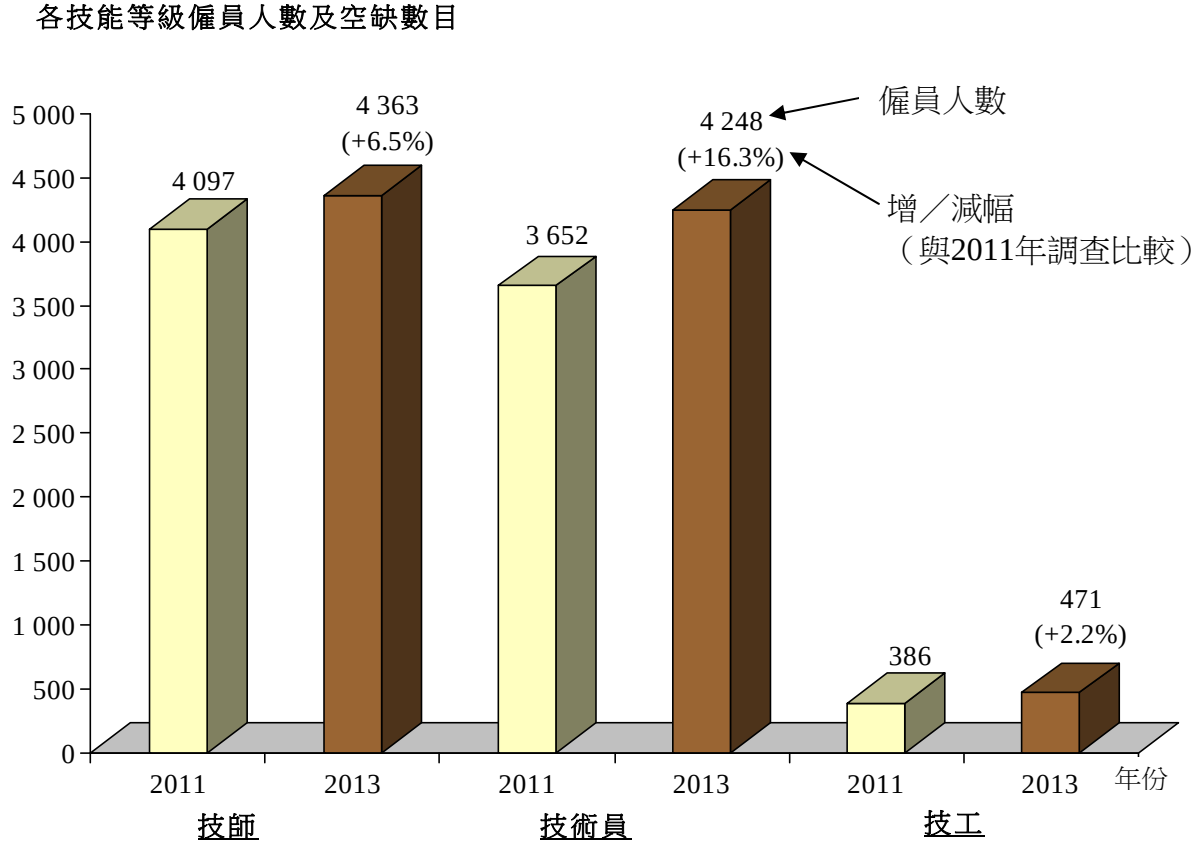
(iii) 僱主雖然也樂於聘用技師，但大多希望應徵者具備解決問題的能力以及系統整合知識。這些能力和知識必須經過多年的工作經驗累積，初出茅廬的畢業生未必能符合僱主的期望。技師級的僱員人數維持平穩。

(iv) 過去三十年，業內機構將生產設施大規模遷離香港，技工級職務大部分已由內地工人擔任。因此，技工級的人力減少33 %不足為奇。

3.7 塑膠製造服務類別的人力佔業內僱員總數約17.2 %。過去兩年，此類別的僱員人數增加約46.8 %（由2011年的1 253人增至2013年的1 839人）。與2011年比較，2013年的技師及技術員人數分別增加約13.9 %及71.4 %。至於技工人數，則由2011年的103人增至2013年的268人。

各技能等級的人力分析

圖 3.B ： 2011年與2013年各技能等級僱員人數比較



3.8 過去兩年，技師級的整體人力錄得6.5%的增幅。技師級九個主要職務中，製造／工業工程師與品質管制／品質保證工程師的人力變化較為穩定（減幅在-1.4%之內）。策劃及統籌工程師、技術支援工程師及模塑工程師分別增加19.8%、29.2% 、128.9% 。然而，產品工程師（塑膠業）、電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／工具工模工程師、電子／電機工程師、成本工程師的人力分別下降7.2%、12.9%、28.6% 及41%。現今的技師需對整個製造過程有全面的了解和認識，而不是只專精某個技術範疇。

3.9 技術員級方面的整體人力在過去兩年錄得16.3% 的升幅。品質管制／品質保證工程師、生產策劃員、實驗室／塑料技術員的數目，承接過往的增幅由2011年至2013年繼續上升了3.6%、 39.2%、 74.6%，增幅在「塑膠貿易」和「塑膠製造服務」類別尤其明顯，反映玩具製造商和塑膠產品製造商投放更多資源以加強產品測試及環保包裝，務求符合海外市場的安全／環保規例。但儘管整體人力增長，其餘7個職務的人力錄得3.5% 至25.7%的減幅。這些主要職務人力之所以縮減，可歸因於香港僱員的廠房技術職務已逐漸為內地工人取代。

3.10 技工級整體人力過去兩年錄得22.0%的增幅。組長、樣本／模型／生產原型製造工、品質檢查工分別增加了2.6%、64%、89.9%，但另外4個職務的人力卻下降，減幅由25%至78%。隨着生產設施於過去三十年來紛紛遷離香港，技工級職務大部分已由內地工人擔任。

業務前景

3.11 環球經濟環境有望改善，先進國家以及新興國家的增長逐漸加快。傳統市場中，儘管有憂慮美國會撤消大規模的量化寬鬆政策，但美國的復蘇勢頭看似最強，亦最有韌力。歐盟國家近期債務危機喘定，復蘇迹象初現。外圍環境較為理想，應對本港塑膠業的未來發展有利。

3.12 幾年以來，環球經濟低迷，利潤收窄，需求疲弱，全球塑膠產品供應商都期望業務前景好轉。業內人士期望各方推出的經濟措施能令全球經濟開始逐步改善，歐洲方面可能需較長時間始會穩定，但美國經濟已有初步迹象回復增長。塑膠業現踏入穩步增長階段。

3.13 雖然歐美市場仍是本港塑膠產品的主要出口市場，亞洲國家和其他新興國家對業界亦愈來愈重要。香港企業在這些國家的發展尚在起步階段，可以多在這方面開拓市場。

3.14 本港塑膠業現時仍以原設備製造*[OEM]*為主要的運作模式，不過，愈來愈多廠家提供設計服務並按客戶指定品牌生產製品*[ODM]*，並使用自家品牌製造和售賣產品*[OBM]*。 研發品牌產品可為產品增值，漸多本港公司採用此策略。

3.15 本港大多數塑膠業公司，尤其於珠三角有生產線的公司，都感到近年在中國內地經營業務愈來愈不容易。困難主要在於勞工、原材料與遵守法規的成本都高漲，勞工短缺，政府銳意提升廣東省市的工業結構等，亦是問題所在。企業承受壓力，謀求產品創新又或改良製造工序，以改善競爭力。

3.16 中國將繼續採納最低工資及工資保障制度。因此，勞工成本會漸漸上升，對塑膠業施加額外壓力。雖然這會鼓勵企業步向自動化生產，有助革新和改進，另一方面亦會迫使機構加快將廠房遷往其他內地省市和東南亞國家。

3.17 勞工成本以外，內地整體生產成本上升，亦是許多香港塑膠業製造商要面對的問題。在內地經營業務的許多廠家，尤其在珠三角，都難免要為外地來的工人提供食宿，2013 年食品價格平均上升 4%，無疑對整體經營成本造成影響。另一方面，內地實行新的價格機制，汽油和柴油價格上升，亦推高了運輸成本。

3.18 人民幣升值長久以來對內地經營的香港廠家都帶來重大挑戰。中國對人民幣匯率機制施行的改革措施，令人民幣可更靈活買賣。人民幣匯率的價格浮動，仍然是影響塑膠企業的一大因素。

3.19 中國塑膠業經歷了大規模的增長，快速擴展。過量擴展業務再加上重複生產往往令回報減弱，數以千計的中小企塑膠產品製造商若要在市場上求存，無可避免地要陷入價格競爭這種惡性循環。企業東主須察悉這種趨勢，致力生產特色的製品，使業務重回蓬勃增長的路軌。

3.20 十八屆三中全會於 2013 年 11 月閉幕，公布《關於全面深化改革若干重大問題的決定》。多項政策之中，其中一項關於中國內地將會放寬「一孩政策」，一對夫婦如其中一方為獨生子女，則可生育兩名孩童。相信這項政策將會帶來正面影響，刺激消費，並推動對嬰兒產品與玩具的需求。

3.21 儘管珠三角的經營環境愈來愈困難，但因業務的配套設施完備，大部分企業無意遷移生產基地，認為如在太過遠離香港的地方開設廠房，會難於管理。

3.22 社會對環保的關注提高，刺激起對循環再造系統及環保物料的需求。生物聚合物和生物塑膠能為環球關注的問題提供解決方案，可以預見未來這方面的需求會大增。

3.23 雖然對高科技產品的需求有增無減，但返璞歸真的玩具仍有市場，不致大減。換言之，洋娃娃、積木、玩具車等傳統產品的銷售應會温和增長。

3.24 由於香港廠家較能符合海外對塑膠產品的嚴格安全和健康標準，因此，海外買家並不輕易將生產廠房和貨源遷至其他生產基地。所以，與其他行業相比，亞洲的競爭對手對香港玩具供應商所構成的威脅較小。

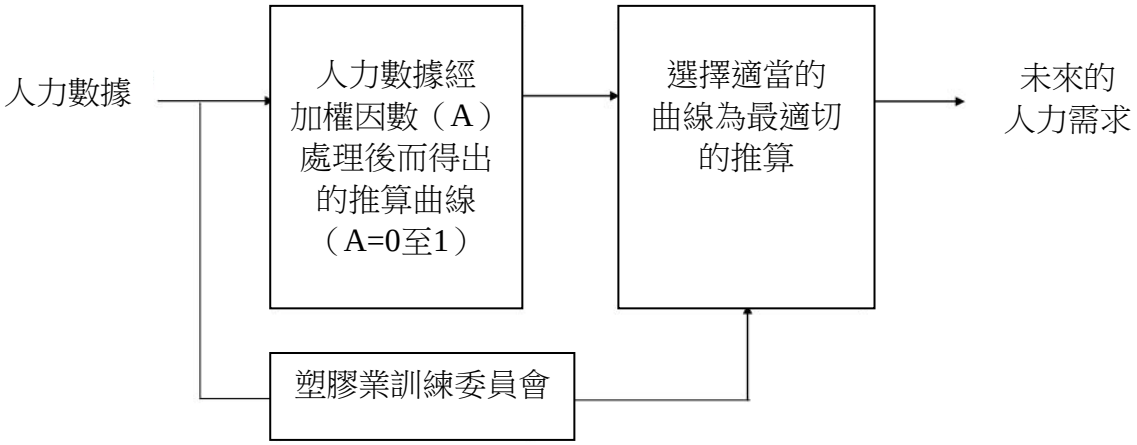
3.25 部分企業已進軍或考慮打入內地的家用市場；其他未有或未打算打入內地的企業，原因主要是缺乏銷售渠道、對法規欠認識、競爭激烈、缺乏經驗人手和成熟品牌。

3.26 中國內地盛行商家對客戶 *[B2C]* 的營商模式，為有意進入內地市場的香港企業提供大好機會。企業必須看見 B2C 的營商模式是整體業務策略中不可或缺的，這種營商模式將加快增長，為香港商家提供更大營利空間。

3.27 面對生產成本上升，買家壓價、客戶延遲付款、激烈競爭等負面影響，香港企業一直採取策略擴展海外和內地市場，並透過改良設施、改善技術、提高產品的附加價值、精簡生產工序等，加強內部監控管理。

未來人力需求

3.28　1997年之前的人力調查，本會一直採用「調節過濾法」*[AFM]*推算塑膠業未來的人力需求。AFM是一種用作趨勢分析的「曲線擬合」方法。下圖說明推算過程：

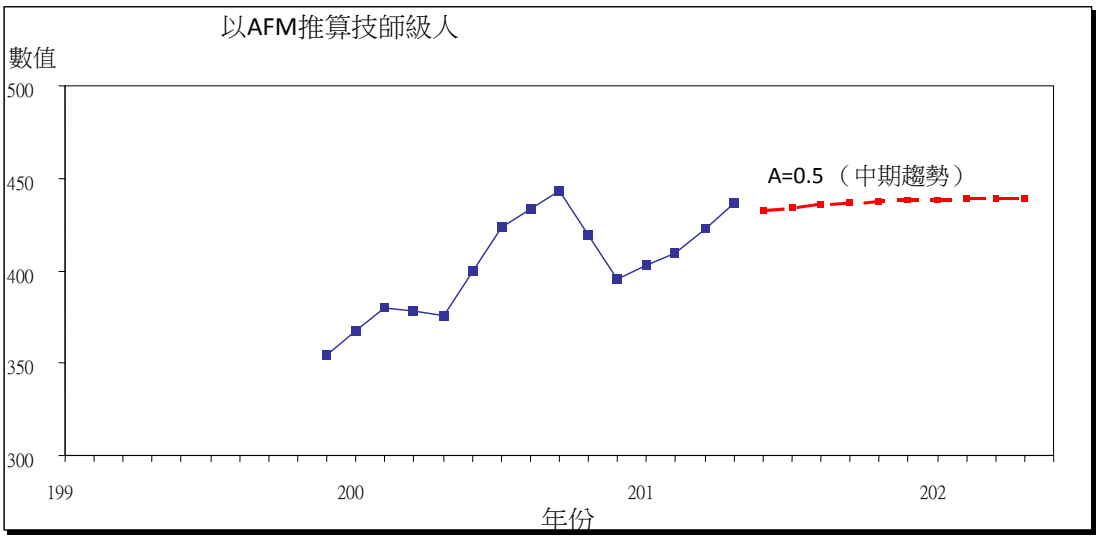


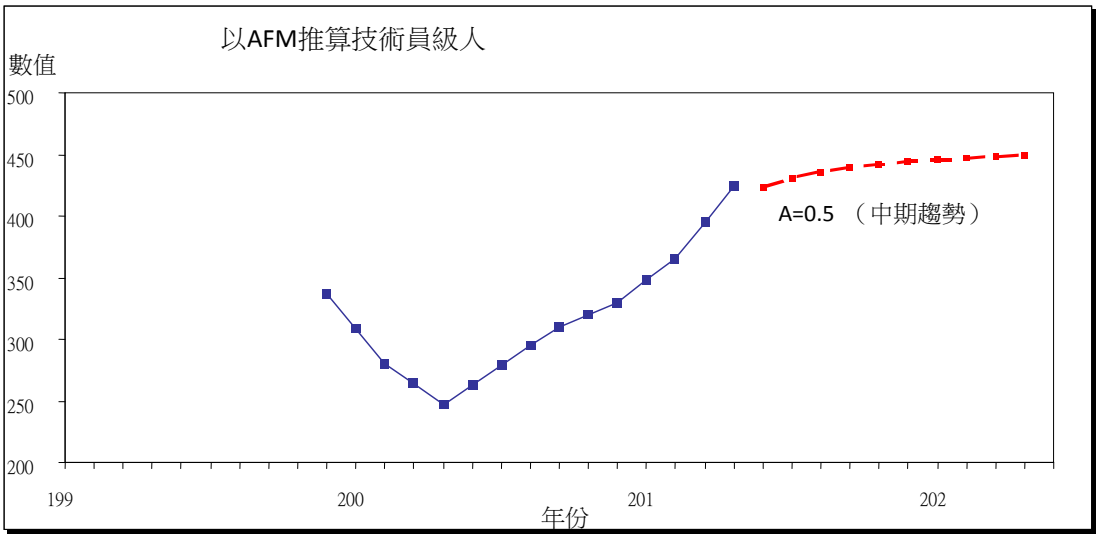
以往調查所得數據均經加權處理。偏重長期抑或短期趨勢，取決於加權因素（A）。（A）的數值愈高，表示近期的調查數據所佔權重愈大（即偏重短期趨勢）。本會考慮了多項因素，如市場趨勢、科技發展及其他社會及經濟變化，然後選取合適的（A）數值，從而推算業內各技能等級的人力需求。

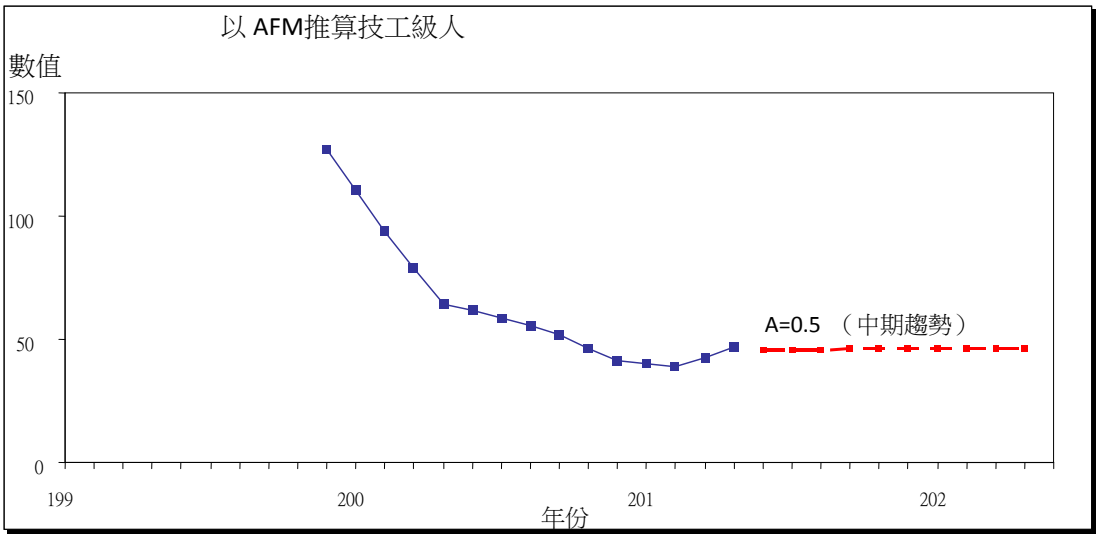
3.29　由1997年的人力調查開始，本會決定擴大調查範圍，在評估未來趨勢及人力需求時，將塑膠製造及貿易兩個類別合併為單一類別考慮。由於調查範圍改變，AFM不再適用，本會遂改為參考僱主對未來一年業界人力需求的預測，推算業內未來的人力需求。1997、1999、2001、2003及2005年的人力調查，均採用這方法推算未來的人力需求。

3.30　本會曾嘗試以「人力市場分析法」*[LMA]*推算塑膠業的人力發展趨勢，但經測試塑膠業相關的主要決定因素後，並未能建立有效的統計關係。因此，本會認為LMA並不適用於是次調查的人力推算。這是修訂調查範圍後進行的第九次調查，而AFM屬趨勢分析預測法，較僱主的一年預測法更為科學，本會因此決定，是次調查採用AFM進行人力推算。推算結果如下列圖表所示：

圖 3.C :　　以AFM 推算各技能等級的人力







3.31 為協助本會確定技師、技術員及技工的流失率（即因退休、移民或轉行等原因而離開本業的僱員比率），本會數年前曾進行一項關於「塑膠業技術僱員離職原因」的小規模郵遞式調查。經評估調查結果後，本會決定採用以下流失率推算人力：技師為5%，技術員及技工均為4%。

3.32 按照第3.30及3.31段所定，本會預計未來四年，為應付以上三個技能等級的人力增長及流失，業界平均每年需培訓的人數見表3.D：

表 3.D : 未來四年（2014至2017年）
平均每年訓練需求

技能等級	平均每年需求人數
技師	198 - 242
技術員	188 - 230
技工	14 -18

業內各主要職務的詳細訓練需求載於附錄5。

3.33 鑑於其他行業內部分僱員從事的工作亦與塑膠業密切相關，本會決定在是次人力調查報告中收錄這方面的人力資料。其中，金屬業訓練委員會、電子業及電訊業訓練委員會已在各自的人力調查中蒐集這些資料，有關僱員人數及這兩個訓練委員會建議平均每年需培訓的人數載於附錄6。

3.34 本會將於2015年進行另一次人力調查，蒐集塑膠業最新的人力資料，並檢討培訓需求。

人力供求分析

3.35 在技師級方面，業界平均每年需培訓額外224至274名具備機械／製造工程背景的僱員（不包括塑膠業的電子／電機工程師，但包括金屬業的製造／生產／工業工程師及電子業的製造／品質保證工程師）。

3.36 機械／製造／工業工程學科的預計畢業生人數（包括學士學位及高級文憑畢業生）摘要載於表3.E，數字乃根據本地大專院校及職業訓練局所提供的資料而得出。估計2014及2015年分別約有1 634及1 241名畢業生可勝任塑膠業及其他行業的技師級職務。然而，須注意有些僱主傾向聘請高級文憑畢業生擔任技術員級職務。此外，近年的高級文憑畢業生約有30%至40%選擇繼續升學，取得學士學位後才投身職場。因此，投身業界擔任技師級職務的實際畢業生人數，應較表3.E所列的數字為少。

表 3.E : 機械／製造／工業工程技師級課程畢業生人數

院校	所頒學銜	預計畢業生人數	
		2014	2015
本地大學	學位	1 084	925
	高級文憑	40	36
香港專業教育學院	高級文憑－機械工程	310	210
	高級文憑－機電工程	70	20
	高級文憑－產品設計工程	50	20
	高級文憑－產品測試	80	30
	總數	1 634	1 241

3.37 除了繼續進修或移居外地，上述畢業生可投身塑膠業以外多個行業，例如金屬、電子、電機及服務業等。要吸引具備適切才幹的畢業生投身塑膠業，本會建議僱主為這批年輕畢業生提供良好的聘用條件及就業前景，並安排他們參加相關的職內及職外培訓，藉以提升畢業生的技術知識及技能，並在機構內推動終身學習的風氣。

3.38 在技術員級方面，監督／管工通常由資深組長或技工晉升；電子／電機工程技術員及實驗室／塑料技術員職位，則會招聘其他學科的畢業生。計及金屬業所需的製造／工業工程技術員及電子業所需的製造／品質保證技術員，塑膠業及其他行業對具備機械／製造／工業工程背景技術員的需求，預計每年為209至256人。

3.39 機械／製造／工業工程學科技術員畢業生人數的供應量，是根據職業訓練局屬下青年學院提供的資料而定。預計畢業生人數見表3.F。2014及2015年可投身塑膠業及其他行業的技術員畢業生分別約有150及100人。

表3.F : 機械／製造／工業工程學科
技術員級課程畢業生人數

院校	所頒學銜	預計畢業生人數	
		2014	2015
青年學院	中專教育文憑 － 電腦輔助產品工程	60	30
	中專教育文憑 － 機械工程	90	70
	總數	150	100

3.40 與技師級畢業生的情況相若，技術員畢業生除可繼續進修外，亦可從事其他相關行業。本會籲請僱主提供良好的聘用條件、就業前景、持續培訓及增值機會，以吸引更多畢業生投身塑膠業。

3.41 在技工級方面，製模及工具技工、樣本／模型／生產原型製造工等職務須聘用修畢機械或有關技工課程的畢業生。計及金屬業及電子業所需的相關 技工，預計這些職務每年的人力需求為36至46人。

3.42 自2009/2010年度起，中三畢業生可報讀職業訓練局屬下青年學院開辦的「中專教育文憑」*[DVE]*課程。DVE為靈活的學分制課程，為學生日後就業或升學做好準備。學生只要完成相關的單元，累積所需學分，就可取得基本技工證書*[BCC]*、技術員基礎證書*[TFC]*或DVE資歷。持BCC資歷的學生可擔任塑膠業的技工職務，而持TFC者則可填補技術員職級的空缺。表3.G列出中三畢業生報讀有關機械／製造／工業工程DVE課程的人數。假設平均而言，選擇考取BCC學歷後離校就業的學生於一年內完成課程，2013及2014年獲取錄修讀DVE課程的部分學生，就可於2014及2015年加入塑膠業成為技工。與表3.D 推算的技工級平均每年訓練需求比較，本會留意到只要電腦輔助產品工程分流及機械工程分流的DVE學生有不少於10%選取BCC學歷，並投身塑膠業，則2014及2015年將有充足的技工供應。

表 3.G : DVE機械／製造／工業工程課程收生人數（中三畢業入讀）

院校	課程	收生人數	
		2013	2014
青年學院	中專教育文憑－ 電腦輔助產品工程	90	60
	中專教育文憑－ 機械工程	150	140
	總數	240	200

3.43 DVE課程 – 機械工程分流教授一般機械技術，部分畢業生會受僱於電機及機械／屋宇設備機構。本會鼓勵僱主聘用這些畢業生，並進一步提供在職訓練，使他們成為合資格技工。

第四章

建議

4.1 過去二十多年，塑膠業廠商將生產設施遷往或設於珠三角區，是業界一項最重大的發展。事實上，不單是塑膠業，珠三角亦已成為本港各行業廠商的生產基地。目前，本地公司正朝著產品開發與物流控制中心的方向發展，為內地廠房提供支援。除了集中處理市場推廣及財務工作，本地公司亦逐漸轉型為創新設計中心，一方面推出本身的品牌，另方面亦為海外客戶提供設計。塑膠業亦為其他相關行業的產品提供塑膠零件及元件，發揮重要作用。本業一直透過技術提升致力改進及開發新技術，這無疑亦大大促進其他相關行業的發展。本會認為，為應付業內的發展需要，僱主除了投資於先進科技（例如機械及電腦軟件），以便為全球市場開發及製造高增值的新產品外，亦需有足夠的幹練人力，才能維持業務進一步增長和發展。

每年取錄的受訓者人數

4.2 調查期間，本業共有16名受訓者，其中3名屬技師級、13名屬技術員級。

4.3 根據自1999年起收集所得的統計數據，以及採用「調節過濾法」得出的推算，本會建議塑膠業推行人力培訓計劃，規模如表4.A 所示：

表 4.A： 建議未年四年每年取錄受訓者人數
（2014年-2017年）

技能等級	建議每年取錄人數
技師	198 - 242
技術員	188 - 230
技工	14 - 18

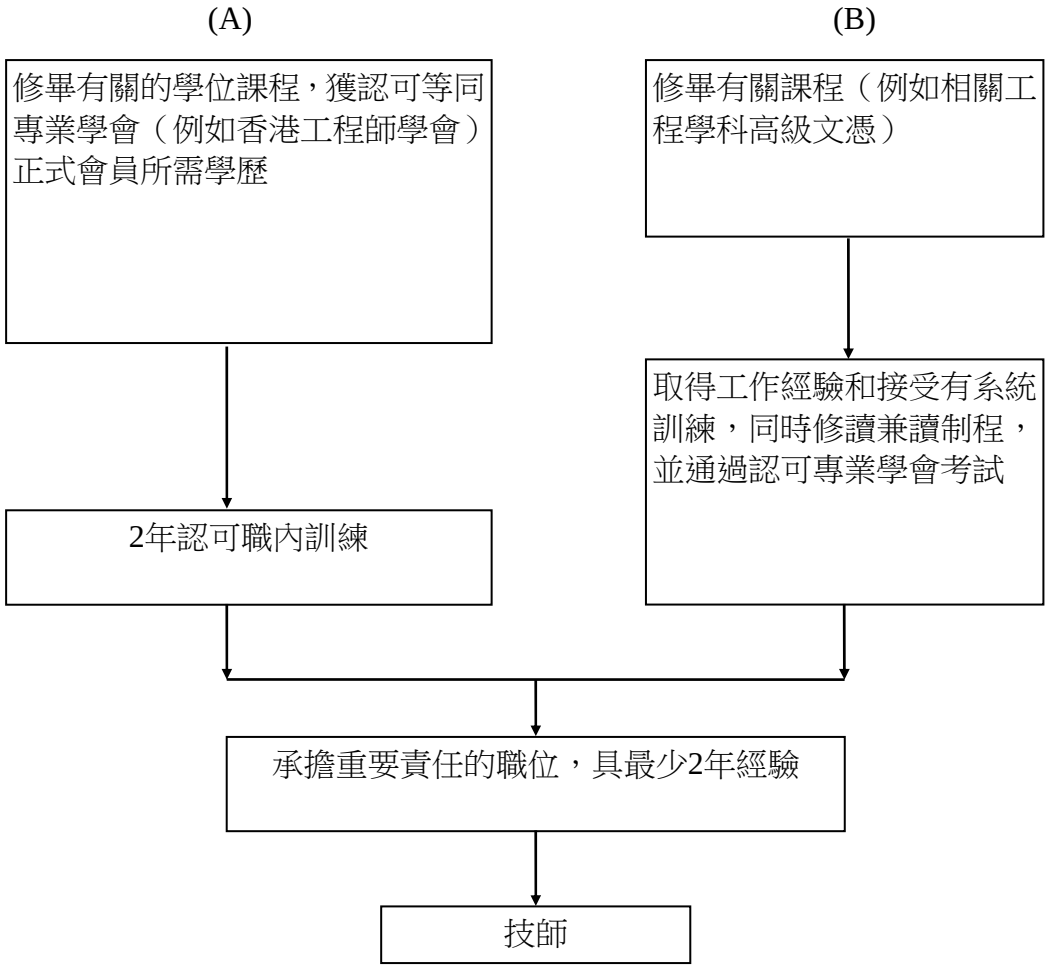
表4.A內各技能等級主要職務的細分數字見附錄5。

4.4 表4.A所列的每年平均受訓人數，分別約為現時技師、技術員及技工人數的5%、4.9% 及 3.4% ，僱主為機構進行人力策劃時可作為參考。

技師訓練

4.5 技師應具備專業學會正式會員所需的資格及經驗，能運用其知識及技能，推動實務發展工作，並有能力分析和解決各種技術問題。此外，技師須負責發展及應用工程原理，發揮原創思維和判斷力，經常留意本行的科技發展，運用現代管理技巧，以及督導和培訓下屬。

4.6 技師在改善管理及引進新科技方面，均擔當重要角色。本會建議循下列途徑訓練技師：



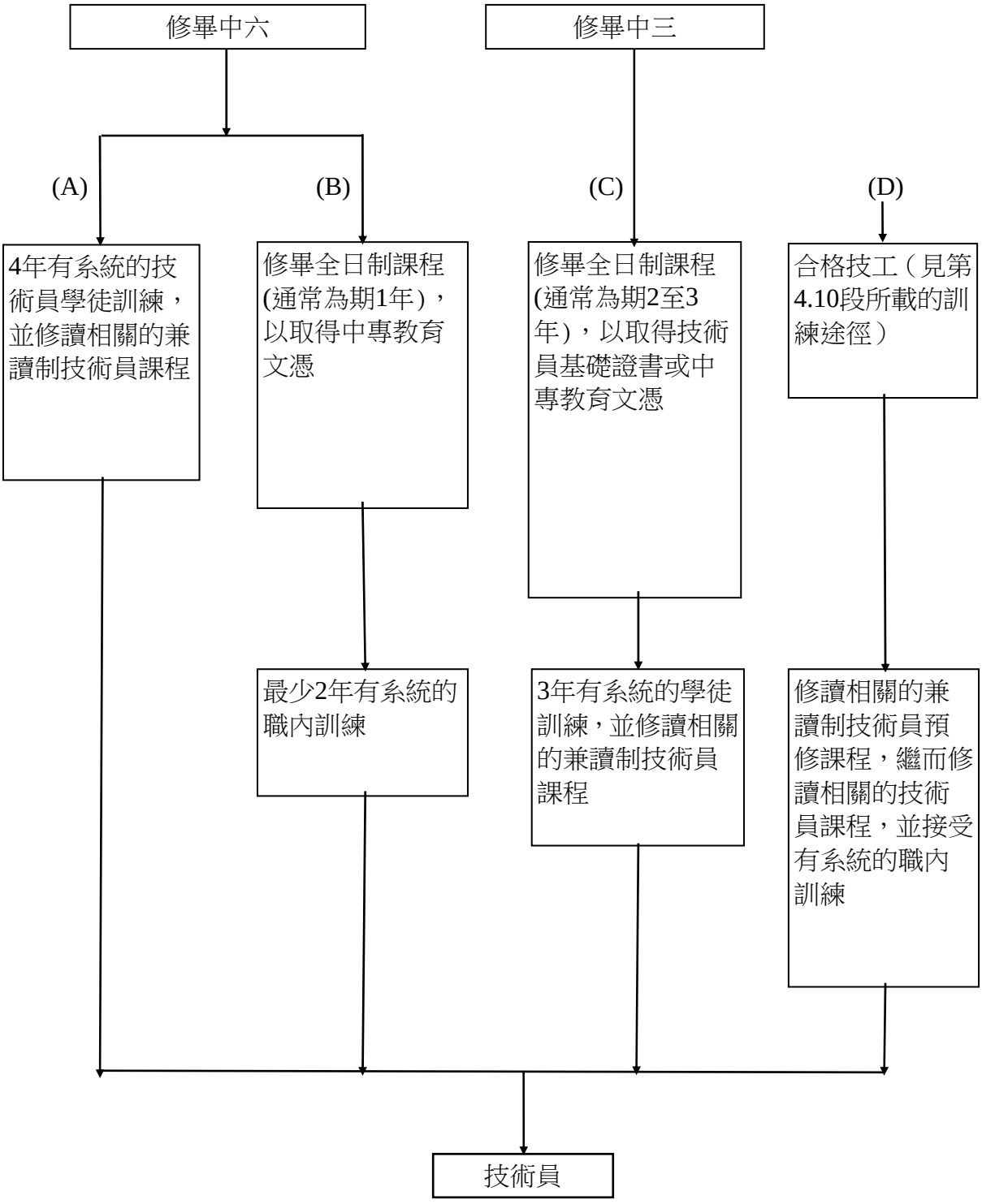
工科畢業生訓練計劃

4.7 工科畢業生訓練計劃由職業訓練局屬下技師訓練委員會負責推行，為工科畢業生提供更多有系統的實務訓練機會。訓練的內容符合香港工程師學會正式會員所需具備的資歷水平，參加者可獲為期18個月的資助。受訓者每月可透過僱主獲得津貼，作為部分薪金，而技師訓練委員會則負責監察訓練進度。此外，職業訓練局的技師訓練組亦提供免費的職位介紹服務，協助僱主招聘工科畢業生，同時亦幫助畢業生取得受訓機會。僱主如對各種有關工科畢業生的受訓事宜需要協助，該組亦可提供。本會籲請僱主參與該項計劃，並善用技師訓練組的服務。

技術員訓練

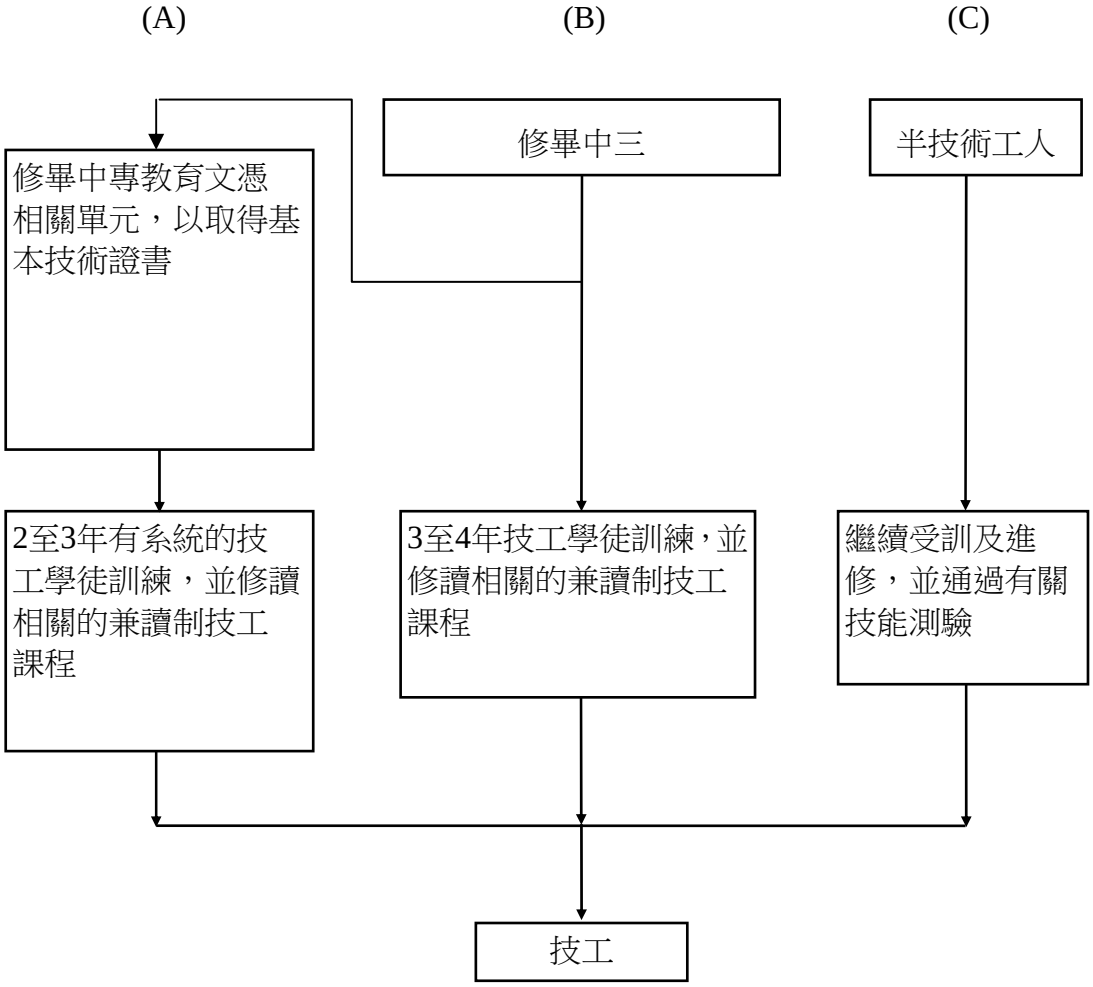
4.8 技術員應具備一定教育程度、實務技能和經驗，能夠在技師的督導下，運用已確立的技術和方法，完成技術性工作。訓練技術員一般可循下頁所列的四個途徑。

4.9 職業訓練局屬下的香港專業教育學院（IVE），於1999年成立，乃由科技學院與工業學院重組而成，開辦高級文憑、文憑及證書課程。此外，職業訓練局的中專教育文憑課程（DVE）也為中學離校生提供技術員級的培訓。IVE及卓越培訓發展中心（精密工程業）開辦的課程，其中不少均適合塑膠業的技術人員及學徒修讀，上課模式包括全日制、日間部分時間給假調訓制及夜間兼讀制。


修畢中六
修畢中三
(A)
(B)
(C)
(D)
4年有系統的技術員學徒訓練，並修讀相關的兼讀制技術員課程
修畢全日制課程(通常為期1年)，以取得中專教育文憑
修畢全日制課程(通常為期2至3年)，以取得技術員基礎證書或中專教育文憑
合格技工（見第4.10段所載的訓練途徑）
最少2年有系統的職內訓練
3年有系統的學徒訓練，並修讀相關的兼讀制技術員課程
修讀相關的兼讀制技術員預修課程，繼而修讀相關的技術員課程，並接受有系統的職內訓練
技術員

技工訓練

4.10 技工是指能夠廣泛應用本身技能以執行所屬行業職務的技術工人。除了實際技能，亦需具備相關的理論知識，以適應科技發展。訓練技工一般有三個途徑：



4.11 本會建議採用途徑（A），因為訓練期較短，而且基本技術證書的畢業生因已受過基本的技術訓練，於參加學徒訓練計劃後很快便能投入工作，亦較易適應業內的工作環境。

4.12 業內通常提升富經驗的注塑機操作工擔任「校機技工」一職；他們均修畢有關的注塑機調校技術短期課程，或透過多年工作經驗掌握到所需技術。另一方面，業內多招聘中六畢業生擔任「品質檢查工」，因他們透過職內訓練及進修相關的兼讀制課程，可掌握檢查塑膠產品及有關元件的專業知識和技能。

工業教育及訓練機構

4.13 本港幾間高等教育院校及香港生產力促進局，均有開辦多項與塑膠業有關的全日制、日間部分時間給假調訓制及夜間兼讀制訓練課程。同時，職業訓練局屬下香港專業教育學院和卓越培訓發展中心(精密工程業)，亦開辦多種類型的兼讀制增修課程。本會籲請僱主充分利用這些院校及機構的訓練設施，保送員工修讀有關課程，以提升他們的專業知識及技能。此外，這些院校及機構所舉辦的研討會／研習班，不但能協助僱主吸收科技新知，亦對技術人員有所裨益。

4.14 為應付塑膠業的發展需要，從業員必須不斷進修、終身學習。同樣重要的，是僱主認同僱員有這類培訓需要，並鼓勵僱員修讀增修／訓練課程、參加研習班或研討會，以學習先進科技。

職業訓練局屬下的卓越培訓發展中心

4.15 在發展培訓服務方面，本會亦向卓越培訓發展中心（精密工程業）提供建議。中心於2000年7月成立，由塑膠業訓練中心與精密工具製造訓練中心合併而成，設於職業訓練局九龍灣大樓內。中心與青年學院提供下列全日制課程，為本業培訓新血：

課程名稱	程度	訓練期
中專教育文憑課程-電腦輔助產品工程	技術員	1至3年

4.16 除上述全日制課程外，中心亦為從業員提供多項全日制、日間部分時間給假調訓制及夜間兼讀制訓練課程，培訓本地從業員配合本港知識型經濟的發展。課程內容包括不同範疇，如電腦數控機械加工技術；精密模具設計及製造；產品設計／發展；電腦輔助設計／製造／工程；產品／生產資料管理；產品測試／評估；品質管理；物料發展／篩選；流程設計／篩選；產品與工程策劃及統籌等。

4.17 為應付業內中小型企業的訓練需求，卓越培訓發展中心(精密工程業)繼續舉辦電腦輔助設計／製造／工程課程，協助中小型企業訓練技術人員熟習應用有關先進軟件。課程學員會分別在中心與受僱機構接受實務訓練。

4.18 本會籲請業內僱主全力支持各訓練中心的工作，僱用中心的學員為學徒或見習員，並保送屬下員工修讀相關的增修課程，以提升他們的工作技能。

職業訓練局的相關培訓服務

4.19 職業訓練局籌辦下列多項訓練計劃，協助僱主培訓人才：

(i) 法定的**學徒訓練計劃** － 為技術員及技工提供有系統的訓練，以應付業內需求；

(ii) **工科畢業生訓練計劃** － 協助工科學生及畢業生完成工程師所需的專業訓練；

(iii) 自願性質的**技能測驗及證書頒發制度** － 旨在確立及認可技術工人的水平。本會自2013年起開始舉辦認可塑膠技術員（產品設計）技能測驗；

(iv) **新科技培訓計劃** － 資助本地機構保送僱員學習新科技，資助金額最高可達訓練費用的50%。計劃涵蓋各類訓練模式，包括海外訓練課程或實習、本地訓練課程，以及專為個別機構而設的本地訓練課程／實習。

4.20 建議僱主可聯絡職業訓練局，協助設立訓練計劃和僱用受訓者。

於珠三角舉辦訓練課程

4.21 本港塑膠業的生產設施大部分設於珠三角，僱用的內地工人約400 000名，其中約有4 500名為工程師。此外，本地僱主亦派駐員工往內地廠房，每年外派大約900名技師和500名技術員在內地工作6個月以上（詳情見第2.10 及2.11 段）。這些數字顯示，在珠三角區工作的不論是本地員工或內地員工，都有極大的訓練需求。因此，卓越培訓發展中心(精密工程業)已提供訓練課程，特別是有關塑膠壓注模塑科技、電腦數控加工及電腦輔助設計／電腦輔助生產科技、塑料知識及工程繪圖標準的訓練，為港資企業服務；課程按成本收費，積極為港商提供支援，配合他們在內地的訓練需求。

備註

4.22 是次人力調查只覆蓋塑膠業內主要類別，詳情見本報告第1.6段所述調查範圍。調查報告內的人力數字，並不包括調查範圍以外的製造門類，例如汽車零件、鐘表、電機及電子、裝修物料等。本會明白，現今社會幾乎每一門工業均需採用塑膠材料；然而，礙於資源所限，調查只可覆蓋聘用最多塑膠業技術僱員的類別。

PLASTICS TRAINING BOARD

Membership
(As at 31 December 2013)

Chairman:

Mr CHEUNG Tat-choi, Stanley	nominated by a Plastic Product Trading Company

Members:

Mrs CHEUNG Augusta, BH	nominated by the Hong Kong Plastics Manufacturers Association Limited
Dr CHIN Kwai-sang	nominated by a Local University
Mr CHONG Chiu-ping, Dave	nominated by a Plastics Mould Manufacturing Company
Mr CHOW Hon-kong, John	nominated by a Small and Medium Enterprise (SME) Company
Dr CHUNG Sai-wing	nominated by the Hong Kong and Kowloon Plastic Products Merchants United Association Limited
Prof LAM Chuen-chun, David	nominated by a Local University
Mr LEE Yuk-pui, Leton	nominated by the Hong Kong Mould and Die Council
Mr LEUNG Tin-fu	Ad Personam
Mr LOUIE Chi-hang, Derek	nominated by the Hong Kong Productivity Council
Mr NG Ka-ho, Andy	nominated by the Chiu Chau Plastic Manufacturers Association Company Limited
Mr NG Ping-hong	nominated by the Hong Kong and Kowloon Rubber & Plastic Workers General Union
Mr SUN Yung-liang, Warren	nominated by the Chinese Manufacturers' Association of Hong Kong

Mr SUN Yung-tson, Eric	nominated by the Federation of Hong Kong Industries
Ms WU Mi-tak, Justina	nominated by a Plastics Machinery Manufacturing Company
Mr LAU Ping-cheung	representative of the Commissioner for Labour
Mr CHONG Vai-keong, Steven	representative of the Director-General of Trade and Industry
Dr FUNG Kin-keung, Michael	representative of the Executive Director, Vocational Training Council

In-attendance:

Mr HO Ching-tak, Joe	representative of the Hong Kong Institute of Vocational Education
Mr LEUNG Kim-ki, Tommy	Manager-In-Charge, Pro-Act Training and Development Centre (Precision Engineering)

Secretary:

Mr LAM Chi-piu, Angus	Vocational Training Council

附錄 1

塑膠業訓練委員會

委員名單
(2013 年 12 月 31 日)

主席：

張達材先生	(某塑膠產品貿易公司提名)

委員：

張崔賢愛女士, BH	(香港塑膠業廠商會提名)
錢桂生博士	(本地某大學提名)
莊超平先生	(某塑膠模具製造公司提名)
周漢光先生	(某中小型企業公司提名
鍾細榮博士	(港九塑膠製造商聯合會提名)
林銓振教授	(本地某大學提名)
李煜培先生	(香港模具協會提名)
梁天富先生	(獨立人士)
雷致行先生	(香港生產力促進局提名)
吳家豪先生	(潮僑塑膠廠商會有限公司提名)
吳炳康先生	(港九樹膠塑膠業總工會提名)
孫榮良先生	(香港中華廠商聯合會提名)
孫榮聰先生	(香港工業總會提名)
胡美得女士	(某塑膠機械製造公司提名)
劉炳昌先生	(勞工處處長代表)
鍾偉強先生	(工業貿易署署長代表)

馮建強博士	(職業訓練局執行幹事代表)

列席者：

何正德先生	(香港專業教育學院代表)
梁劍奇先生	(卓越培訓發展中心（精密工程業）中心主管)

秘書：

林之彪先生	(職業訓練局)

PLASTICS TRAINING BOARD

Terms of Reference

1. To determine the manpower demand of the industry, including the collection and analysis of relevant manpower and student/trainee statistics and information on socio-economic, technological and labour market developments.

2. To assess and review whether the manpower supply for the industry matches with the manpower demand.

3. To recommend to the Vocational Training Council the development of vocational education and training facilities to meet the assessed manpower demand.

4. To advise the Hong Kong Institute of Vocational Education (IVE) and Pro-Act Training & Development Centres on the direction and strategic development of their programmes in the relevant disciplines.

5. To advise on the course planning, curriculum development and quality assurance systems of IVE and Pro-Act Training & Development Centres.

6. To prescribe job specifications for the principal jobs in the industry defining the skills, knowledge and training required.

7. To advise on training programmes for the principal jobs in the industry specifying the time a trainee needs to spend on each skill element.

8. To tender advice in respect of skill assessments, trade tests and certification for in-service workers, apprentices and trainees, for the purpose of ascertaining that the specified skill standards have been attained.

9. To advise on the conduct of skill competitions in key trades in the industry for the promotion of vocational education and training as well as participation in international competitions.

10. To liaise with relevant bodies, including employers, employers' associations, trade unions, professional institutions, training and educational institutions and government departments, on matters pertaining to the development and promotion of vocational education and training in the industry.

11. To organise seminars/conferences/symposia on vocational education and training for the industry.

12. To advise on the publicity relating to the activities of the Training Board and relevant vocational education and training programmes of VTC.

13. To submit to the Council an annual report on the Training Board's work and its recommendations on the strategies for programmes in the relevant disciplines.

14. To undertake any other functions delegated by the Council in accordance with Section 7 of the Vocational Training Council Ordinance.

附錄 2

塑膠業訓練委員會

職權範圍

1. 確定業內的人力需求，包括收集、分析相關的人力和學生／學員統計數字，以及關於社會經濟、科技及人力市場發展的資料。

2. 評估及研究本業的人力供求是否平衡。

3. 就發展業內專業教育及訓練設施應付人力需求，向職業訓練局提供意見。

4. 就相關學科的課程發展方向及策略，向香港專業教育學院(IVE)、卓越培訓發展中心提出建議。

5. 就 IVE、卓越培訓發展中心的課程策劃、課程發展及質素保證制度提供意見。

6. 擬訂本業主要職務的工作範圍，界定所需的技能、知識及訓練。

7. 建議本業主要職務訓練方案，訂定每種技能所需的訓練期。

8. 對技術評估、技能測驗及證書頒發制度提供意見，以確定從業員、學徒及見習員的技能水平。

9. 就本業主要行業舉辦技能比賽提供意見，以推廣專業教育與訓練和派員參加國際賽事。

10. 就本業專業教育及訓練的發展與推廣事宜，與僱主、僱主聯會、工會、專業團體、訓練及教育機構、政府部門等聯絡。

11. 為本業舉辦有關專業教育及訓練的研討會與會議。

12. 就業內訓練委員會工作、有關職訓局專業教育及訓練課程的宣傳事宜提供意見。

13. 每年向局方呈交訓練委員會工作報告，以及相關學科課程發展策略建議。

14. 根據《職業訓練局條例》第 7 條，負責局方所委派的其他工作。

CONFIDENTIAL WHEN ENTERED WITH DATA	填入數據後即成 **機密文件**

VOCATIONAL TRAINING COUNCIL
職 業 訓 練 局

2013 MANPOWER SURVEY OF THE PLASTICS INDUSTRY
塑膠業 2013 年人力調查

QUESTIONNAIRE
調 查 表

PLEASE READ THE EXPLANATORY NOTES BEFORE COMPLETING THIS QUESTIONNAIRE
填 表 前，請 參 閱 附 註

For Official Use Only:
此欄毋須填寫

Rec. Type	Survey Code	Industry Code	Establishment No.	Enumerator's No.	Editor's No.	Check Digit	No. of Employees Covered by the Questionnaire
1	0 8						
1	2 3	4 5 6 7 8 9	10 11 12 13 14 15	16 17	18 19	20 21 22	23 24 25 26 27

NAME OF ESTABLISHMENT: _____
機構名稱

ADDRESS: _____
地 址

TYPE OF BUSINESS/
TYPE OF PRODUCTS: _____
業務性質／產品

TOTAL NO. OF EMPLOYEES: _____
僱員總人數

NAME OF PERSON TO CONTACT: _____ (28 – 47)
聯絡人姓名

POSITION: _____
職 位

TEL. NO. : _____ (48 – 55) - _____ (56 – 63)
電 話

FAX NO.: _____
圖文傳真

E-MAIL: _____ (64 – 98)
電 郵

Part I 第一部份

	(A) Principal Job 主要職務			(B) Average Monthly Income 每月平均收入	(C) No. of Employees at Date of Survey (Excluding Trainees#) 現有僱員人數（受訓者# 除外）	(D) No. of Vacancies at Date of Survey (Excluding Trainees#) 現有空缺額（受訓者# 除外）	(E) Forecast of No. Employed 12 Months from Now (Excluding Trainees#) 預計12個月後僱員人數（受訓者# 除外）	(F) No. of Trainees# at Date of Survey 現有受訓者# 人數
	Job Title 職稱 (Refer to Appendix C) (參考附錄C)	Rec. Type	Job Code 職稱編號 (Refer to Appendix C) (參考附錄C)	Income Code* 收入編號				
			8 - 10	11	12 - 15	16 - 18	19 - 22	23 - 25
1		2						
2		2						
3		2						
4		2						
5		2						
6		2						
7		2						
8		2						
9		2						
10		2						
11		2						
12		2						
13		2						
14		2						
15		2						
16		2						
17		2						
18		2						
19		2						
20		2						

* Enter in column (B) the employee's average monthly income range according to the following codes:
請將僱員每月平均收入幅度按照下列類別編號填入 (B) 欄內：

Income Code 收入編號	Average Monthly Income Range 每月平均收入幅度
1	Under $7,501 以下
2	$7,501 - $10,000
3	$10,001 - $15,000
4	$15,001 - $20,000
5	$20,001 - $25,000
6	Over $25,000 以上

The term 'trainees' includes all trainees receiving any form of training and apprentices under a contract of apprenticeship.

「受訓者」包括正在接受各種訓練的人士，以及簽有學徒合約的登記學徒。

Reference of Job Code and Job Title:

TECHNOLOGIST LEVEL 技師級

101	Product Engineer (Plastics)	產品工程師（塑膠業）
102	Manufacturing/Industrial Engineer	製造／工業工程師
103	CAD, CAM or CAE Engineer/ Tooling Engineer	電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／工具工模工程師
104	Project Engineer	策劃及統籌工程師
105	Costing Engineer	成本工程師
106	Q.C./Q.A. Engineer	品質管制／品質保證工程師
107	Electronics/Electrical Engineer	電子／電機工程師
108	Technical Services Engineer	技術支援工程師
109	Moulding Engineer	模塑工程師

TECHNICIAN LEVEL 技術員級

201	Supervisor/Foreman	監督／管工
202	Mechanical Engineering Technician	機械工程技術員
203	Electronics/Electrical Engineering Technician	電子／電機工程技術員
204	Q.C./Q.A. Technician	品質管制／品質保證技術員
205	Product/Packaging Development Technician	產品／包裝發展技術員
206	Laboratory/Materials Technician	實驗室／塑料技術員
207	Manufacturing/Industrial Engineering Technician	製造／工業工程技術員
208	Tooling Technician	工具工模技術員
209	CAD or CAM Technician (Tooling)	電腦輔助設計或電腦輔助生產技術員(工模)
210	Production Planner	生產策劃員

CRAFTSMAN LEVEL 技工級

301	Leader	組長
302	Electrician	電器技工
303	Mould/ Die and Tool Maker	製模及工具技工
304	Pattern/Model/Prototype Maker	樣本／模型／生產原型製造工
305	Plastics Machine Setter	調機技工
306	Sizing (Plastics/Fabric)	裁床技工（塑膠／布料）
307	Quality Control Inspector	品質檢查工

OPERATIVE LEVEL 操作工級

401	Blow Moulding Machine Operator	吹氣模塑機工
402	Film Blowing Machine Operator	吹膜機工
403	Injection Moulding Machine Operator	注塑機工
404	Vacuum Forming Machine Operator	真空吸塑機工
405	Other Plastics Processing Machine Operator	其他塑膠加工機操作工
406	Power Press Operator	動力沖壓機操作工
407	Printing Operator	印刷工
408	Assembler	裝配工
409	Seamstress/Sewing Machine Operator	縫工

GENERAL WORKER (UNSKILLED) LEVEL 雜工（非技工）級

501	General Worker	雜工

Note : If additional lines are necessary, please tick here ☐ and enter on supplementary sheet(s).
附註： 如此頁已填滿，請先將（✓）號填入此 ☐ 內，然後在附頁繼續填寫。

Part II 第二部份

Internal Promotion
內部晉升

Q1. Please fill in the number of internal promotion in the **past 12 months**
請填寫**過去12個月內**，內部晉升的人數

Rec. Type	From Technician to Technologist Level 由技術員級晉升至技師級	From Craftsman to Technician Level 由技工級晉升至技術員級	From Others to Craftsman Level 由其他職位晉升至技工級
3			
1	8 9 10	11 12 13	14 15 16

Technical Staff Outside Hong Kong
在香港以外任職的技術人員

Q2. Please enter below the number of technologists, technicians and craftsmen who had worked for **more than 6 months** outside Hong Kong in the **past 12 months**
請填寫**過去12個月內**，在香港以外任職**超過6個月**的技師、技術員及技工人數

Number of Technologists 技師人數	Number of Technicians 技術員人數	Number of Craftsmen 技工人數
17 18 19	20 21 22	23 24 25

Workers Working in Operations in Guangdong Province under Your Company's Control
由貴公司管理在廣東省機構工作的員工

Q3. Please enter below the total number of **Mainland workers** (excluding Hong Kong Residents) working in operations in Guangdong Province which manufacture products for your company and are under your company's control
請填寫在廣東省機構為貴公司生產製成品，並由貴公司所管理的**內地員工**總數（不包括香港人）

26 27 28 29 30

Q4. Please enter below the number of **Mainland engineers** (excluding Hong Kong Residents) working in operations in Guangdong Province included in (Q3)
請填寫在廣東省機構工作，包括在 (Q3) 項內的**內地工程師**人數（不包括香港人）

31 32 33

Q5. Please enter below the forecast of **Mainland engineers** (excluding Hong Kong Residents) working in operations in Guangdong Province **12 Months from Now**
請填寫預計**12個月後**在廣東省機構工作的**內地工程師**人數（不包括香港人）

34 35 36

Operations Relating to Plastics Industry Set Up in China Other Than Guangdong Province
除廣東省外，在中國其他省份成立與塑膠業有關的營運機構

Q6. Other than Guangdong Province, has your company set up any other operations in China relating to plastics industry?
除廣東省外，貴公司有否在中國其他省份成立任何與塑膠業有關的營運機構？

Yes 有	No 否
37	38

(Please tick as appropriate)
(請在適當的格內填上✓號)

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Q1	Q2	Q3 - Q5	Q6
39 40 41	42 43 44	45 46 47	48

49	50

Q7. Education and Training an Employee Should Have
僱員宜有的教育及訓練

Technologist 技師			Technician 技術員			Craftsman 技工		
Education 教育	Training Mode 訓練方式	Training Period 訓練時間	Education 教育	Training Mode 訓練方式	Training Period 訓練時間	Education 教育	Training Mode 訓練方式	Training Period 訓練時間
51	52	53	54	55	56	57	58	59

Please enter in the boxes the education and training an employee should have according to the following codes:
請將僱員宜有的教育及訓練按照下列類別編號填入格內：

Code 編號	Education 教育
1	University Degree or above 大學學位或以上
2	Associate Degree 副學位
3	Higher Diploma 高級文憑
4	Diploma 文憑
5	Higher Certificate 高級證書
6	Craft Certificate 技工證書
7	Secondary 5 - Secondary 7 中五 - 中七
8	Secondary 4 or below 中四或以下

Code 編號	Training Mode 訓練方式
1	Graduate traineeship 工科畢業生訓練
2	On-the-job training 在職訓練
3	Apprenticeship 學徒訓練

Code 編號	Training Period 訓練時間
1	4 years or above 4年或以上
2	3 to less than 4 years 3年至4年以下
3	2 to less than 3 years 2年至3年以下
4	1 to less than 2 years 1年至2年以下
5	6 months to less than 1 year 6個月至1年以下
6	Below 6 months 6個月以下

Future Development of Your Company
貴公司未來的發展

Q8. In the coming 3 years, will your company transform or upgrade your business? (Please tick as appropriate)
貴公司會否在未來3年內轉型或升級業務？(請在適當的格內填上✓號)

Yes 會 ☐ 60 — No (Please go to Q10) 否 (請跳答第10題) ☐ 61

Q9. If Yes to Q8, what will be the direction of transformation or upgrading of your company? (May tick more than one option)
如Q8答會，貴公司轉型或升級的方向是如何？(可選多於一項)

(a) Origin Equipment Manufacture 原設備製造 ☐ 62
(b) Origin Design Manufacture 原設計製造 ☐ 63
(c) Origin Brand Manufacture 原品牌製造 ☐ 64
(d) Others (Please specify) 其他 (請註明)

_____

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Q8 77 ☐ Q9 78 ☐ 79 ☐ 80 ☐
81 ☐ 82 ☐ 83 ☐

92

Q10. In the coming 3 years, will your company relocate your manufacturing base or factory? (Please tick as appropriate)
貴公司在未來3年內會否搬遷生產基地或廠房？(請在適當的格內填上✓號)

Yes 會 ☐ 65 — No 否 ☐ 66 — Not Applicable 不適用 ☐ 67

(If choose "No" or "Not Applicable", please go to Q12)
(如選擇"否"或"不適用"，請跳答第12題)

Q11. If Yes to Q10, where will your manufacturing base or factory be relocated to? (May tick more than one option)
如Q10答會，貴公司的生產基地或廠房將會搬遷往哪裏？(可選多於一項)

(a) The Pearl River Delta, Mainland China 中國大陸珠三角地區 ☐ 68
(b) Other Regions of Mainland China (other than the Pearl River Delta) 中國大陸其他地區 (珠三角地區以外) ☐ 69
(c) Southeast Asian Countries 東南亞國家 ☐ 70
(d) Hong Kong 香港 ☐ 71
(e) Others (Please specify) 其他 (請註明)

_____

Q10 84 ☐ Q11 85 ☐ 86 ☐ 87 ☐ 88 ☐
89 ☐ 90 ☐ 91 ☐

Q12. In the coming 3 years, will your company develop new markets? (Please tick as appropriate)
貴公司在未來3年內會否拓展新市場？(請在適當的格內填上✓號)

Yes 會 ☐ 72 — No (End of questionnaire) 否 (問卷完) ☐ 73

Q13. If Yes to Q12, where will be the new markets to be developed by your company? (May tick more than one option)
如Q12答會，貴公司將會拓展的新市場在哪裏？(可選多於一項)

(a) Mainland China 中國大陸 ☐ 74
(b) BRIS (Brazil, Russia, India & South Africa) 金磚國家 (巴西、俄羅斯、印度和南非) ☐ 75
(c) Europe & America 歐美國家 ☐ 76
(d) Others (Please specify) 其他 (請註明)

_____

_____

Q12 92 ☐ Q13 93 ☐ 94 ☐ 95 ☐
96 ☐ 97 ☐ 98 ☐

End of questionnaire. Thank you for your co-operation.
問卷完，多謝合作。

Appendix IIIB
附 錄 3B

The 2013 Manpower Survey of the Plastics Industry
塑 膠 業 2 0 1 3 年 人 力 調 查

Explanatory Notes
附 註

1. Please ignore the numbers in the row immediately beneath the boxes. They are purely for data processing.
每 個 方 格 下 的 編 號 只 供 資 料 處 理 之 用 ， 請 毋 須 理 會 。

2. Before completing the questionnaire, please read carefully the job titles and job descriptions in Appendix C.
填 寫 調 查 表 前 ， 請 參 閱 附 錄 C 所 列 的 職 稱 與 工 作 說 明 。

3. Please insert a zero (0) for any column not applicable to your establishment.
請 在 貴 機 構 不 適 用 的 各 欄 內 填 入 (0) 符 號 。

4. Please fill in information as accurate as possible because the information collected from this survey is vital for determining the manpower requirements of the industry in order that the Plastics Industry Training Board can make meaningful recommendations to Government on how to meet training needs.
請 填 入 準 確 的 資 料 ， 因 有 關 資 料 對 於 確 定 本 業 的 人 力 需 求 極 為 重 要 ， 而 塑 膠 業 訓 練 委 員 會 亦 將 以 此 為 根 據 ， 向 政 府 建 議 如 何 應 付 業 內 的 訓 練 需 求 。

Part I
第一部份

5. Job Titles - Column “A”
職 稱 － “ A ” 欄

   (a) Those job titles together with their appropriate codes of the principal jobs in the Plastics Industry have been printed under the table. Please refer to the job descriptions in Appendix C, and fill information of the columns “B” to “F” for those jobs applicable to your establishment.
   塑 膠 業 主 要 職 務 的 職 稱 及 其 職 位 編 號 已 預 印 在 表 下 。 請 參 閱 附 錄 C 內 的 工 作 說 明 ， 將 適 用 於 貴 機 構 的 職 務 的 有 關 資 料 ， 填 入 “B”至 “F”各 欄 內 。

(b) Please add in column "A" titles of any technical jobs not mentioned in Appendix C, and briefly describe them and indicate their skill levels.
如貴機構另有技術性職稱未載於附錄C內，請一併填入"A"欄內，並扼要說明其工作性質及技能等級。

(c) Please classify an employee according to his/her main duty irrespective of any additional secondary duties he/she may be required to perform, e.g. a craftsman, who works mainly as a mould and die maker but is also required to perform the work of a tool and die maker occasionally, should be classified as a mould and die maker and not as a tool and die maker.
請根據僱員的主要職務分類，而不以其兼任的其他職務分類。例如：某技工的主要職務為製模技工，但間中亦須擔任為工具及五金工模工，則應歸類為製模技工而非工具及五金工模工。

6. Average Monthly Income - Column "B"
僱員每月平均收入－"B"欄

Please enter into this column the average monthly income range code during the past 12 months for employees under each type of jobs. Monthly income should include basic wages, regular overtime pay, cost of living allowance, meal allowance, year end bonus etc., if any. If you have more than one employee doing the same job, please enter the average figure.
請在"B"欄填入每類工作的僱員過去12個月，每月平均收入幅度編號；這包括底薪、定期超時工作工資、生活津貼、膳食津貼、年終花紅等。若從事同類工作的僱員多於一名，則請取其平均收入。

7. Number of Employees at Date of Survey (Excluding Trainees) - Column "C"
現有僱員人數（受訓者除外）－"C"欄

Please fill in the total number of employees (excluding trainees) for each type of jobs in your establishment.
請填寫貴機構現有每類工作的僱員人數（受訓者除外）。

8. Number of Vacancies at Date of Survey (Excluding Trainees) - Column "D"
現有空缺額（受訓者除外）－"D"欄

Please fill in the number of existing vacancies (excluding those for trainees) for each type of jobs in your establishment. "Existing Vacancies" refer to those unfilled, immediately available job openings for which the establishment is actively trying to recruit personnel at date of survey.
請填入貴機構現有的每類工作的空缺數目（受訓者空缺數目除外）。「現有空缺額」是指該職位仍懸空，須立刻填補而現正積極招聘人員填補。

9. Forecast of Number Employed 12 Months from Now (Excluding Trainees) - Column "E"
預計12個月後僱員人數（受訓者除外）－"E"欄

The forecast of number employed means the likely number of employees (excluding trainees) for each type of jobs you will be employing in your establishment 12 months from now.
預計僱員人數指貴機構12個月後所僱用每類工作的僱員人數（受訓者除外）。

10. Number of Trainees at Date of Survey - Column "F"
現有受訓者人數－"F"欄

Please fill in the number of employees undergoing training for each type of jobs in your establishment.
請填寫貴機構正在接受訓練的每類工作的僱員人數。

11. Example
例子

To facilitate proper completion, an example is given after this explanatory note for your reference.
為協助閣下填表，現將例子夾附於本附註後，以供參考。

Part II
第二部份

12. Internal Promotion
內部晉升

An internal promotion is the promotion of an employee to a higher level job by virtue of his/her performance or abilities. In Q1, please fill in the number of internal promotions from "Technician to Technologist Level", from "Craftsman to Technician Level" and from "Others to Craftsman Level" in the past 12 months in the respective columns.
內部晉升是指僱員因工作表現良好或具所需才能而獲提升至較高職位。請於Q1所屬欄內填寫過去12個月內，機構內部由技術員級晉升至技師級，由技工級晉升至技術員級，以及由其他職位晉升至技工級的人數。

13. Technical Staff Outside Hong Kong
在香港以外任職的技術人員

In Q2, please enter the number of technologists, technicians and craftsmen who had worked for more than 6 months outside Hong Kong in the past 12 months.
請在Q2填寫過去12個月內，在香港以外任職超過6個月的技師、技術員及技工人數。

14. Workers Working in Operations in Guangdong Province under Your Company's Control[#]
由貴公司管理在廣東省機構[#]工作的員工

Q3 Please enter the total number of Mainland workers (excluding Hong Kong residents) working in operations in Guangdong Province which manufacture products for your company and are under your company's control.[#] All Mainland workers involved in engineering, management, clerical and production work in such operations should be included (but workers seconded from Hong Kong should be excluded). Please disregard the name or ownership of such operations.

Q3 請填寫在廣東省機構為貴公司生產製成品，並由貴公司所管理的內地員工總數(不包括香港人)。內地員工總數包括工程人員、管理人員、文職人員及生產人員（但不包括派往內地工作的香港人）。請毋須理會這些機構的名稱或擁有權。

[#] The meaning of 'Operations in Guangdong Province under Your Company's Control' refers to any operations in Guangdong which satisfy the following conditions:
「由貴公司所管理在廣東省的機構」指屬於下列情況的當地機構：

(1) there are staff in your company posted to the Guangdong operations to manage the activities on a part-time or full-time basis; or/and
貴公司有派僱員長期或短期在該機構工作；或／及

(2) your company/top management of your company is involved in making important management decisions concerning the Guangdong operations.
貴公司或貴公司的管理層有參與該機構的重要管理決策。

Q4 Please enter the total number of Mainland engineers (excluding Hong Kong residents) working in operations in Guangdong Province included in Q3. Mainland managers responsible for technical work should be included as engineers.

Q4 請填寫在廣東省機構工作，包括在Q3內的內地工程師人數(不包括香港人)。負責技術工作的內地經理亦作內地工程師計算。

Q5 Please enter the forecast number of Mainland engineers (excluding Hong Kong residents) likely to be working in the operations in Guangdong Province 12 months from now.
Q5 請填寫預計12個月後在廣東省機構工作的內地工程師人數(不包括香港人)。

15. Operations Relating to Plastics Industry Set Up in China Other than Guangdong Province
除廣東省外，在中國其他省份成立與塑膠業有關的營運機構

In Q6, please indicate whether your company has set up any other operations relating to plastics industry in China other than the Guangdong Province.
請在Q6表明貴公司除廣東省外，有否在中國其他省份成立任何與塑膠業有關的營運機構。

16. Education and Training an Employee Should Have
僱員宜有的教育及訓練

In Q7, please enter in the boxes your view on the education and training which an employee in each of the three job levels (i.e. technologist level, technician level and craftsman level) should have if he/she were to carry out his/her work competently according to the codes on the right column of the questionnaire.
請在Q7格內填寫貴機構的意見：在技師級、技術員級及技工級的僱員宜具備的教育程度及訓練方式，才能勝任其工作。請參閱問卷右欄的類別編號。

17. Transformation / Upgrading
轉型/升級

Q8 Please indicate whether your company will transform or upgrade your business in the coming 3 years.
Q8 請表明貴公司會否在未來3年內轉型或升級業務。

Q9 If Yes to Q8, please enter in the boxes or specify the direction of transformation or upgrading of your company.
Q9 如Q8答會，請填寫貴公司轉型或升級的方向。

18. Relocation of Manufacturing Base / Factory
生產基地/廠房搬遷

Q10 Please indicate whether your company will relocate your manufacturing base / factory in the coming 3 years.
Q10 請表明貴公司會否在未來3年內搬遷生產基地或廠房。

Q11 If Yes to Q10, please enter in the boxes or specify the place(s) to where the manufacturing base / factory of your company will be relocated.
Q11 如 Q10 答 會 ， 請 填 寫 貴 公 司 生 產 基 地 或 廠 房 將 會 搬 遷 往 的 地 方 。

19. Development of New Market
新 市 場 拓 展

Q12 Please indicate whether your company will develop new markets in the coming 3 years.
Q12 請 表 明 貴 公 司 會 否 在 未 來 3 年 內 拓 展 新 市 場 。

Q13 If Yes to Q12, please enter in the boxes or specify the new market(s) which will be developed by your company.
Q13 如 Q12 答 會 ， 請 填 寫 貴 公 司 將 會 拓 展 新 市 場 的 地 區 。

EXAMPLE
例子

Part I 第一部份

	(A) Principal Job 主要職務			(B) Average Monthly Income 每月平均收入	(C) No. of Employees at Date of Survey (Excluding Trainees#) 現有僱員人數（受訓者#除外）	(D) No. of Vacancies at Date of Survey (Excluding Trainees#) 現有空缺額（受訓者#除外）	(E) Forecast of No. Employed 12 Months from Now (Excluding Trainees#) 預計12個月後僱員人數（受訓者#除外）	(F) No. of Trainees# at Date of Survey 現有受訓者#人數
	Job Title 職稱 (Refer to Appendix C) (參考附錄C)	Rec. Type	Job Code 職稱編號 (Refer to Appendix C) (參考附錄C)	Income Code* 收入編號				
			8 - 10	11	12 - 15	16 - 18	19 - 22	23 - 25
1	**Project Engineer**	**2**	**1 0 4**	**6**	**1 2**	**1**	**1 4**	**1**
2	**Manufacturing/Industrial Engineering Technician**	**2**	**2 0 7**	**5**	**8**	**0**	**9**	**0**
3	**Mould and Die Maker**	**2**	**3 0 3**	**3**	**4**	**0**	**4**	**0**
4		2						
5		2						
6		2						
7		2						
8		2						
9		2						
10		2						

* Enter in column (B) the employee's average monthly income range according to the following codes:
請將僱員每月平均收入幅度按照下列類別編號填入 (B) 欄內：

Income Code 收入編號	Average Monthly Income Range 每月平均收入幅度
1	Under $7,501 以下
2	$7,501 - $10,000
3	$10,001 - $15,000
4	$15,001 - $20,000
5	$20,001 - $25,000
6	Over $25,000 以上

The term 'trainees' includes all trainees receiving any form of training and apprentices under a contract of apprenticeship.

「受訓者」包括正在接受各種訓練的人士，以及簽有學徒合約的登記學徒。

Job Descriptions for Principal Jobs in the Plastics Industry
塑 膠 業 主 要 職 務 工 作 說 明

Job Code 職 稱 編 號	Principal Job Title 主 要 職 稱	Job Description 工 作 說 明
TECHNOLOGIST LEVEL 技 師 級		
101	Product Engineer (Plastics) 產 品 工 程 師 （ 塑 膠 業 ）	Originates and directs the design, modification and development of plastics products, harmonising technical, aesthetic and economic features to satisfy client specifications. 擬 訂 及 指 導 塑 膠 產 品 的 設 計 、 修 改 及 發 展 等 工 作 ， 以 符 合 顧 客 在 技 術 、 美 觀 及 經 濟 等 方 面 的 要 求 。
102	Manufacturing/ Industrial Engineer 製 造 ／ 工 業 工 程 師	Plans and directs programmes of production including production processes, production planning and control, plant layout and maintenance, assembly tooling design and fabrication, work measurement and utilisation of resources to ensure optimum production efficiency and maintenance of specified quality standards. 策 劃 及 指 導 生 產 計 劃 ， 包 括 生 產 過 程 、 生 產 策 劃 及 管 制 、 廠 房 佈 置 及 維 修 、 裝 配 工 具 設 計 及 製 造 、 工 作 研 究 及 資 源 的 利 用 ， 以 發 揮 最 高 生 產 效 率 及 保 持 品 質 達 到 指 定 的 標 準 。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNOLOGIST LEVEL (Continued) 技師級（續）		
103	CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／工具工模工程師	Plans and uses CAD, CAM or CAE facilities to design and manufacture moulds and dies for production of plastics products and related components. Studies, designs, advises and prepares cost estimates on tools, jigs and fixtures, moulds and dies for manufacture of plastics products and related components; plans and supervises their development, manufacture, operation and modifications. 策劃及應用電腦輔助設計、電腦輔助生產或電腦輔助工程設備以設計及製造塑膠工模作生產塑膠產品及其配件之用。研究與設計製造塑膠及附屬產品的工具、夾具及工模，並就此方面提出意見以及編製成本預算，策劃及督導其發展、製造、操作及修改事宜。
104	Project Engineer 策劃及統籌工程師	Plans and co-ordinates the development of plastics products throughout the stages of design, costing, scheduling, tooling, debugging and production. Liaises with customers and coordinates with various departments and suppliers/ vendors to ensure the project could meet target requirement. 策劃及統籌塑膠產品的開發工作，工作程序包括由設計至成本會計、生產排期、模具開發、產品試產以至大量生產等。亦包括與客人研商及與各部門及供應商聯絡以確保工作能符合要求。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNOLOGIST LEVEL (Continued) 技師級（續）		
105	Costing Engineer 成本工程師	Studies and prepares cost estimates for manufacture of plastics products and related components. Discusses with other engineers and makes recommendations on changes in part design, materials and production methods in order to reduce product cost. Studies actual manufacturing costs and updates cost data. 研究與編製生產塑膠產品及其配件的成本預算。與其他工程師共同研究並在產品設計、應用材料及生產工序方面提供建議以減低產品成本。研究製作成本及為成本數據提供最新資料。
106	Q.C./ Q.A. Engineer 品質管制／品質保證工程師	Conducts design review on new products. Plans, directs and supervises the quality control/ quality assurance, including testing and measurement of incoming materials and parts, work-in-progress and finished products to ensure compliance with standards and specifications, and in conformance with safety regulations. 檢討新產品設計。策劃、指導及監督品質管制／品質保證工作，其中包括測試及量度交來物料與配件、半製成品及製成品的品質管制／品質保證工作，使產品能符合標準及規格，並符合安全條例。
107	Electronics/ Electrical Engineer 電子／電機工程師	Designs electronic/ electrical circuitry and systems for use in plastics products, plans and supervises their development and production; advises on the installation, operation and maintenance of electronic/ electrical production equipment. 設計應用在塑膠產品上的電子／電機線路及系統，並策劃及監督這些線路系統的發展及生產工作；以及提出有關安裝、操作及保養電子／電機生產設備的意見。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNOLOGIST LEVEL (Continued) 技師級（續）		
108	Technical Services Engineer 技術支援工程師	Provides expertise and technical services relating to one or more of the following aspects for the production of plastics products : (a) the application of plastics resins and additives; (b) the application of relevant technologies for processing and testing. 為下列一項或多項塑膠產品生產工作提供專業意見及技術服務： (a) 塑膠原料及添加劑的應用； (b) 應用有關科技加工及測試。
109	Moulding Engineer 模塑工程師	Performs technical tasks related to the application of moulding technology for the manufacture of plastics parts. Optimises moulding systems and moulding conditions to achieve quality requirements. Identifies technical problems related to moulding and performs trouble-shooting to solve problems on moulding defects. Applies advanced technologies to improve the quality and efficiency on moulding. 應用模塑科技，製造塑膠零件；善用模塑系統，以及調校模塑條件，力求達至高品質水平；找出模塑方面的技術問題，並解決模塑上的次品問題；以及應用先進技術，改進模塑工作的品質與效益。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNICIAN LEVEL 技術員級		
201	Supervisor/ Foreman 監督／管工	Performs supervisory duties contributory to planning and allocation of tasks to craftsmen and trainees relating to manufacture, inspection, installation, operation, maintenance and repair of plant, tools and equipment or products. 監督、策劃及分配下列工作予技工和受訓者：廠房、工具及設備或產品的製造、檢查、安裝、操作、保養及修理等工作。
202	Mechanical Engineering Technician 機械工程技術員	Performs technical tasks, normally under the direction and supervision of an engineer, contributory to design, development, manufacture, installation, operation, maintenance and repair of mechanical plant equipment and tools. 通常在工程師的指導及監督下擔任技術工作，如從事設計、發展、製造、安裝、操作、保養與修理廠房機械設備及工具。
203	Electronics/ Electrical Engineering Technician 電子／電機工程技術員	Performs technical tasks, normally under the direction and supervision of an engineer, contributory to design, development, manufacture, installation, operation, maintenance and repair of electronic devices/ electrical systems in plastics products and/or plant equipment. 通常在工程師的指導及監督下擔任技術工作，如從事設計、發展、製造、安裝、操作、保養與修理塑膠產品及／或廠房設備的電子裝置／電氣系統。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNICIAN LEVEL (Continued)		技術員級（續）
204	Q.C./ Q.A. Technician 品質管制／品質保證技術員	Performs technical tasks, normally under the direction and supervision of a quality control/ quality assurance engineer, contributory to quality control/quality assurance of incoming materials and parts, work-in-progress, and finished products to ensure compliance with standards and specifications, and in conformance with safety regulations. 通常在品質管制／品質保證工程師的督導下擔任技術工作，如參與來料與配件、半製成品及製成品的品質管制／品質保證工作，使產品能符合標準及規格，並符合安全條例。
205	Product/ Packaging Development Technician 產品／包裝發展技術員	Assists in design and development of plastics products and/or packaging, harmonising technical, aesthetic and economic features including preparation of product and package drawings and materials specifications. 協助從事塑膠產品及／或包裝的設計及發展，使能符合技術、美觀及經濟等方面的要求，包括編製產品、包裝圖樣及塑料規格。
206	Laboratory/ Materials Technician 實驗室／塑料技術員	Formulates and assists in preparation of plastics materials; assesses quality by laboratory analyses and tests of plastics and related samples in accordance with specifications. 制定及協助製備塑料，按照規格於實驗室內分析及測試塑膠及有關樣本，以評估品質。
207	Manufacturing/ Industrial Engineering Technician 製造／工業工程技術員	Performs technical tasks, normally under the supervision of a manufacturing/industrial engineer, contributory to the production processes, production planning and control, plant layouts and assurance of quality standards. 通常在製造／工業工程師指導下擔任技術工作，如生產工序、生產策劃及管制、廠房佈置及品質標準保證等。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
TECHNICIAN LEVEL (Continued)		技術員級（續）
208	Tooling Technician 工具工模技術員	Performs technical tasks, normally under the direction and supervision of a tooling engineer, contributory to the design, development, manufacture and operation of jigs and fixtures, press tools, and moulds and dies for manufacture of plastics products and related components. 通常在工具工模工程師指導下擔任技術工作，如從事設計、發展、製造及操作夾具及裝置、五金工模及塑膠工模作生產塑膠產品及其配件之用。
209	CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員(工模)	Performs technical tasks, normally under the direction and supervision of a CAD or CAM Engineer/ Tooling Engineer, contributory to the design and manufacture of moulds and dies for production of plastics products and related components using CAD/ CAM facilities. 通常在電腦輔助設計或電腦輔助生產工程師／工具工模工程師的督導下擔任技術工作，應用電腦輔助設計／電腦輔助生產設備以設計及製造塑膠工模作生產塑膠產品及其配件之用。
210	Production Planner 生產策劃員	Formulates planning work based on capacity and devises and monitors production schedules to meet delivery targets. Performs planning and monitors the progress of supplied materials/parts to cope with production schedules. Negotiates with suppliers/ vendors on delivery, price and quality of supplied materials/ parts. 根據資源制訂生產計劃；釐定及監察生產進度，確保產品能於交貨期內完成；策劃及監察物料或零件的供應，以配合生產進度；就物料或零件的交貨期、價格及品質事宜，與供應商聯絡。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
CRAFTSMAN LEVEL 技工級		
301	Leader 組長	Organises, trains and takes charge of a group or groups of operatives in a section. 組織、訓練及監督部門內一組或多組操作工的工作。
302	Electrician 電器技工	Installs, tests, services and repairs electrical systems/ electronic devices of machinery and equipment; undertakes maintenance of plant electrical wiring systems. 安裝、測試、保養及修理機器與廠房設備的電氣系統／電子裝置；負責維修廠房的電線系統。
303	Mould/ Die and Tool Maker 製模及工具技工	Marks out, machines, fits, assembles and finishes metal parts to make, test, and repair plastics moulds/ dies and special tools according to drawings and other specifications. 按照圖則及其他規格，劃線、機械加工、打磨、裝配及處理金屬配件，以製造、測試及修理塑膠模／五金模具及特別工具。
304	Pattern/ Model/ Prototype Maker 樣本／模型／生產原型製造工	Sets up and operates metal working and other processing machines to cut, shape and fit parts to fabricate or modify models, patterns and/or prototypes of plastics products from drawings and other specifications. 依照圖則及其他規格，調校及操作金屬製造及其他加工機床以切割、鉋削及打磨配件，以便構造或修改塑膠產品的模型、樣本及／或生產原型。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued) 技工級（續）		
305	Plastics Machine Setter 調機技工	Sets up various plastics processing machines such as injection moulding machines, blow moulding machines, film blowing machines, etc., to produce parts to specified tolerances, colour and finish. 調校各種塑膠加工機，例如注塑機，吹塑機，吹膜機等，使加工機能生產符合規定公差、顏色及光潔度的配件。
306	Sizing (Plastics/ Fabric) 裁床技工 (塑膠／布料)	Makes master patterns, plans lay, and cuts cloth, plastics or other materials to facilitate sewing operations. 製造原樣紙樣，設計排料圖，剪裁布料、塑膠料或其他物料，以供縫紉之用。
307	Quality Control Inspector 品質檢查工	Inspects plastics products and related components according to specified instructions to ensure compliance with quality requirement. 依照指示檢查塑膠產品及其配件以保證符合品質要求。
OPERATIVE LEVEL 操作工級		
401	Blow Moulding Machine Operator 吹塑機工	Operates a blow moulding machine. 操作吹塑機。
402	Film Blowing Machine Operator 吹膜機工	Operates a film blowing machine. 操作塑膠吹膜機。
403	Injection Moulding Machine Operator 注塑機工	Operates a plastics injection moulding machine. 操作注塑機。
404	Vacuum Forming Machine Operator 真空吸塑機工	Operates a vacuum forming machine. 操作真空吸塑機。

Job Code 職稱編號	Principal Job Title 主要職稱	Job Description 工作說明
OPERATIVE LEVEL 操作工級（續）		
405	Other Plastics Processing Machine Operator 其他塑膠加工機操作工	Operates one or more of the following plastics processing machines: extrusion, calendering, compression moulding, laminating, preheating and drying, tumbling, granulating machine etc., or makes Glass Reinforced Plastics (GRP) parts and products by hand lay-up or spraying method. 操作下列一種或多種塑膠加工機器，例如壓擠機，軋光機，壓塑機，積層壓製機，預熱及烘乾機，混色機及製粒（碎料）機等；或運用手工敷層或噴塗法製造玻璃纖維配件及成品。
406	Power Press Operator 動力沖壓機操作工	Operates a power press to produce sheet metal component parts. 操作動力沖壓機，壓製金屬薄片配件。
407	Printing Operator 印刷工	Prints plastics and related products by operating printing machines such as pad printer, grauvre printer, screen printing machines etc. 操作移印機、凹版機、絲網印刷機等機器，以印刷塑膠及有關產品。
408	Assembler 裝配工	Performs tasks in the assembly of plastics products. 從事塑膠產品的裝配工作。
409	Seamstress/ Sewing Machine Operator 縫工	Sews articles of various fabrics by hand or machines. 用手或針車縫製各類纖維物品。
GENERAL WORKER (UNSKILLED) LEVEL 雜工（非技工）級		
501	General Worker 雜工	Carries out mainly manual work such as loading and unloading goods, sprue removal, stamping, packing etc. 主要擔任粗重工作或雜務，如上落貨物、剪水口、打印及包裝等。

TABLE 1 : PLASTICS INDUSTRY MANPOWER STATISTICS (ALL SECTORS)
表一：塑膠業人力統計數字（所有類別）

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNOLOGIST LEVEL　技師級				
Product Engineer (Plastics) 產品工程師（塑膠業）	582	-	1	583
Manufacturing/ Industrial Engineer 製造／工業工程師	515	-	-	515
CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／ 工具工模工程師	182	-	2	184
Project Engineer 策劃及統籌工程師	1 782	1	4	1 786
Costing Engineer 成本工程師	98	-	4	102
Q.C./ Q.A. Engineer 品質管制／ 品質保證工程師	434	2	1	435
Electronics/ Electrical Engineer 電子／ 電機工程師	145	-	1	146
Technical Services Engineer 技術支援工程師	522	-	5	527
Moulding Engineer 模塑工程師	103	-	-	103
Sub-total 分類總數	4 363	3	18	4 381
TECHNICIAN LEVEL　技術員級				
Supervisor/ Foreman 監督／ 管工	189	-	-	189
Mechanical Engineering Technician 機械工程技術員	59	-	-	59
Electronics/ Electrical Engineering Technician 電子／ 電機工程技術員	53	-	-	53

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNICIAN LEVEL (Continued)　技術員級（續）				
Q.C./ Q.A. Technician 品質管制／ 品質保證技術員	727	-	4	731
Product/ Packaging Development Technician 產品／ 包裝發展技術員	608	-	18	626
Laboratory/ Materials Technician 實驗室／ 塑料技術員	419	10	17	436
Manufacturing/ Industrial Engineering Technician 製造／ 工業工程技術員	179	-	-	179
Tooling Technician 工具工模技術員	51	-	-	51
CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員（工模）	153	-	7	160
Production Planner 生產策劃員	1 810	3	8	1 818
Sub-total 分類總數	4 248	13	54	4 302
CRAFTSMAN LEVEL　技工級				
Leader 組長	80	-	1	81
Electrician 電器技工	12	-	-	12
Mould/ Die and Tool Maker 製模及工具技工	44	-	-	44
Pattern/ Model/ Prototype Maker 樣本／ 模型／ 生產原型製造工	41	-	-	41
Plastics Machine Setter 調機技工	23	-	3	26
Sizing (Plastics/ Fabric) 裁床技工（塑膠／ 布料）	7	-	-	7
Quality Control Inspector 品質檢查工	264	-	3	267
Sub-total 分類總數	471	-	7	478

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
OPERATIVE LEVEL　操作工級				
Blow Moulding Machine Operator 吹塑機工	32	-	-	32
Film Blowing Machine Operator 吹膜機工	108	-	4	112
Injection Moulding Machine Operator 注塑機工	142	-	2	144
Vacuum Forming Machine Operator 真空吸塑機工	14	-	-	14
Other Plastics Processing Machine Operator 其他塑膠加工機操作工	285	-	5	290
Power Press Operator 動力沖壓機操作工	2	-	-	2
Printing Operator 印刷工	114	-	2	116
Assembler 裝配工	122	-	7	129
Seamstress/ Sewing Machine Operator 縫工	12	-	-	12
Sub-total 分類總數	831	-	20	851
UNSKILLED LEVEL　非技工級				
General Worker 雜工	788	-	19	822
Sub-total 分類總數	788	-	19	822
GRAND TOTAL 五類總數	10 701	16	118	10 834

TABLE 2 : PLASTICS INDUSTRY MANPOWER STATISTICS
(SECTOR A : PLASTICS MANUFACTURING & TRADING)
表二：塑膠業人力統計數字（塑膠製造及貿易類別）

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNOLOGIST LEVEL　技師級				
Product Engineer (Plastics) 產品工程師（塑膠業）	567	-	1	568
Manufacturing/ Industrial Engineer 製造／ 工業工程師	487	-	-	487
CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／ 工具工模工程師	164	-	2	166
Project Engineer 策劃及統籌工程師	1 739	1	3	1 742
Costing Engineer 成本工程師	98	-	4	102
Q.C./ Q.A. Engineer 品質管制／ 品質保證工程師	327	1	-	327
Electronics/ Electrical Engineer 電子／ 電機工程師	140	-	1	141
Technical Services Engineer 技術支援工程師	16	-	-	16
Moulding Engineer 模塑工程師	102	-	-	102
Sub-total 分類總數	3 640	2	11	3 651
TECHNICIAN LEVEL　技術員級				
Supervisor/ Foreman 監督／ 管工	182	-	-	182
Mechanical Engineering Technician 機械工程技術員	50	-	-	50
Electronics/ Electrical Engineering Technician 電子／ 電機工程技術員	45	-	-	45

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNICIAN LEVEL (Continued)　技術員級（續）				
Q.C./ Q.A. Technician 品質管制／ 品質保證技術員	565	-	3	568
Product/ Packaging Development Technician 產品／ 包裝發展技術員	596	-	18	614
Laboratory/ Materials Technician 實驗室／ 塑料技術員	7	-	2	9
Manufacturing/ Industrial Engineering Technician 製造／ 工業工程技術員	166	-	-	166
Tooling Technician 工具工模技術員	42	-	-	42
CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員（工模）	143	-	7	150
Production Planner 生產策劃員	1 739	3	8	1 747
Sub-total 分類總數	3 535	3	38	3 573
CRAFTSMAN LEVEL　技工級				
Leader 組長	63	-	-	63
Electrician 電氣技工	8	-	-	8
Mould/ Die and Tool Maker 製模及工具技工	37	-	-	37
Pattern/ Model/ Prototype Maker 樣本／ 模型／ 生產原型製造工	38	-	-	38
Plastics Machine Setter 調機技工	16	-	-	16
Sizing (Plastics/ Fabric) 裁床技工（塑膠／ 布料）	7	-	-	7
Quality Control Inspector 品質檢查工	34	-	-	34
Sub-total 分類總數	203	-	-	203

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
OPERATIVE LEVEL　操作工級				
Blow Moulding Machine Operator 吹氣模塑機工	32	-	-	32
Film Blowing Machine Operator 吹膜機工	108	-	4	112
Injection Moulding Machine Operator 注塑機工	135	-	2	137
Vacuum Forming Machine Operator 真空吸塑機工	14	-	-	14
Other Plastics Processing Machine Operator 其他塑膠加工機操作工	238	-	-	238
Power Press Operator 動力沖壓機操作工	2	-	-	2
Printing Operator 印刷工	114	-	2	116
Assembler 裝配工	122	-	7	129
Seamstress/ Sewing Machine Operator 縫工	12	-	-	12
Sub-total 分類總數	777	-	15	792
UNSKILLED LEVEL　非技工級				
General Worker 雜工	707	-	15	737
Sub-total 分類總數	707	-	15	737
GRAND TOTAL 五類總數	8 862	5	79	8 956

TABLE 3 : PLASTICS INDUSTRY MANPOWER STATISTICS
(SECTOR B : PLASTICS MANUFACTURING SERVICES)
表三：塑膠業人力統計數字（塑膠製造服務類別）

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNOLOGIST LEVEL　技師級				
Product Engineer (Plastics) 產品工程師（塑膠業）	15	-	-	15
Manufacturing/ Industrial Engineer 製造／ 工業工程師	28	-	-	28
CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／ 工具工模工程師	18	-	-	18
Project Engineer 策劃及統籌工程師	43	-	1	44
Costing Engineer 成本工程師	-	-	-	-
Q.C./ Q.A. Engineer 品質管制／ 品質保證工程師	107	1	1	108
Electronics/ Electrical Engineer 電子／ 電機工程師	5	-	-	5
Technical Services Engineer 技術支援工程師	506	-	5	511
Moulding Engineer 模塑工程師	1	-	-	1
Sub-total 分類總數	723	1	7	730
TECHNICIAN LEVEL　技術員級				
Supervisor/ Foreman 監督／ 管工	7	-	-	7
Mechanical Engineering Technician 機械工程技術員	9	-	-	9
Electronics/ Electrical Engineering Technician 電子／ 電機工程技術員	8	-	-	8

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
TECHNICIAN LEVEL (Continued)　技術員級（續）				
Q.C./ Q.A. Technician 品質管制／ 品質保證技術員	162	-	1	163
Product/ Packaging Development Technician 產品／ 包裝發展技術員	12	-	-	12
Laboratory/ Materials Technician 實驗室／ 塑料技術員	412	10	15	427
Manufacturing/ Industrial Engineering Technician 製造／ 工業工程技術員	13	-	-	13
Tooling Technician 工具工模技術員	9	-	-	9
CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員（工模）	10	-	-	10
Production Planner 生產策劃員	71	-	-	71
Sub-total 分類總數	713	10	16	729
CRAFTSMAN LEVEL　技工級				
Leader 組長	17	-	1	18
Electrician 電氣技工	4	-	-	4
Mould/ Die and Tool Maker 製模及工具技工	7	-	-	7
Pattern/ Model/ Prototype Maker 樣本／ 模型／ 生產原型製造工	3	-	-	3
Plastics Machine Setter 調機技工	7	-	3	10
Sizing (Plastics/ Fabric) 裁床技工（塑膠／ 布料）	-	-	-	-
Quality Control Inspector 品質檢查工	230	-	3	233
Sub-total 分類總數	268	-	7	275

Job Title 職　稱	Number of Employees as at 28 June 2013 在 2013 年 6 月 28 日的僱員人數	Number of Trainees as at 28 June 2013 在 2013 年 6 月 28 日的受訓者人數	Number of Vacancies as at 28 June 2013 在 2013 年 6 月 28 日的空缺人數	Forecast Number Employed as at June 2014 預計在 2014 年 6 月時的僱員人數
OPERATIVE LEVEL　操作工級				
Blow Moulding Machine Operator 吹氣模塑機工	-	-	-	-
Film Blowing Machine Operator 吹膜機工	-	-	-	-
Injection Moulding Machine Operator 注塑機工	7	-	-	7
Vacuum Forming Machine Operator 真空吸塑機工	-	-	-	-
Other Plastics Processing Machine Operator 其他塑膠加工機操作工	47	-	5	52
Power Press Operator 動力沖壓機操作工	-	-	-	-
Printing Operator 印刷工	-	-	-	-
Assembler 裝配工	-	-	-	-
Seamstress/Sewing Machine Operator 縫工	-	-	-	-
Sub-total 分類總數	54	-	5	59
UNSKILLED LEVEL　非技工級				
General Worker 雜工	81	-	4	85
Sub-total 分類總數	81	-	4	85
GRAND TOTAL 五類總數	1 839	11	39	1 878

TABLE 4: DISTRIBUTION OF EMPLOYEES BY MONTHLY INCOME RANGE
表四：根據每月平均收入幅度劃分的僱員分布情況

Job Title 職稱	Under $7,501 $7,501 以下	$7,501 - $10,000	$10,001 - $15,000	$15,001 - $20,000	$20,001 - $25,000	Over $25,001 $25,001 以上	Unspecified 未列明
TECHNOLOGIST LEVEL 技師級							
Product Engineer (Plastics) 產品工程師（塑膠業）	-	-	2	57	234	254	35
Manufacturing/ Industrial Engineer 製造／ 工業工程師	-	2	1	45	181	230	56
CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／ 工具工模工程師	-	-	1	7	56	68	50
Project Engineer 策劃及統籌工程師	-	-	39	415	585	574	169
Costing Engineer 成本工程師	-	-	-	7	58	30	3
Q.C./ Q.A. Engineer 品質管制／ 品質保證工程師	-	-	7	75	90	133	129
Electronics/ Electrical Engineer 電子／ 電機工程師	-	-	-	20	97	14	14
Technical Services Engineer 技術支援工程師	-	-	30	178	42	63	209
Moulding Engineer 模塑工程師	-	-	4	8	32	55	4

Job Title 職稱	Under $7,501 以下	$7,501 - $10,000	$10,001 - $15,000	$15,001 - $20,000	$20,001 - $25,000	Over $25,001 以上	Unspecified 未列明
TECHNOLOGIST LEVEL(Continued) 技師級（續）							
Sub-total 分類總數	-	2	84	812	1 375	1 422	668
TECHNICIAN LEVEL 技術員級							
Supervisor/ Foreman 監督／ 管工	-	1	44	55	46	18	25
Mechanical Engineering Technician 機械工程技術員	-	1	28	15	6	2	7
Electronics/ Electrical Engineering Technician 電子／ 電機工程技術員	-	-	15	24	6	1	7
Q.C./ Q.A. Technician 品質管制／ 品質保證技術員	-	-	135	269	40	111	172
Product/ Packaging Development Technician 產品／ 包裝發展技術員	7	8	138	273	40	21	121
Laboratory/ Materials Technician 實驗室／ 塑料技術員	-	-	89	110	4	-	216
Manufacturing/ Industrial Engineering Technician 製造／ 工業工程技術員	-	1	125	23	8	2	20
Tooling Technician 工具工模技術員	-	-	3	18	3	-	27

Job Title 職稱	Under $7,501 以下	$7,501 - $10,000	$10,001 - $15,000	$15,001 - $20,000	$20,001 - $25,000	Over $25,001 以上	Unspecified 未列明
TECHNICIAN LEVEL(Continued) 技術員級 (續)							
CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員（工模）	-	5	68	33	13	-	34
Production Planner 生產策劃員	1	46	564	882	126	7	184
Sub-total 分類總數	8	62	1 209	1 702	292	162	813
CRAFTSMAN LEVEL 技工級							
Leader 組長	-	17	29	13	-	2	19
Electrician 電氣技工	-	-	6	5	-	-	1
Mould/ Die and Tool Maker 製模及工具技工	-	-	34	2	6	-	2
Pattern/ Model/ Prototype Maker 樣本／ 模型／ 生產原型製造工	2	5	28	-	-	-	6
Plastics Machine Setter 調機技工	-	1	18	1	-	-	3
Sizing(Plastics/ Fabric) 裁床技工（塑膠／ 布料）	-	-	7	-	-	-	-
Quality Control Inspector 品質檢查工	10	11	24	9	-	-	210
Sub-total 分類總數	12	34	146	30	6	2	241

Job Title 職稱	Under $7,501 以下	$7,501 - $10,000	$10,001 - $15,000	$15,001 - $20,000	$20,001 - $25,000	Over $25,001 以上	Unspecified 未列明
OPERATIVE LEVEL　操作工級							
Blow Moulding Machine Operator 吹氣模塑機工	-	8	24	-	-	-	-
Film Blowing Machine Operator 吹模機工	-	48	60	-	-	-	-
Injection Moulding Machine Operator 注塑機工	1	48	84	8	-	-	1
Vacuum Forming Machine Operator 真空吸塑機工	-	7	2	-	-	-	5
Other Plastics Processing Machine Operator 其他塑膠加工機操作工	12	99	93	5	-	-	76
Power Press Operator 動力沖壓機操作工	-	2	-	-	-	-	-
Printing Operator 印刷工	3	49	58	2	-	-	2
Assembler 裝配工	13	21	11	-	-	-	77
Seamstress/Sewing Machine Operator 縫工	-	-	12	-	-	-	-
Sub-total 分類總數	29	282	344	15	-	-	161
UNSKILLED LEVEL　非技工級							
General Worker 雜工	133	358	230	2	-	-	65
Sub-total 分類總數	133	358	230	2	-	-	65

RECOMMENDED NUMBER OF TRAINEES
TO BE TAKEN ON FOR THE NEXT FEW YEARS
建議未來幾年應取錄的受訓者人數

Job Title 職　稱	Number of Employees at Time of Survey (2013) 調查期間（2013 年）僱員人數	Recommended Number of Persons to be Taken on Annually from 2014 由 2014 年起每年應取錄的受訓者人數
TECHNOLOGIST LEVEL　技師級		
Product Engineer (Plastics) 產品工程師（塑膠業）	582	26 – 32
Manufacturing/ Industrial Engineer 製造／ 工業工程師	515	23 – 29
CAD, CAM or CAE Engineer/ Tooling Engineer 電腦輔助設計、電腦輔助生產或電腦輔助工程工程師／ 工具工模工程師	182	8 – 10
Project Engineer 策劃及統籌工程師	1 782	81 – 99
Costing Engineer 成本工程師	98	4 – 5
Q.C./ Q.A. Engineer 品質管制／ 品質保證工程師	434	20 – 24
Electronics/ Electrical Engineer 電子／ 電機工程師	145	7 – 8
Technical Services Engineer 技術支援工程師	522	24 – 29
Moulding Engineer 模塑工程師	103	5 – 6
Sub-total 分類總數	4 363	198 – 242
TECHNICIAN LEVEL　技術員級		
Supervisor/ Foreman 監督／ 管工	189	8 – 10
Mechanical Engineering Technician 機械工程技術員	59	3

Job Title 職　稱	Number of Employees at Time of Survey (2013) 調查期間（2013 年）僱員人數	Recommended Number of Persons to be Taken on Annually from 2014 由 2014 年起每年應取錄的受訓者人數
TECHNICIAN LEVEL (Continued)　技術員級（續）		
Electronics/ Electrical Engineering Technician 電子／ 電機工程技術員	53	2 – 3
Q.C./ Q.A. Technician 品質管制／ 品質保證技術員	727	32 – 39
Product/ Packaging Development Technician 產品／ 包裝進展技術員	608	27 – 33
Laboratory/ Materials Technician 實驗室／ 塑料技術員	419	19 – 23
Manufacturing/ Industrial Engineering Technician 製造／ 工業工程技術員	179	8 – 10
Tooling Technician 工具工模技術員	51	2 – 3
CAD or CAM Technician (Tooling) 電腦輔助設計或電腦輔助生產技術員（工模）	153	7 – 8
Production Planner 生產策劃員	1 810	80 – 98
Sub-total 分類總數	4 248	188 – 230
CRAFTSMAN LEVEL　技工級		
Leader 組長	80	3
Electrician 電氣技工	12	0
Mould/ Die and Tool Maker 製模及工具技工	44	1 – 2
Pattern/ Model/ Prototype Maker 樣本／ 模型／ 生產原型製造工	41	1 – 2
Plastics Machine Setter 調機技工	23	1
Sizing (Plastics/ Fabric) 裁床技工（塑膠／ 布料）	7	0
Quality Control Inspector 品質檢查工	264	8 – 10

Job Title 職　稱	Number of Employees at Time of Survey (2013) 調查期間（2013 年）僱員人數	Recommended Number of Persons to be Taken on Annually from 2014 由 2014 年起每年應取錄的受訓者人數
CRAFTSMAN LEVEL (Continued)　技工級（續）		
Sub-total 分類總數	471	14 – 18

NUMBER OF EMPLOYEES IN OTHER INDUSTRIES RELATED TO THE PLASTICS FIELD AND RECOMMENDED NUMBER OF TRAINEES TO BE TRAINED FOR THE NEXT FEW YEARS

與塑膠業有關並在其他行業工作的僱員人數及建議未來幾年應取錄的受訓者人數

Industry 行業 (Source of Information) 資料來源	Job Title 職稱	Number of Employees at Time of Survey 調查期間僱員人數	Recommended Number of Trainees to be Taken on Annually 建議每年應取錄的受訓者人數
Metals Industry 金屬業 (From the 2012 Manpower Survey of the Metals Industry) (根據 2012 年金屬業人力調查報告)	Manufacturing/ Production/ Industrial Engineer 製造／生產／工業工程師	318	6 – 7
	Manufacturing/Production/ Industrial Engineering Technician 製造／生產／工業工程技術員	204	12 – 15
	Mould Maker 製模技工	205	10 – 12
	Pattern/ Model/ Prototype Maker 樣本／模型／生產原型製造工	127	6 – 8
Electronics Industry 電子業 (From the 2012 Manpower Survey of the Electronics Industry) (根據 2012 年電子業人力調查報告)	Manufacturing/ Quality Assurance Engineer 製造／品質保證工程師	815	27 – 33
	Manufacturing/ Quality Assurance Technician 製造／品質保證技術員	703	38 – 47
	Mechanic 技工	646	18 – 22