

2012 MANPOWER SURVEY REPORT

METALS INDUSTRY

METALS TRAINING BOARD

VOCATIONAL TRAINING COUNCIL

金 屬 業

2012 年人力調查報告

職業訓練局

金屬業訓練委員會

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Executive Summary of the Report on the 2012 Manpower Survey of the Metals Industry

Objective

The Metals Training Board of the Vocational Training Council conducted a survey during the period from 11 June to 10 July 2012 to collect the latest manpower information of the metals industry which also includes the jewellery sector.

Scope of the Survey

2. The survey covered the following 13 branches of the two major sectors of the metals industry:

Sector A : Metal Products and Related Industries

- Branch 1 : Plant maintenance section of food, beverage and tobacco manufacturing industries (HSIC 101-108, 110, 120)
- Branch 2 : Manufacture of basic metals (HSIC 241-243)
- Branch 3 : Manufacture of fabricated metal products (except machinery and equipment) and metal toys (HSIC 251, 259, 3244)
- Branch 4 : Manufacture of machinery and equipment (HSIC 281-282)
- Branch 5 : Manufacture of medical equipment (HSIC 266, 2672, 3251, 3259)
- Branch 6 : Manufacture of electrical equipment (HSIC 271-275, 279)
- Branch 7 : Repair and installation of machinery and equipment (HSIC 331-332)
- Branch 8 : Manufacture of watches and clocks (HSIC 2652)
- Branch 9 : Wholesale, import/export trading of machinery, equipment, watches and clocks (HSIC 451434, 451446, 451621, 451633, 451635, 451699, 451711, 452434, 452446, 452621, 452633, 452635, 452699, 452711, 460434, 460446, 460621, 460633, 460635, 460699 and 460711)
- Branch 10 : Engineering services related to Metals industry including material testing, metallurgist, process development/testing, production line consulting/design and quality control (HSIC 712 and 719)
- Branch 11 : Supplementary samples - relevant division/department in training/ education institutions

Sector B : Jewellery Industry

Branch 12 : Manufacture of jewellery, bijouterie and related articles (HSIC 321)

Branch 13 : Wholesale, import/export trading of jewellery, bijouterie and related products (HSIC 451432, 451433, 452432, 452433, 460432 and 460433)

(HSIC denotes Hong Kong Standard Industrial Classification)

3. Prior to the survey, the Census and Statistics Department recorded some 22 280 establishments in the above 13 branches of the metals industry in Hong Kong. In view of the limited resources available, a stratified random sampling method was adopted and a total of 1 008 samples were selected to be surveyed. The data collected were scaled up statistically to give an overall picture of the manpower situation of the industry.

Survey Findings

4. The survey revealed that in June/July 2012, a total of **43 472** persons were employed in the principal jobs of the metals industry. Of them, **30 501** (70.2%) were employed in the metal products and related industries, and **12 971** (29.8%) were in the jewellery industry. The distribution of the workforce by job level of the two major sectors of the metals industry is as follows:

Job Level	No. of Employees	Percentage of Total Number of Employees
(a) Metal Products and Related Industries		
Technologist/Managerial	5 990	19.64%
Technician/Supervisory	15 136	49.62%
Craftsman	6 207	20.35%
Operative/Unskilled	3 168	10.39%
Total	30 501	100.00%
(b) Jewellery Industry		
Technologist/Managerial	2 401	18.51%
Technician/Supervisory	9 001	69.39%
Craftsman	1 239	9.55%
Operative/Unskilled	330	2.55%
Total	12 971	100.00%

Number of Trainees and Vacancies

5. At the time of the survey, there were 115 trainees and 554 vacancies in the metal products and related industries, and 11 trainees and 91 vacancies in the jewellery industry. Their distributions are shown below:

Job Level	Metal Products and Related Industries					Jewellery Industry				
	Manpower	Trainees		Vacancies		Manpower	Trainees		Vacancies	
		No.	% of Manpower	No.	% of Manpower		No.	% of Manpower	No.	% of Manpower
Technologist/Managerial	5 990	10	0.17%	44	0.73%	2 401	-	-	10	0.42%
Technician/Supervisory	15 136	33	0.22%	245	1.62%	9 001	1	0.01%	77	0.86%
Craftsman	6 207	67	1.08%	144	2.32%	1 239	10	0.81%	2	0.16%
Operative/Unskilled	3 168	5	0.16%	121	3.82%	330	-	-	-	-
Total	30 501	115	0.38%	554	1.82%	12 971	11	0.08%	91	0.70%

6. According to employers' one-year forecast, there would be 31 148 and 13 112 employees in the metal products and related industries and the jewellery industry respectively by June 2013. A summary of the employers' one year forecast by job level is shown below:

Job Level	No. of Employees in June 2012	Employers' Forecast of Total No. of Employees by June 2013
(a) Metal Products and Related Industries		
Technologist/Managerial	5 990	6 043
Technician/Supervisory	15 136	15 447
Craftsman	6 207	6 368
Operative/Unskilled	3 168	3 290
Total	30 501	31 148
(b) Jewellery Industry		
Technologist/Managerial	2 401	2 411
Technician/Supervisory	9 001	9 119
Craftsman	1 239	1 250
Operative/Unskilled	330	332
Total	12 971	13 112

Business Outlook

7. The global economy has been recovering fast after the 2008 financial tsunami. However, the recovery has not been long lasting, as indicated by the Baltic Dry Index (BDI). The BDI had “recovered” from its lowest ebb of 663 in December 2008 (caused by the financial tsunami) and then bounced back and overshot to reach its “peak” of 11 771 in early 2009. It has since been gradually staggering downwards and in February 2012, it hit another “all-time-low” record of 647 and then again, hit two other low ebbs of 661 and 698 in September 2012 and December 2012 respectively. The index “rose” a little bit in 2013 (in March 2013, it was recorded at around 900), but it appears that the global economy does not seem to fare well in the next couple of years, as indicated by the BDI.

8. A number of economic/financial experts including the World Economic Outlook (WEO) have projected that the global economic growth would continue to increase, but at a slower pace than before. The extent of growth is largely determined by the effectiveness of the policy actions undertaken by the European nations and the United States to prevent and/or lower any risk of further acute economic crises, but that encompasses lots of uncertainties. Japan has already been slid into recession, but it is foreseeable that its government would continue to provide stimulus to boost growth in the coming future. For some of the countries in the emerging markets, such as China, India, Russia, Eastern Europe and Latin American countries, it is expected that their governments would stick to policies for a modest growth “pickup”.

Sector A: Metal Products and Related Industries

9. With the continued economic development in the Mainland during the past two decades, Hong Kong manufacturers have been enjoying growth and success in production operations in China. However, the business environment in China has undergone great changes in recent years, which were brought about by the Mainland’s introduction of the various new laws, regulations and policies, such as the Labour Contract Law, the Enterprise Income Tax Law, the Environmental Protection Initiatives and the adjustments in process trade polices; together with the appreciation of RMB, shortage of labour supply in the Mainland, soaring raw material costs and fierce competitions from the emergence of local enterprises, which compete mainly on cost advantages. All these environmental changes have substantially increased the operation cost and pose hardship for the Hong Kong manufacturers to continue their manufacturing operations in China. As a consequence, some of Hong Kong’s less effective manufacturers have been competed out of business.

10. To cope with these challenges, many Hong Kong manufacturers are making continuous improvements in order to sustain their competitive advantages and beat down competitors through “differentiation”, such as making breakthroughs in product design and innovation, maintaining a high standard of product quality, cutting down wastages and enhancing supply chain management, investing/modernizing machinery and equipment to enhance productivity and quality and to training/upgrading their manpower resources to sustain their competitive edges. Some employers have opted to relocate part of their activities, such as the production branch on value-added processes back to Hong Kong.

11. Under such unpredictable environment, a high demand for high quality tooling, industrial machinery, equipment and parts as well as technical-support, manufacturing-related services, as well as rising demand on product and engineering design, sales and marketing workforce with good business and costing concept and familiar with production and workflow processes are required, as evidenced by the survey results.

12. The Training Board opines that the metal products and related industries, in particular, the wholesale and import/export trading branch which employed about 50% of the manpower in this sector, will continue to play an important role and make valuable contributions to the further development of the manufacturing industries both in Hong Kong and the Mainland.

Sector B: Jewellery Industry

13. Hong Kong is one of the leading exporters and producers of jewellery products in the world. However, Hong Kong's jewellery exporters are also facing intensified competition from their counterparts in the Chinese Mainland and other countries, particularly India and Thailand. Together with the price fluctuation of precious metals, diamonds, precious stones and materials, Hong Kong exports' profit margins have been trimmed down in recent years. To sustain their competitive edges, many Hong Kong manufacturers have opted for "differentiation" through investing and applying sophisticated and automated production equipment, including computer-aided design and manufacturing (CAD/CAM) systems, rapid prototyping and computer numerically controlled (CNC) machine tools, in their product design and manufacturing processes. They have also integrated advanced production techniques, such as electroforming, with handicraft skills to further enhance their efficiency.

14. Under the zero import tariff preference of the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), Hong Kong jewellery manufacturers have been attracted to move up-market in producing more "brand name" products, apply more manufacturing processes with high value-added content and substantial intellectual property input. However, CEPA also requires that moulding of precious metals; moulding and setting of pearls, precious/semi-precious stones for jewellery articles and assembling processes must be carried out in Hong Kong. As a consequence, although many Hong Kong jewellery manufacturers have already shifted their production processes to the Mainland, mainly in Shenzhen and Panyu, value-added processes including those required to be carried out in Hong Kong by CEPA are still retained in Hong Kong. Some Hong Kong manufacturers are keen on preserving their brand image as well as upholding the quality, reliability and uniqueness of "made in/by Hong Kong" products and therefore, they have also relocated some of their core product design functions and/or value-added operations back to Hong Kong.

15. RMB's appreciation and the Chinese government's previous policy on encouraging consumption had shored up the purchasing power and import appetite of Chinese residents, and this has indeed facilitate the sales of jewellery articles to the mainland, as well as retail sales in Hong Kong contributed by the influx of Chinese visitors over the recent years. However, the recent policy by the Chinese government to curb lavish spending by the government officials might temporarily cool off the "overheated" consumption temperament

in the Mainland, which might potentially pose some challenges to the jewellery exporters in Hong Kong.

16. The Training Board is confident that China's vitality would continue. With the increased Mainland visitors coming to Hong Kong and RMB's appreciation, it is envisaged that the jewellery industry would continue to flourish in the coming years, albeit overshadowed by some potential and unpredictable challenges.

Future Manpower Demand

17. Having considered the latest developments as well as the employers' forecast of future manpower requirements and their views on the expected change in business situation, the Training Board opines that in the years ahead there will be an on-going demand for properly trained technologists, technicians and craftsmen to sustain the development of the metal products and related industries and to stave off keen competition. In particular, demand on competencies in technology and product & engineering design, sales/marketing and production processes is high. Most of these technical personnel would be employed by the repair and installation, wholesale and import/export trading branches to provide marketing and after sales repair & maintenance services to the machinery and equipment they installed in the manufacturing establishments. On the other hand, the demand for operatives and unskilled workers would decrease.

18. As regards the jewellery industry, the Training Board is of the view that the jewellery wholesale and import/export trading branch will continue to enjoy growth in the coming years, while the jewellery manufacturing branch will continue to contract. There will be a high demand for jewellery manpower at the technologist and technician levels for design and development, marketing and sales for export-oriented activities in Hong Kong. However, the demand for additional craftsmen for production related jobs will be limited, and the number of operative/unskilled workers would further decrease.

19. The Training Board has also estimated the loss of manpower at different job levels due to natural wastage, i.e. workers leaving the metals industry through retirement, migration to other industries and other causes. The Training Board has decided that the annual wastage rates for most of the job levels should remain unchanged at 3% except for craftsmen level in the metal products and related industries, which should be adjusted to 5%, as aging of existing employees in this sector has become an issue in recent years.

20. The Training Board's forecast of the additional manpower required by the metals industry to cover both wastage and growth from 2013 to 2016 is given below:

Annual Manpower Demand in the Metals Industry from 2013 to 2016

Job Level	Annual Average Additional Demand for Employees	
	<u>Sector A</u> Metal Products and Related Industries	<u>Sector B</u> Jewellery Industry
Technologist/Managerial	113 – 138	375 – 459
Technician/Supervisory	898 – 1 098	155 – 189
Craftsman	308 – 376	27 – 33

21. The Training Board will conduct another manpower survey in 2014 to update the manpower statistics and review the training requirements of the metals industry.

SECTION I

INTRODUCTION

The Metals Training Board

1.1 The Metals Training Board of the Vocational Training Council (VTC) is a statutory body appointed by the HKSAR Government to be responsible for matters pertaining to manpower training in the metals industry which also includes the jewellery sector. The Training Board comprises members nominated by major trade associations, professional bodies, workers unions, training and educational institutions, as well as representatives from government departments. The membership and terms of reference of the Training Board are given in Appendices 1 and 2 respectively.

1.2 The Training Board is required by its terms of reference to determine the manpower needs of the industry and to recommend to the VTC the development of vocational education and training facilities to meet such needs.

The Manpower Survey

1.3 The Training Board conducted a survey from 11 June to 10 July 2012 to collect up-to-date information on the manpower situation of the metals industry. The survey was conducted with the assistance of the Census and Statistics Department of the HKSAR Government. Follow-up of the fieldwork was completed in October and data processing was carried out in November/December 2012.

1.4 The following manpower statistics and information were collected from the survey:

- (i) number of employees in various principal jobs at the time of the survey,
- (ii) number of existing vacancies,
- (iii) number of trainees,
- (iv) employers' forecast of the total number of employees by June 2013,
- (v) average monthly income of employees, and
- (vi) employers' views on the preferred education, training mode and training period of employees.

1.5 Employers were also requested to provide other information such as the number of technologists/managers, technicians/supervisors and craftsmen who had been promoted in the

past 12 months, and also those who had been deployed to work for more than 6 months outside Hong Kong during the 12 months prior to the survey.

Scope of Survey

1.6 The survey covered the following 13 branches of the two major sectors of the metals industry:

Sector A : Metal Products and Related Industries

- Branch 1 : Plant maintenance section of food, beverage and tobacco manufacturing industries (HSIC 101-108, 110, 120)
- Branch 2 : Manufacture of basic metals (HSIC 241-243)
- Branch 3 : Manufacture of fabricated metal products (except machinery and equipment) and metal toys (HSIC 251, 259, 3244)
- Branch 4 : Manufacture of machinery and equipment (HSIC 281-282)
- Branch 5 : Manufacture of medical equipment (HSIC 266, 2672, 3251, 3259)
- Branch 6 : Manufacture of electrical equipment (HSIC 271-275, 279)
- Branch 7 : Repair and installation of machinery and equipment (HSIC 331-332)
- Branch 8 : Manufacture of watches and clocks (HSIC 2652)
- Branch 9 : Wholesale, import/export trading of machinery, equipment, watches and clocks (HSIC 451434, 451446, 451621, 451633, 451635, 451699, 451711, 452434, 452446, 452621, 452633, 452635, 452699, 452711, 460434, 460446, 460621, 460633, 460635, 460699 and 460711)
- Branch 10 : Engineering services related to Metals industry including material testing, metallurgist, process development/testing, production line consulting/design and quality control (HSIC 712 and 719)
- Branch 11 : Supplementary samples - relevant division/department in training/ education institutions

Sector B : Jewellery Industry

- Branch 12 : Manufacture of jewellery, bijouterie and related articles (HSIC 321)
- Branch 13 : Wholesale, import/export trading of jewellery, bijouterie and related products (HSIC 451432, 451433, 452432, 452433, 460432 and 460433)

(HSIC denotes Hong Kong Standard Industrial Classification)

1.7 Prior to the survey, the Census and Statistics Department recorded some 22 280 establishments in the above 13 branches of the metals industry in Hong Kong. In view of the limited resources available, a stratified random sampling method was adopted and a total of 1 008 samples were selected to be surveyed. The data collected were scaled up statistically to give an overall picture of the manpower situation of the industry.

Method of the Survey

1.8 Two sets of survey documents including questionnaires, explanatory notes and lists of principal jobs were designed, one for Sector A (Appendices 13, 15 and 17) and the other for Sector B (Appendices 14, 16 and 18). About a week before the survey, relevant survey documents were mailed to the 1 008 establishments according to their nature of work. Prior publicity was given through the local press to solicit employers' co-operation. Relevant trade and industrial organizations were also requested to publicize the survey among their members and to encourage them to co-operate in the survey.

1.9 During the survey period, interviewing officers of the Census and Statistics Department visited all 1 008 establishments to collect the completed questionnaires and, where required, to assist employers in completing them. All returned questionnaires were scrutinized and where necessary, cross checked with the respondents.

Response to the Survey

1.10 Of the 1 008 establishments, 658 completed the questionnaires and 19 refused to supply information. The remaining 331 establishments had either moved, closed and could not be traced, or no longer engaged in the trade. The effective response rate was 97.2%.

The Report

1.11 After follow-up of the fieldwork and data processing, the Training Board compiled in March 2013 the manpower survey report which presented the manpower data collected from the survey. The report was subsequently mounted on the VTC web site for public information.

1.12 This report presents all the findings of the survey together with the Training Board's forecast of the training needs of the industry and recommendations on measures to meet these needs. In the report, the terms "employees", "workers" and "manpower" refer to the total number of persons employed in the principal jobs at the time of the survey but excluding trainees and apprentices. The term "trainees" means all persons receiving any form of training including those registered apprentices under a contract of apprenticeship.

SECTION II

SUMMARY OF SURVEY FINDINGS

Number of Workers Employed

2.1 The survey revealed that in June/July 2012, a total of 43 472 persons were employed in the principal jobs of the metals industry. Of them, 30 501 (70.2%) were employed in the metal products and related industries (Sector A), and 12 971 (29.8%) were in the jewellery industry (Sector B). Details of the manpower statistics are shown in Appendices 3, 4 and 5.

2.2 At the time of the survey, there were also 47 129 persons of other disciplines, such as accounting officers and clerks, working in the metals industry. Of them, 38 093 persons (80.8%) were in the metal products and related industries, and 9 036 persons (19.2%) in the jewellery industry.

2.3 The following paragraphs present only the manpower statistics of those workers engaged in the principal jobs of the metals industry.

Distribution of Employees by Job Level

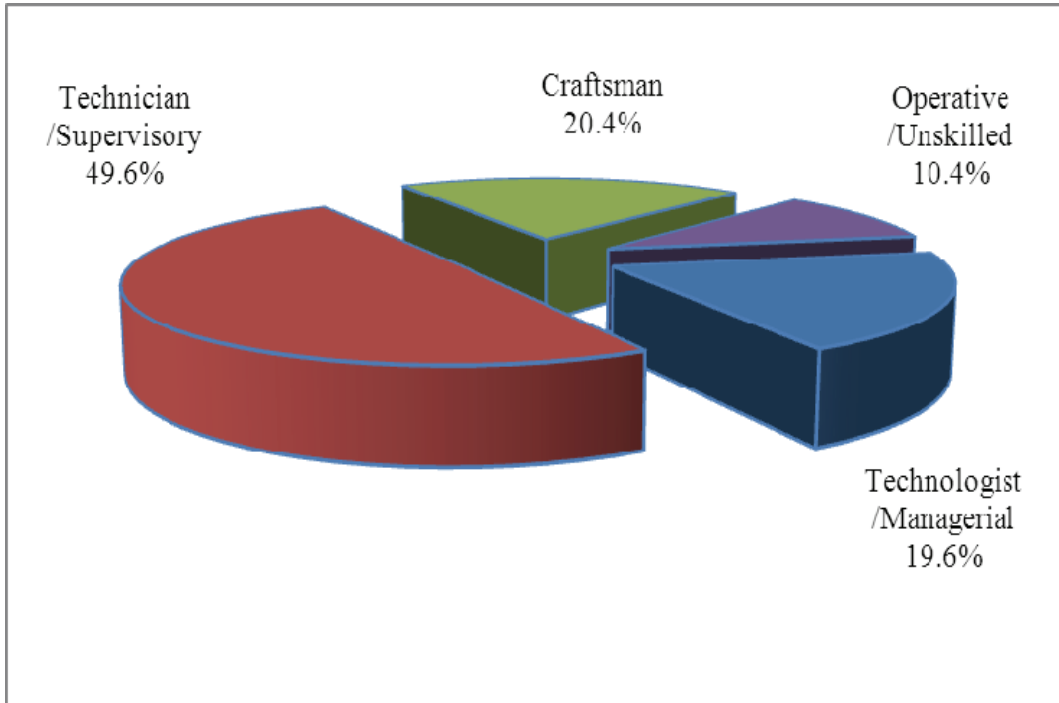
2.4 The distribution of employees in principal jobs by job level is shown in Table 2.1 and Figure 2.1:

Table 2.1 : Distribution of Employees by Job Level

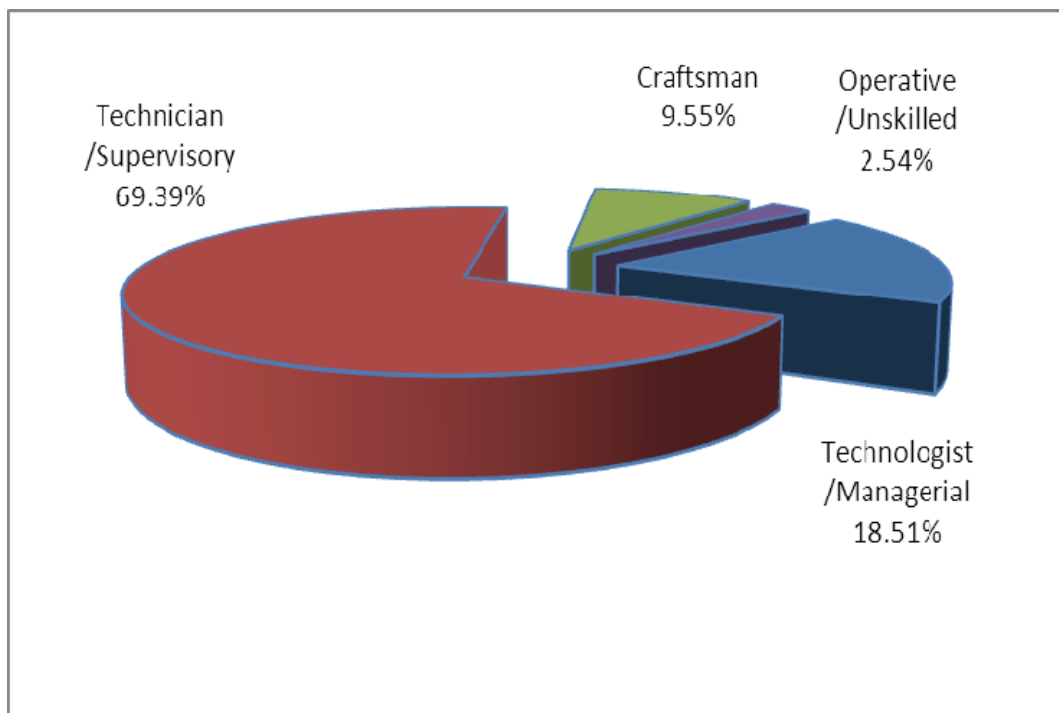
Job Level	<u>Sector A</u> Metal Products and Related Industries	<u>Sector B</u> Jewellery Industry
Technologist/Managerial	5 990	2 401
Technician/Supervisory	15 136	9 001
Craftsman	6 207	1 239
Operative/Unskilled	3 168	330
Total	30 501	12 971

Figure 2.1 (a & b) : Distribution of Employees by Job Level

(a) Metal Products and Related Industries



(b) Jewellery Industry



Number of Trainees

2.5 At the time of the survey, there were 115 trainees in the metal products and related industries and 11 trainees in the jewellery industry. Details of the trainee statistics are shown in Appendices 3 and 5. The distribution of trainees by job level is shown in Table 2.2:

Table 2.2 : Distribution of Trainees by Job Level

Job Level	Metal Products and Related Industries		Jewellery Industry	
	No. of Trainees	% of Total No. of Employees at same Job Level	No. of Trainees	% of Total No. of Employees at same Job Level
Technologist/ Managerial	10	0.17%	-	-
Technician/ Supervisory	33	0.22%	1	0.01%
Craftsman	67	1.08%	10	0.81%
Operative/ Unskilled	5	0.16%	-	-
Total	115	0.38%	11	0.08%

Number of Vacancies at Time of Survey and Forecast Manpower by June 2013

2.6 At the time of the survey, the total number of job vacancies was 554 and 91, or 1.82% and 0.7% of the total number employed in the metal products and related industries and the jewellery industry respectively.

2.7 Employers also forecast that there would be 31 148 and 13 112 employees in the metal products and related industries and the jewellery industry respectively by June 2013, comparing with 30 501 and 12 971 employees at the time of the survey.

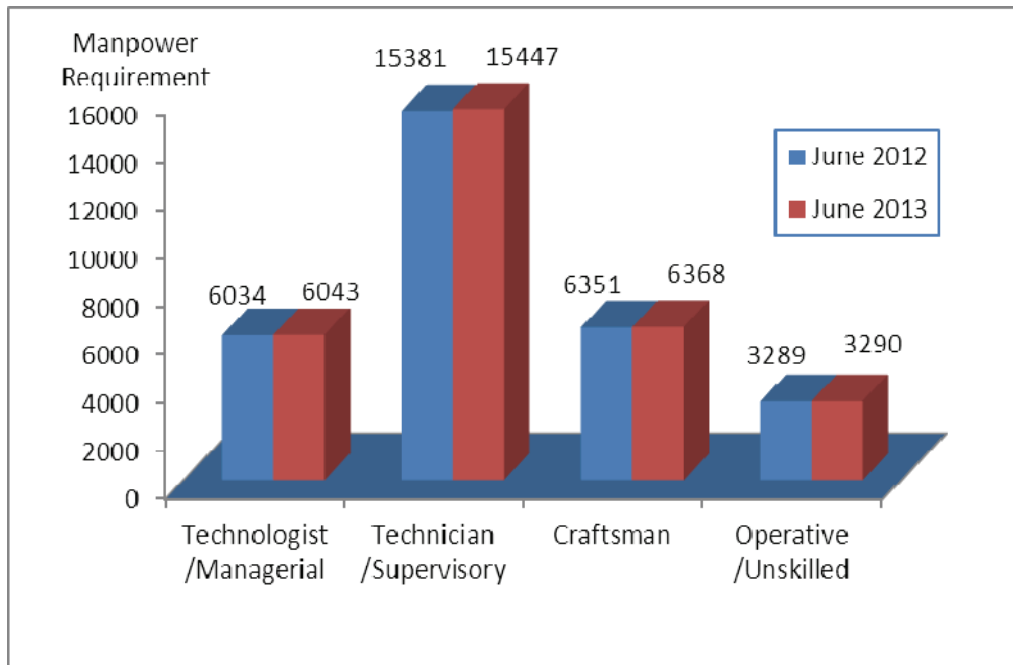
2.8 Details of the vacancy statistics and forecast manpower are shown in Appendices 3 and 5. A comparison of the manpower requirement at the time of the survey and the employers' forecast of the number of employees by June 2013 is shown in Table 2.3 and Figure 2.2:

Table 2.3 : Comparison of Manpower Requirement by
June 2012 and June 2013

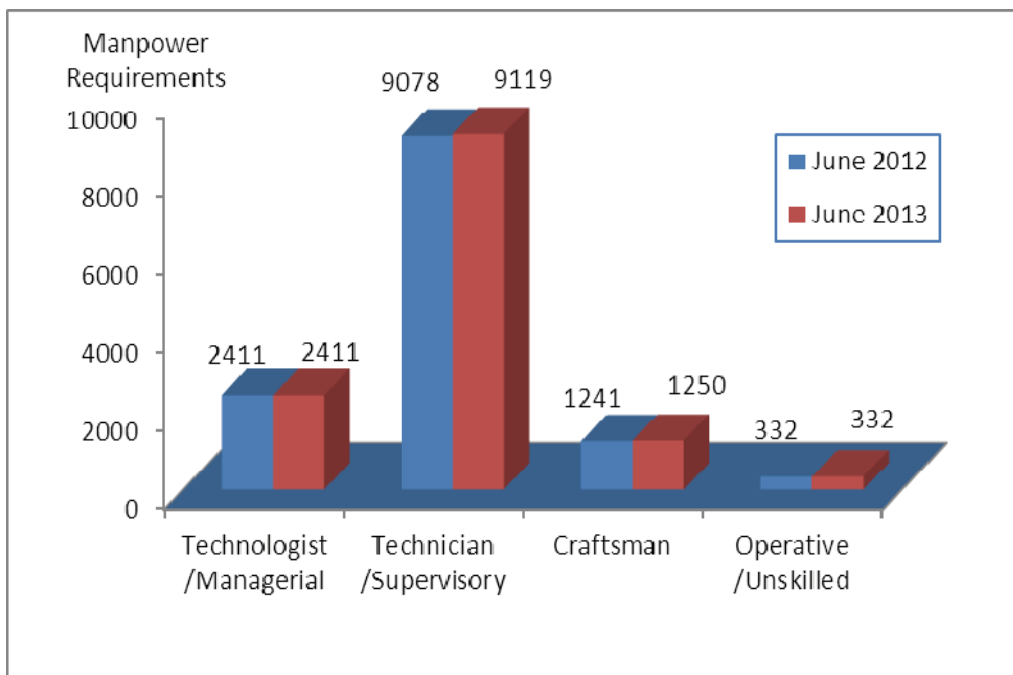
Job Level	At Time of Survey (June 2012)			Forecast Total No. of Employees by June 2013	Forecast Increase in No. of Employees
	No. of Employees	No. of Vacancies	Total Manpower Requirement		
(a) Metal Products and Related Industries					
Technologist/ Managerial	5 990	44	6 034	6 043	0.15%
Technician/ Supervisory	15 136	245	15 381	15 447	0.43%
Craftsman	6 207	144	6 351	6 368	0.27%
Operative/ Unskilled	3 168	121	3 289	3 290	0.03%
Total	30 501	554	31 055	31 148	0.30%
(b) Jewellery Industry					
Technologist/ Managerial	2 401	10	2 411	2 411	-
Technician/ Supervisory	9 001	77	9 078	9 119	0.45%
Craftsman	1 239	2	1 241	1 250	0.73%
Operative/ Unskilled	330	2	332	332	-
Total	12 971	91	13 062	13 112	0.38%

Figure 2.2 (a & b) : Comparison of Manpower Requirements by June 2012 and June 2013

(a) Metal Products and Related Industries



(b) Jewellery Industry



Total Monthly Income Range of Employees

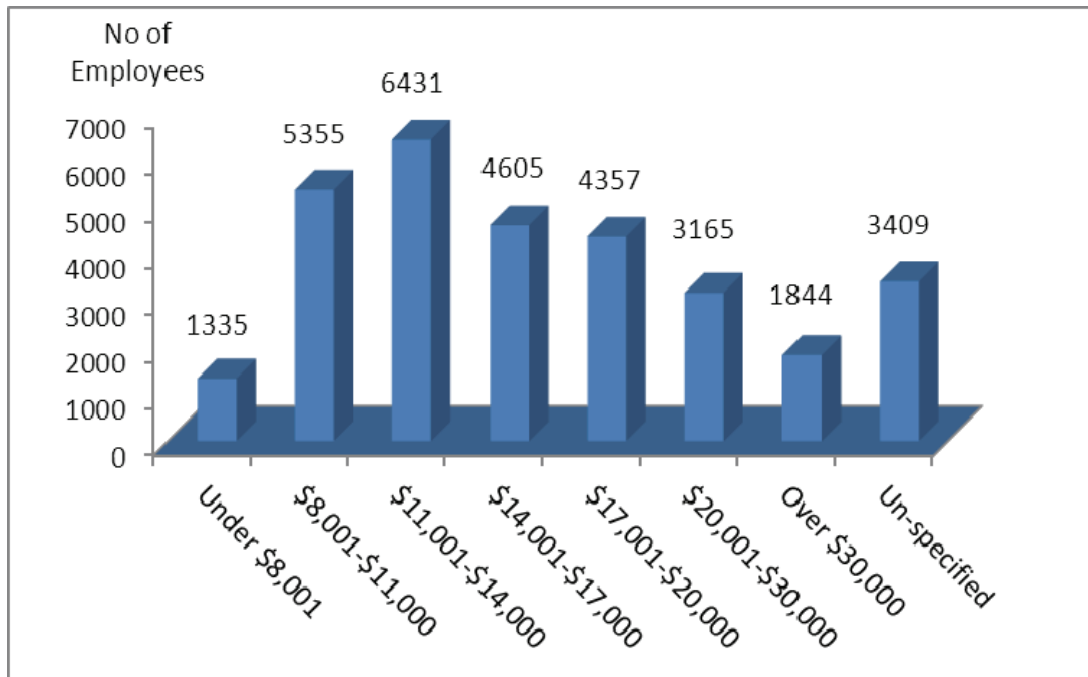
2.9 The distribution of employees by total monthly income range in the two major sectors of the metals industry is shown in Table 2.4 and Figure 2.3, and details are also given in Appendices 6 and 7:

Table 2.4 : Distribution of Employees by
Total Monthly Income Range

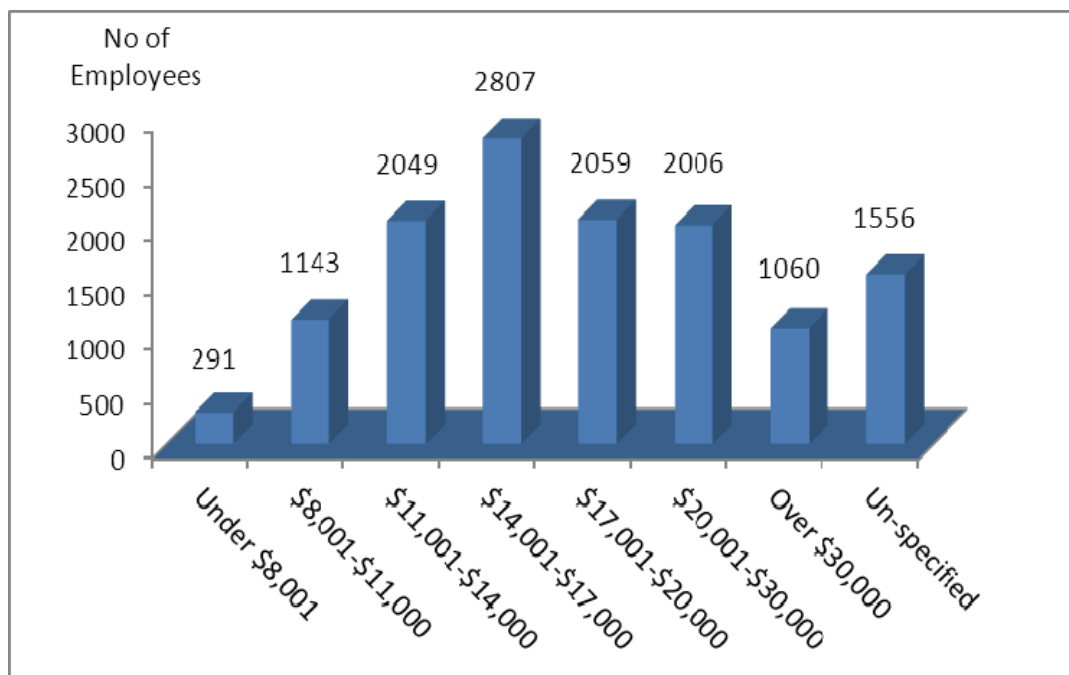
Job Level	Under \$8,001	\$8,001-\$11,000	\$11,001-\$14,000	\$14,001-\$17,000	\$17,001-\$20,000	\$20,001-\$30,000	Over \$30,000	Un-specified	Total
(a) Metal Products and Related Industries									
Technologist/Managerial	-	-	284	475	940	1 699	1 578	1 014	5 990
Technician/Supervisory	491	1 581	3 328	3 483	2 933	1 029	266	2025	15 136
Craftsman	310	1 903	2 465	528	436	390	-	175	6 207
Operative/Unskilled	534	1 871	354	119	48	47	-	195	3 168
Total	1 335	5 355	6 431	4 605	4 357	3 165	1 844	3 409	30 501
(b) Jewellery Industry									
Technologist/Managerial	-	-	80	238	200	653	866	364	2 401
Technician/Supervisory	146	677	1 354	2 322	1 808	1 353	194	1 147	9 001
Craftsman	145	320	436	247	51	-	-	40	1 239
Operative/Unskilled	-	146	179	-	-	-	-	5	330
Total	291	1 143	2 049	2 807	2 059	2 006	1 060	1 556	12 971

Figure 2.3 (a & b) : Distribution of Employees by Total Monthly Income Range

(a) Metal Products and Related Industries



(b) Jewellery Industry



Employers' Views on the Expected Change in Business Situation for the Coming Year

2.10 The survey revealed that 51.6% of the employers in the metal products & related industries and 76.7% of the employers in the jewellery industry had forecasted that the business situation would be the same in the coming year. However, 42.9% of the employers in the metal products & related industries had forecasted that the business situation would be worse in the coming year. The distribution of employers' views is shown in Table 2.5:

Table 2.5 : Distribution of Employer's Views on the Business Situation in the Coming Year

Employment Size	Business Situation in the Coming Year				
	Better	Same	Worse	Unspecified	Total
(a) Metal Products and Related Industries					
1 – 9	182	2 928	2 811	10	5 931
10 – 49	144	570	213	1	928
50 & Over	48	144	7	4	203
All	374 (5.3%)	3 642 (51.6%)	3 031 (42.9%)	15 (0.2%)	7 062 (100.0%)
(b) Jewellery Industry					
1 – 9	81	2 481	601	44	3 207
10 – 49	24	431	131	-	586
50 & Over	4	17	3	-	24
All	109 (2.9%)	2 929 (76.7%)	735 (19.3%)	44 (1.2%)	3 817 (100.0%)

Preferred Education, Mode of Training and Period of Training of Employees

2.11 The majority views of employers on the preferred education, mode of training and period of training of their employees are shown in Table 2.6. Details are given in Appendices 8, 9 and 10.

Table 2.6 : Preferred Education, Mode of Training and
Period of Training of Employees in the Metals Industry

Job Level	Preferred Education	Preferred Mode of Training	Preferred Period of Training
Technologist/ Managerial	Degree/ Higher Diploma	Graduate traineeship/ On-the-job training	2 years or above
Technician/ Supervisory	Higher Diploma/ Higher Certificate	On-the-job training	1 - 3 years
Craftsman	Craft Certificate/Secondary school education	On-the-job training/ Apprenticeship	1 - 2 years

Internal Promotion

2.12 In the twelve months prior to the survey, a total of 149 employees were promoted to higher level jobs in their own companies. Their distributions in each job level are shown below:

Table 2.7 : Internal Promotion in the Metals Industry

Internal Promotion	No. of Employees Promoted (a)	No. of Employees at the Promoted Level (b)	Percentage $\frac{(a)}{(b)} \times 100\%$
From Technician/Supervisor to Technologist/Manager	112	8 391	1.3%
From Craftsman to Technician/Supervisor	28	24 137	0.1%
From Other Levels to Craftsman	9	7 446	0.1%
Total	149	39 974	0.4%

Employees Deployed to Work Outside Hong Kong

2.13 Employers reported the following number of employees who had been deployed to work outside Hong Kong more than 6 months during the 12 months prior to the survey:

Table 2.8 : Number of Employees Deployed to Work outside Hong Kong in the Metals Industry

Job Level	No. of Employees Deployed to Work Outside Hong Kong (a)	Total No. of Employees at Same Job Level (b)	Percentage $\frac{(a)}{(b)} \times 100\%$
Technologist/Managerial	1 033	8 391	12.3%
Technician/Supervisory	909	24 137	3.8%
Craftsman	261	7 446	3.5%
Total	2 203	39 974	5.5%

Establishments with Operations in Chinese Mainland

2.14 The survey revealed that in the metals industry, there were 991 establishments (1 106 in 2010 survey) with active operations in the Chinese Mainland and they employed some 110 042 Mainland workers (245 351 in 2010 survey). Among these workers, 4 242 were technologists (7 725 in 2010 survey) including managers responsible for technical work. Employers also forecasted that the number of Mainland technologists in their Mainland operations would increase to 4 254 by June 2013 (7 898 by June 2011 in 2010 survey).

SECTION III

CONCLUSIONS

3.1 The Training Board has carefully examined the survey findings and is of the view that they generally reflect the employment situation of the metals industry at the time of the survey.

Manpower Changes by Job Level

3.2 The survey revealed that the manpower of the metal products and related industries (Sector A) had increased at an annual rate of 7.3% from 26 507 employees in June 2010 to 30 501 employees in June 2012 (for comparison, in the 2010 survey, there was an annual decrease of 7.5% from 30 948 employees in June 2008 to 26 507 employees in June 2010). The manpower of the jewellery industry (Sector B) had slightly increased at an annual rate of 1% from 12 706 to 12 971 employees during the same period (for comparison, in the 2010 survey, there was an annual decrease of 1.8% from 13 186 employees in June 2008 to 12 706 employees in June 2010). Table 3.1 shows the manpower changes by job level of the two major sectors of the metals industry between 2010 and 2012:

Table 3.1: Manpower Changes by Job Level
between 2010 and 2012

Job Level	No. of Employees		Change Per Annum
	June 2010	June 2012	
(a) Metal Products and Related Industries			
Technologist/Managerial	5 498	5 990	+4.4%
Technician/Supervisory	11 959	15 136	+12.5%
Craftsman	5 782	6 207	+3.6%
Operative/Unskilled	3 268	3 168	-1.5%
Total	26 507	30 501	+7.3%
(b) Jewellery Industry			
Technologist/Managerial	1 326	2 401	+34.6%
Technician/Supervisory	9 779	9 001	-4.1%
Craftsman	1 142	1 239	+4.2%
Operative/Unskilled	459	330	-15.2%
Total	12 706	12 971	+1.0%

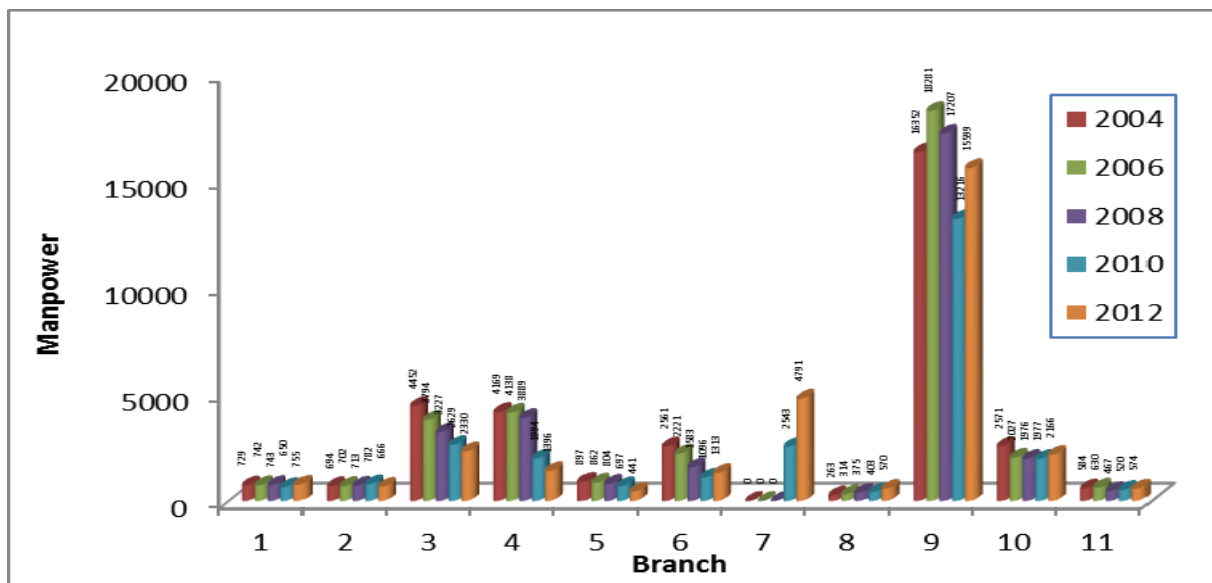
3.3 The survey revealed that for the metal products and related industries, there was a significant increase (12.5%) in the number of technicians/supervisors and some increases in the number of technologists/managers (4.4%) and craftsmen (3.6%) during the past two years. As regards the jewellery industry, the slight increase in manpower was a result from the combination of a substantial increase (34.6%) in the number of technologists/managers and a significant decrease (-15.2%) in the number of operatives.

Manpower Changes by Branch

3.4 The scope of the manpower surveys of the metals industry has been expanded significantly to include more branches of the industry since the survey conducted in 2004. Figures 3.1(a) and 3.1(b) show the manpower changes by branch of the two major sectors of the metals industry between 2004 and 2012.

Figure 3.1(a): Manpower Changes by Branch
between 2004 and 2012

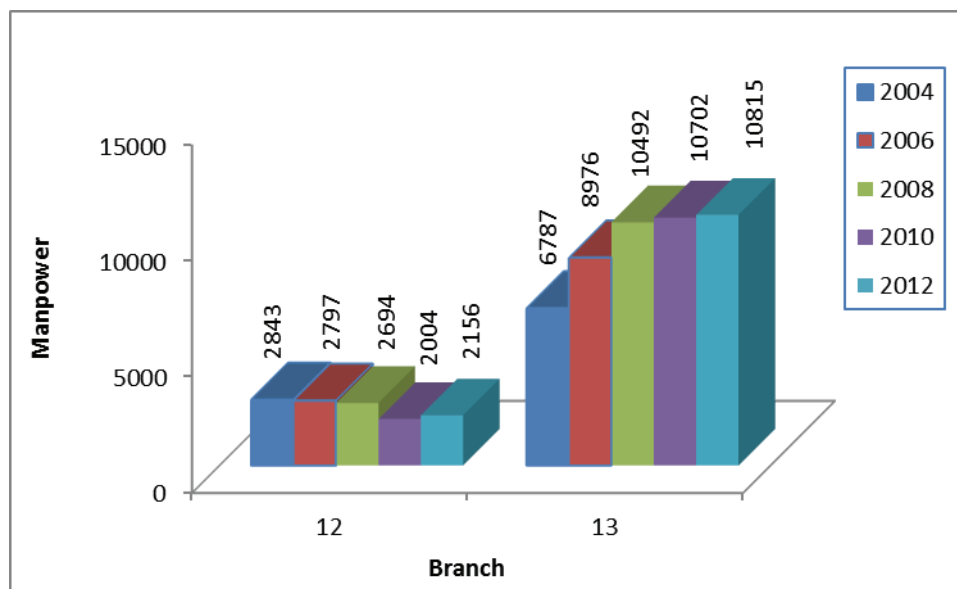
Sector A: Metal Products and Related Industries



- | | |
|----------|---|
| Branch : | 1. Plant maintenance section of food, beverage and tobacco manufacturing industries |
| | 2. Manufacture of basic metals |
| | 3. Manufacture of fabricated metal products (except machinery and equipment) and metal toys |
| | 4. Manufacture of machinery and equipment |
| | 5. Manufacture of medical equipment |
| | 6. Manufacture of electrical equipment |
| | 7. Repair and installation of machinery and equipment |
| | 8. Manufacture of watches and clocks |
| | 9. Wholesale, import/export trading of machinery, equipment, watches and clocks |
| | 10. Engineering services related to Metals industry including material testing, metallurgist, process development/testing, production line consulting/design, and quality control |
| | 11. Supplementary samples – Relevant division/department in training/education institutions |

Figure 3.1(b): Manpower Changes by Branch
between 2004 and 2012

Sector B: Jewellery Industry



Branch :	12.	Manufacture of jewellery, bijouterie and related articles
	13.	Wholesale, import/export trading of jewellery, bijouterie and related products

3.5 As shown in figure 3.1(a), the branch of “wholesale, import/export trading of machinery, equipment, watches and clocks” (Branch 9), which employed about 50% of the total manpower in the metal products and related industries, had experienced significant increase in manpower from 13 216 in June 2010 to 15 599 in June 2012. That represents an average increase of 8.6% per annum.¹

3.6 Another branch also experienced significant increase in manpower is the branch of “repair and installation of machinery and equipment” (Branch 7), with increase in manpower from 2 543 in June 2010 to 4 791 June 2012. That represents an average increase of a whopping 37.3% per annum.

3.7 On the other hand, the branches of “manufacture of basic metals” (Branch 2 – decrease in manpower from 782 in June 2010 to 666 in June 2012), “manufacture of fabricated metal products (except machinery and equipment) and metal toys” (Branch 3 – decrease in manpower from 2 629 in June 2010 to 2 230 in June 2012) and “manufacture of machinery and equipment” (Branch 4 – decrease in manpower from 1 994 in June 2010 to 1 396 in June 2012) had experienced significant decrease in manpower during the past two years.

¹ In the 2010 survey, this number had dropped from 17 207 in 2008 down to 13 216. However, part of the decrease was caused by “branch reorganization”, viz., some employees originally classified under this Branch had been “regrouped” under Branch 7.

3.8 As manpower for these three manufacturing branches (Branch 2, Branch 3 and Branch 4) continued to dwindle, it indicates that the re-structuring process for the metals industry in Hong Kong (i.e., transformation from production based/labour intensive mode of operation to value-added/quality-emphasized mode of operation, such as championed/niched at financial management, sales and marketing, R&D, design, brand development, pre-sales and post-sales support etc.) would still continue.

3.9 Moreover, as the total number of establishment in the metals industry remained steady (around 15 000 to 16 000 in number for the 2006, 2008, 2010 and 2012 surveys) and the number of persons of other disciplines, such as accounting officers and clerks, working in the metals industry had experienced significant increase in number (35 165 in June 2008 and 35 218 in June 2010, and then increase to 47 129 in June 2012), it indicates that the metals industry (especially those in Branch 7 and 9) had not only recovered from the 2008-09 doldrums but also experienced expansion both in terms of scopes as well as activities, which largely value-added / “quality-emphasized” in nature.

3.10 Regarding the jewellery industry (Sector B), manpower in both the branches of jewellery manufacture branch (Branch 12) and jewellery wholesale, import/export trading branch (Branch 13) recorded slight increases: from 2 004 and 10 702 in June 2010 to 2 156 and 10 815 in June 2012 respectively (Figure 3.1(b)). This was attributable to an expansion of the local market including sales to tourists and the rapid economic development in China, which had stimulated the business and consumer activities in the jewellery industry. Besides, it was also attributable to a gradual establishment of brand names and images (with respect to astute and outstanding astute product design and reliable product quality) for the jewellery products which are “made in” and/or “made by” Hong Kong.

Business Outlook

3.11 Owing to the combined strenuous efforts by the employers and employees in the metals industry (including the jewellery sector) during the past few years, with the former incessantly and continuously investing in people, machinery and technology; and the latter industriously and devotedly striving for quality and continuous improvement, the metals industry had not only recovered from the 2008-09 doldrums but also made significant expansion (as shown from the survey figures) during the past two years. However, it is foreseen that the industry would continue to encounter and have to overcome some more challenges ahead in the ensuing years.

3.12 The global economy has been recovering fast after the 2008 financial tsunami. However, the recovery has not been long lasting, as indicated by the Baltic Dry Index (BDI).² The BDI had “recovered” from its lowest ebb of 663 in December 2008 (caused by the

² The Baltic Dry Index (BDI) is a number issued daily by the London-based Baltic Exchange, which provides “an assessment of the price of moving the major raw materials by sea” and is considered by many economic experts as a leading economic indicator of “future” economic growth and production. In other words, it is one of a widely adopted leading indicators for predict business/economic outlook.

financial tsunami) and then bounced back and overshot to reach its “peak” of 11 771 in early 2009. It has since been gradually staggering downwards and in February 2012, it hit another “all-time-low” record of 647 and then again, hit two other low ebbs of 661 and 698 in September 2012 and December 2012 respectively. The index “rose” a little bit in 2013 (in March 2013, it was recorded at around 900), but it appears that the global economy does not seem to fare well in the next couple of years, as indicated by the BDI.

3.13 On the other hand, quite a number of economic/financial experts including the World Economic Outlook (WEO) have projected that the global economic growth would continue to increase, but at a slower pace than before. This increase is triggered by the fact that many of the factors underlying soft global activity are expected to subside. Nevertheless, the extent of growth is largely determined by the effectiveness of the policy actions undertaken by the European nations and the United States to prevent/lower any risk of further acute economic crises, but that encompasses lots of uncertainties. Japan has already been slid into recession, but it is foreseeable that its government would continue to provide stimulus to boost growth in the coming future. For some of the countries in the emerging markets such as China, India, Russia, Eastern Europe and Latin American etc., it is expected that their governments would stick to policies for a modest growth “pickup”, nonetheless, many other countries in the emerging markets would have to struggle with weak external demand and domestic bottlenecks. In essence, if the risk of major crises does not “materialize” and the financial conditions are to improve smoothly and continuously, it is expected that global economic growth would be moving up at a much faster pace. However, in case policy actions are found to be ineffective, then probably, downside risks, such as renewed “setbacks” in the euro area (for example, the recent crisis in Cyprus) and/or near-term fiscal consolidation in the United States might set in and cast adversely affect the current growth trend.

Sector A: Metal Products and Related Industries

3.14 As a result of the rapid economic development of China and the established collaboration between Hong Kong and the Pearl River Delta (PRD), local manufacturers have the opportunities to expand their scale of operations and upgrade their manufacturing capabilities in the past two decades. Since the mid-1990s, manufacturing enterprises based in Hong Kong with production operations in Guangdong have also gradually expanded their operations to the Yangtze River Delta (YRD) region. Apart from being end-product producers, the metal products and related industries also serve as linkage industries by providing moulds and dies, parts and components, machine maintenance and technical services for other industries. With the continued economic development in the Mainland during the past two decades, Hong Kong manufacturers have been enjoying growth and success in production operations in China.

3.15 However, the business environment in China has undergone great changes in recent years, which were brought about by the Mainland’s introduction of the Labour Contract Law, the Enterprise Income Tax Law, the Environmental Protection Initiatives and the adjustments in process trade policies; together with the appreciation of RMB, shortage of labour supply in the Mainland, soaring raw material costs and fierce competitions from the emergence of local enterprises, which compete mainly on cost advantages. All these

environmental changes have substantially increased the operation cost and pose hardship for the Hong Kong manufacturers to continue their manufacturing operations in China. It is also revealed from the current and the previous surveys (conducted in 2012 and 2010 respectively) that the number of enterprises/companies with active operations in Mainland China is decreasing from 2 847 (employing 487 400 mainland workers) in June 2008, down to 1 106 (employing 245 351 mainland workers) in June 2010 and further down to 991 (employing 110 042 mainland workers). From the figures, it is obvious that some of Hong Kong's less effective manufacturers have been competed out of business.

3.16 To cope with these challenges, many Hong Kong manufacturers are making continuous improvements in order to sustain their competitive advantages and beat down competitors through “differentiation”, such as making breakthroughs in product design and innovation, maintaining a high standard of product quality, cutting down wastages and enhance supply chain management. Besides, many employers continue to invest in modernizing their machinery and equipment to enhance productivity and quality, as well as commit to upgrade and train up their manpower resources (both technical, managerial) to sustain their competitive edges in product & engineering design, operation processes and also, in other largely neglected but important areas/issues, such as work ethics and attitude. On the other hand, some of the employers, particularly those in the watches and clocks industries and the optical goods industries have relocated part of their activities, such as the production branch on value-added processes back to Hong Kong.

3.17 Amidst so many uncertainties and “unpredictable”, there is indeed a high demand for high quality tooling, industrial machinery, equipment and parts as well as technical-support, manufacturing-related services, as well as rising demand on product and engineering design, sales and marketing workforce with good business and costing concept and familiar with production and workflow processes, as evidenced by the survey results. In view of the above, the Training Board opines that the metal products and related industries, in particular, the wholesale and import/export trading branch which used to employ about 50% of the manpower in this sector, will continue to play an important role and make valuable contributions to the further development of the manufacturing industries both in Hong Kong and the Mainland.

Sector B: Jewellery Industry

3.18 Hong Kong is one of the largest exporters of fine jewellery amongst Italy, the US and Switzerland and it is the second largest exporter of imitation jewellery in the World. Hong Kong is also the leader in the production of pure gold items and jade jewellery and has recently evolved into a leading trading and distribution centre for pearls. Over the years, jewellery exports from Hong Kong are on the rise. In 2012, total export value of jewellery, goldsmiths' and silversmiths' wares, and other articles of precious or semi-precious materials (SITC 897) was amounted to HK\$62 186 million, which was about 12% higher than that of 2011.³ Details of the export values between 2005 and 2012 are shown in Table 3.2 and Figure 3.2.

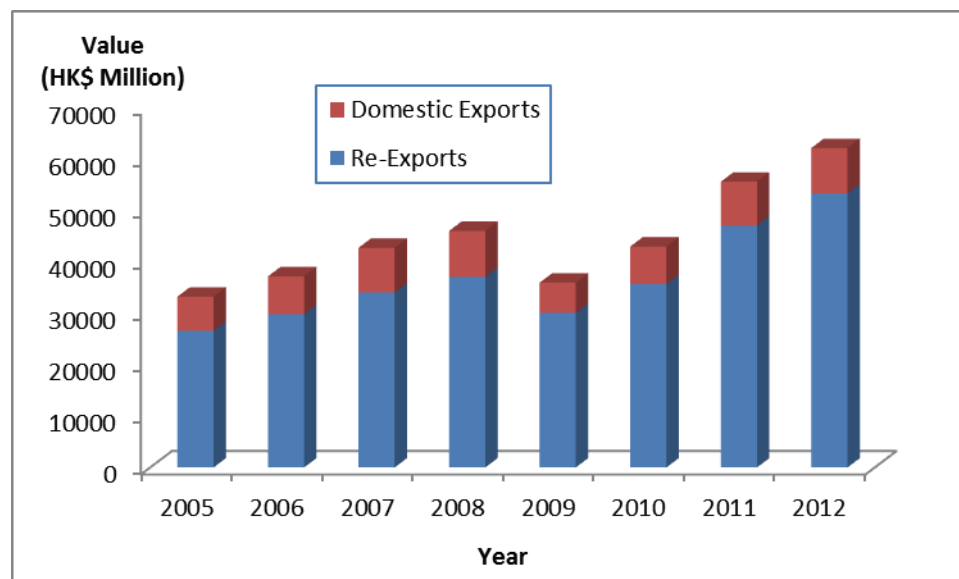
³ If pearls and precious or semiprecious stones, unworked or worked (SITC 667) is also included, the total export value in 2012 would be amounted to \$117 805 million.

Table 3.2: Export Value of Jewellery Products
(SITC 897)

Jewellery Products (SITC 897)	Value (HK\$ Million)							
	2005	2006	2007	2008	2009	2010	2011	2012
Domestic Exports	6 642	7 376	8 705	8 978	5 884	7 320	8 492	8 821
Re-Exports	26 607	29 820	34 049	37 064	30 084	35 671	47 118	53 365
Total Exports	33 249	37 196	42 754	46 042	35 968	42 991	55 610	62 186

Source: Hong Kong External Merchandise Trade, Census and Statistics Department and the Hong Kong Trade Development Council

Figure 3.2: Export Value of Jewellery Products



3.19 However, Hong Kong's jewellery exporters are facing ever-intensified competition from their counterparts in the Chinese Mainland and other countries, particularly India and Thailand.⁴ Together with the price fluctuation of precious metals, diamonds, precious stones and materials, exports' profit margins have been trimmed down in recent years. In order to

⁴ For example, Thailand has surpassed Hong Kong to become the largest jewellery exporter in Asia last year (i.e., 2012).

sustain their competitive edges, many manufacturers have opted for “differentiation” through investing and applying sophisticated and automated production equipment, including computer-aided design and manufacturing (CAD/CAM) systems, rapid prototyping and computer numerically controlled (CNC) machine tools, in their product design and manufacturing processes. They also integrate advanced production techniques, such as electroforming, with handicraft skills to further enhance their efficiency.

3.20 Under the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), the Mainland has given all products of Hong Kong origin, including jewellery, tariff-free treatment starting from 1 January 2006. The zero import tariff preference has attracted Hong Kong jewellery manufacturers to move up-market in producing more brand name products, or applying more manufacturing processes with high value-added content or substantial intellectual property input. However, to benefit from CEPA's tariff, moulding of precious metals; moulding and setting of pearls, precious/semi-precious stones for jewellery articles, which are identified as the principal process for the purpose of delineating their origin, are required to be carried out in Hong Kong. Besides, assembling is also required to be done in Hong Kong. As a consequence, although many Hong Kong jewellery manufacturers have already shifted their production processes to the Chinese Mainland, mainly in Shenzhen and Panyu, the value-added processes including moulding of precious metals; moulding and setting of precious metals, pearls, precious/semi-precious stones are still retained in Hong Kong. Besides, some Hong Kong manufacturers are keen on preserving their brand image as well as upholding the quality, reliability and uniqueness of “made in/by Hong Kong” products and therefore, they have relocated some of their core product design functions and/or value-added operations back to Hong Kong.

3.21 The impact of the RMB's appreciation on the jewellery industry is modest compared with other industries because the Mainland only accounts for a relatively small part of a jewellery article's value. The most valuable parts of the jewellery products are primarily imported into the Mainland for export processing. On the other hand, Chinese government's previous policy on encouraging consumption had shored up the purchasing power and import appetite of Chinese residents, and this has indeed facilitate the sales of jewellery articles to the mainland, as well as retail sales in Hong Kong contributed by the influx of Chinese visitors over the recent years. However, the recent policy by the Chinese government to curb lavish spending by the government officials might temporarily cool off the “overheated” consumption temperament in the mainland, which might potentially pose some challenges to the jewellery exporters in Hong Kong.

3.22 The Training Board is highly convinced that China's vitality would continue. With the increased Mainland visitors coming to Hong Kong and RMB's appreciation, it is envisaged that further business growth in the jewellery industry would continue to flourish in the coming years, albeit overshadowed by some potential and unpredictable challenges.

Future Manpower Demand

3.23 Having considered the latest developments as well as the employers' forecast of future manpower requirements and their views on the expected change in business situation,

the Training Board opines that in the years ahead there will be an on-going demand for properly trained technologists, technicians and craftsmen to sustain the development of the metal products and related industries and to stave off keen competition. In particular, demand on competencies in technology and product & engineering design, sales/marketing and production processes is high. Most of these technical personnel would be employed by the repair and installation, wholesale and import/export trading branches to provide marketing and after sales repair & maintenance services to the machinery and equipment installed in the manufacturing establishments. However, demand for operatives/unskilled workers will further decrease.

3.24 As regards the jewellery industry, the Training Board is of the view that the jewellery wholesale and import/export trading branch will continue to enjoy growth in the coming years, while the jewellery manufacturing branch will continue to contract. There will be a high demand for jewellery manpower at the technologist and technician levels for design and development, marketing and sales for export-oriented activities in Hong Kong. However, the demand for additional craftsmen for production related jobs would be limited, and the number of operative/unskilled workers will further decrease.

3.25 The Training Board has also estimated the loss of manpower at different job levels due to natural wastage, i.e. workers leaving the metals industry through retirement, migration to other industries and other causes. The Training Board has decided that the annual wastage rates for most of the job levels should remain unchanged at 3% except for craftsmen level in the metal products and related industries, which should be adjusted to 5%, as aging of existing employees in this sector has become an issue in recent years.

3.26 The Training Board's forecast of the additional manpower required by the metals industry to cover both wastage and growth from 2013 to 2016 is given in Table 3.3 below:

Table 3.3: Annual Manpower Demand in the Metals Industry from 2013 to 2016

Job Level	Annual Average Additional Demand for Employees	
	<u>Sector A</u> Metal Products and Related Industries	<u>Sector B</u> Jewellery Industry
Technologist/Managerial	113 – 138	375 – 459
Technician/Supervisory	898 – 1 098	155 – 189
Craftsman	308 – 376	27 – 33

3.27 The Training Board will conduct another manpower survey in 2014 to update the manpower statistics and review the training requirements of the metals industry.

SECTION IV

RECOMMENDATIONS

4.1 Hong Kong employers (particularly manufacturers) in the metals industry (also including the jewellery sector) have been successful in expanding their production operations into the Pearl River Delta (PRD) in the past twenty years, and this has resulted in a sophisticated division of labour between their PRD and Hong Kong operations. While the labour intensive production activities are relocated and carried out by the PRD factories, the Hong Kong headquarters perform the value-added functions such as financial management, sales and marketing, R&D, design and brand development. The above transformation of the Hong Kong manufacturing industry had led to a major restructuring of the local manpower resources, resulting in a significant reduction in the number of production-related craft and operative jobs, and an constant demand for manpower in manufacturing-related services such as technical support, marketing, tooling, product design and development during the past two decades. However, with the rapid changes in business environment in China in recent years, Hong Kong employers have been under tremendous challenges and pressure to upgrade their manpower in order to stay competitive.

4.2 To cope with the surmounting challenges, many Hong Kong manufacturers are making continuous improvements in order to sustain their competitive advantages and beat down competitors through “differentiation”, such as making breakthroughs in product design and innovation, maintaining a high standard of product quality, cutting down wastages and enhancing supply chain management. Besides, many employers continue to invest in modernizing their machinery and equipment to enhance productivity and quality, as well as commit to upgrade and train up their manpower resources to sustain their competitive edges not only in terms of technical and/or managerial aspects but also in other largely neglected but important areas, such as work ethics and attitudes. On the other hand, some employers, particularly those in the watches and clocks industries and the optical goods industries have relocated part of their activities, such as the production branch on value-added processes back to Hong Kong.

4.3 In view of the above challenges, the Training Board recommends that employers in the metals industry must step up their training efforts to ensure an adequate supply of properly trained manpower to meet the developing need of the industry, especially in the areas of product design & innovation, value-added production, costing, operation management and logistic & supply chain management, work ethics and attitudes. To develop quality and value-added products and services, abundant supply of well-trained staff is required. Therefore, employers should plan and seek for organized training for their employees to upgrade and update the latter’s knowledge and skills from time to time, in addition to investing in sophisticated machinery and equipment. They should also provide long-term career development and training opportunities to help retain staff and reduce staff turnover and wastage rate. Moreover, as it is possible that some of the production processes might gradually be migrated back to Hong Kong in the longer term, it is recommendable that plans and provisions for corresponding recruitment/training would have to be made.

4.4 Employees in the metals industry, in particular, the younger generation, should expand their horizons and tap emerging opportunities in the Chinese Mainland and/or other emerging markets. They should equip themselves with the relevant knowledge and skills for working in Hong Kong, the Mainland or possibly, other emerging markets. To remain competitive, they should also pursue lifelong learning, particularly participation in programmes and training schemes that will lead to recognized qualifications.

Annual Intake of Trainees

4.5 At the time of the survey, there were only 115 trainees in the metal products and related industries, and 11 trainees in the jewellery industry. Since it normally takes three to four years to train a trainee, it is evident that the present training efforts are insufficient to satisfy the industry's needs.

4.6 The Training Board recommends that the industry as a whole should embark on a training programme of a scale as set out in paragraph 3.26. A breakdown of the training requirements into various principal jobs is given in Appendices 11 and 12.

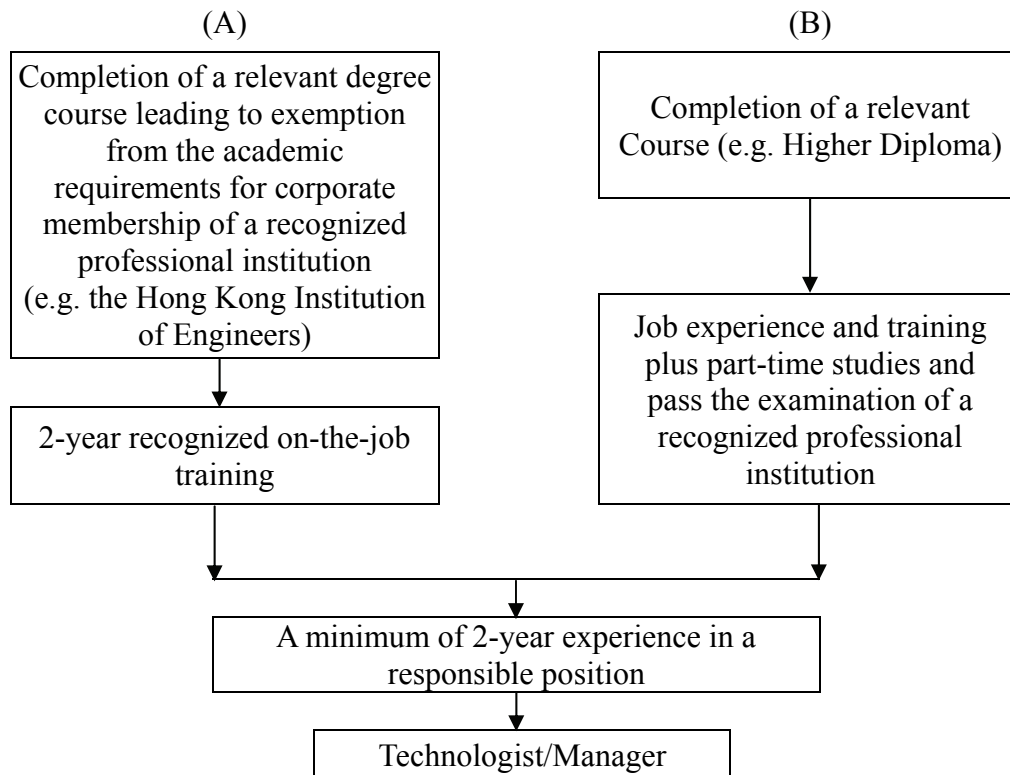
4.7 The recommended training routes for technologists/managers, technicians and craftsmen are outlined in the following paragraphs.

(a) Training in the Metal Products and Related Industries

Training of Technologists/Managers

4.8 Technologists/Managers play an important role in bringing about improvement in management and technological innovations. The Training Board recommends that they should be trained via the following routes:

Figure 4.1: Training of Technologists/Managers



4.9 A number of local educational institutions funded by the University Grants Committee (UGC) offer various degree courses in mechanical/manufacturing engineering and related disciplines. The following table shows the estimated number of graduates from these full-time engineering degree courses in 2012/13 and 2013/14:

Table 4.1: Estimated Number of Graduates from UGC-funded Institutions

Full-time Degree Programme	Estimated Number of Graduates	
	2012/13	2013/14
Mechanical Engineering	347	306
Manufacturing/Industrial/Systems Engineering & Engineering Management	400	403
Mechatronic Engineering	33	31
Materials Engineering	49	42
Total	829	782

4.10 The Hong Kong Institute of Vocational Education (IVE) of the VTC offers a range of higher diploma courses in the mechanical/manufacturing engineering and related disciplines. An UGC-funded institution also offers higher diploma programmes in industrial & systems engineering, computer aided engineering design, and product innovation technologies. The following table shows the estimated number of graduates from relevant full-time higher diploma courses offered by these institutions:

Table 4.2: Estimated Number of Higher Diploma Graduates

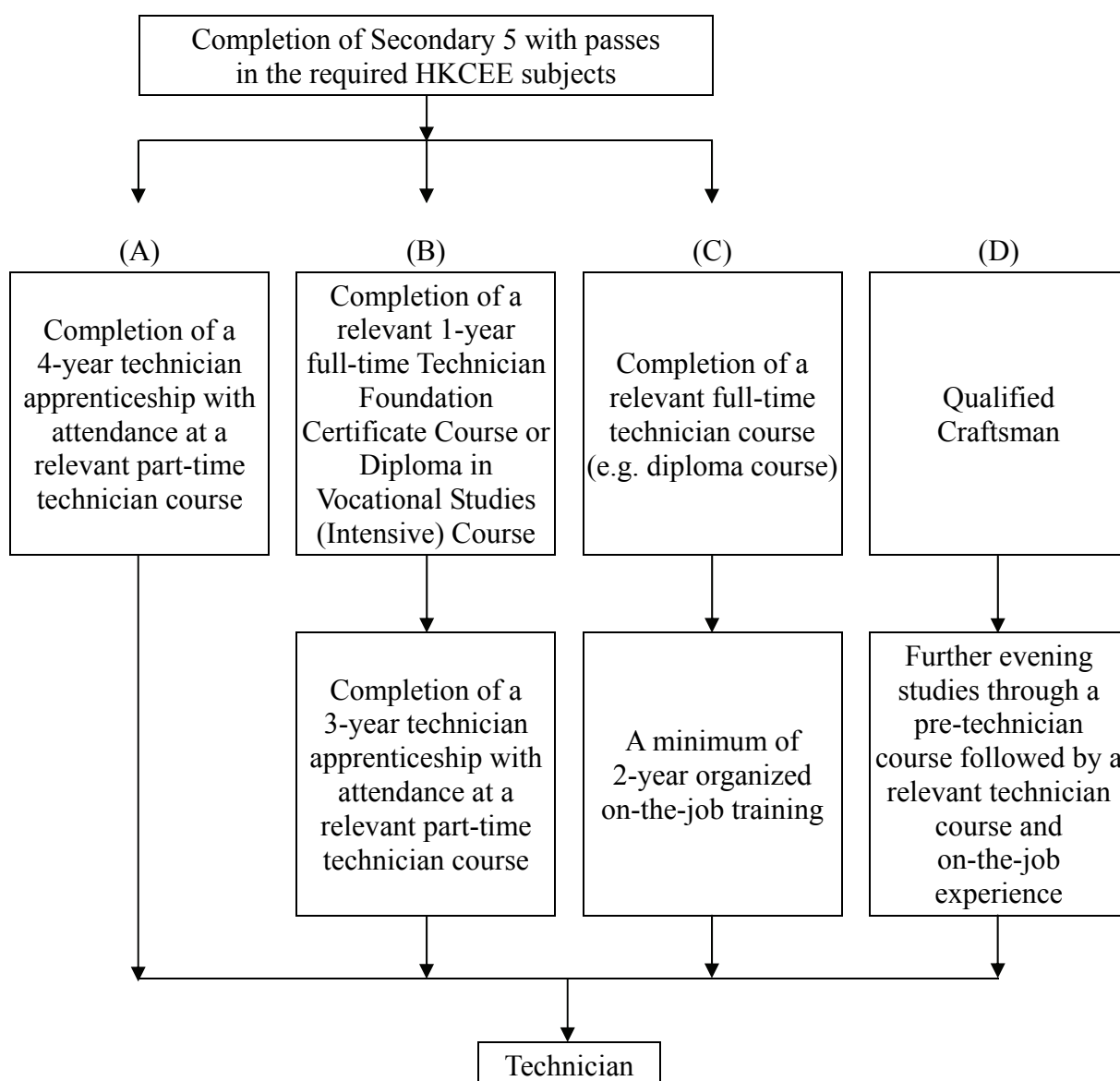
Full-time Higher Diploma Programme	Estimated Number of Graduates	
	2012/13	2013/14
Mechanical Engineering (including Computer-Aided Engineering Design)	166	366
Manufacturing/Industrial/Systems Engineering & Engineering Management	250	169
Product Design/Innovation/Engineering	260	229
Horological Science & Technology	40	32
Total	716	796

4.11 A large number of the degree and higher diploma graduates of the mechanical/manufacturing engineering and related disciplines are also employed by other economic sectors such as the electrical and mechanical services, construction and plastics industries. Many higher diploma graduates also enter jobs at the technician level, instead of technologist level.

Training of Technicians

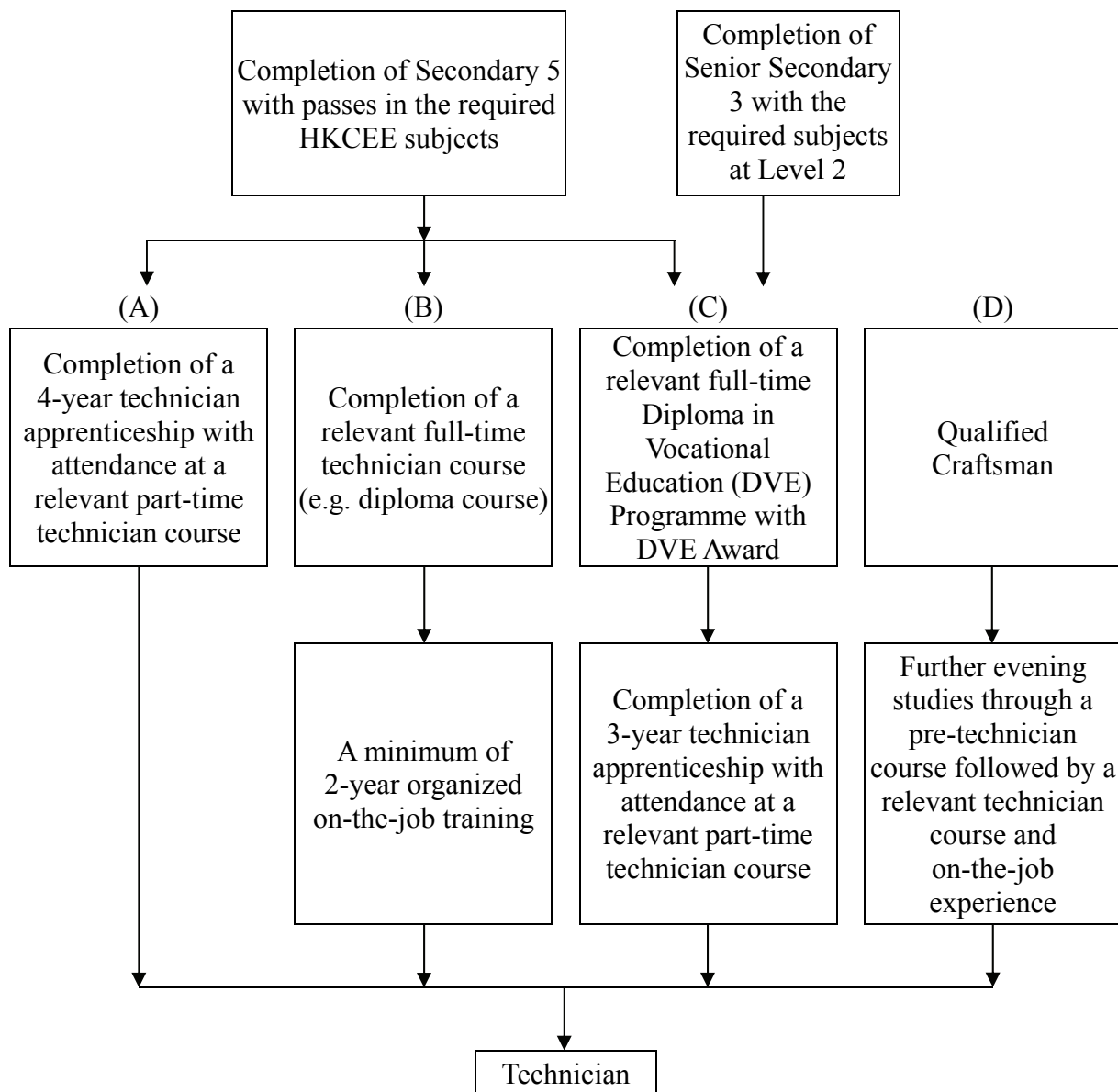
4.12 A technician is one who occupies a position between the technologist and the craftsman. His education, training and practical experience should enable him to apply proven techniques to solve technical problems. He is expected to carry a measure of technical responsibility, normally under the guidance of a technologist. Prior to the introduction of the “3+3+4” academic structure under the Education Reform and the development of the Qualifications Framework (QF), the routes available for training technicians are shown in Figure 4.2.

Figure 4.2: Training of Technicians
(Original Routes)



4.13 After the introduction the new “3+3+4” academic structure under the Education Reform and the development of the Qualifications Framework (QF), the new routes available for training technicians are shown in Figure 4.3.

Figure 4.3: Training of Technicians
(New Routes)

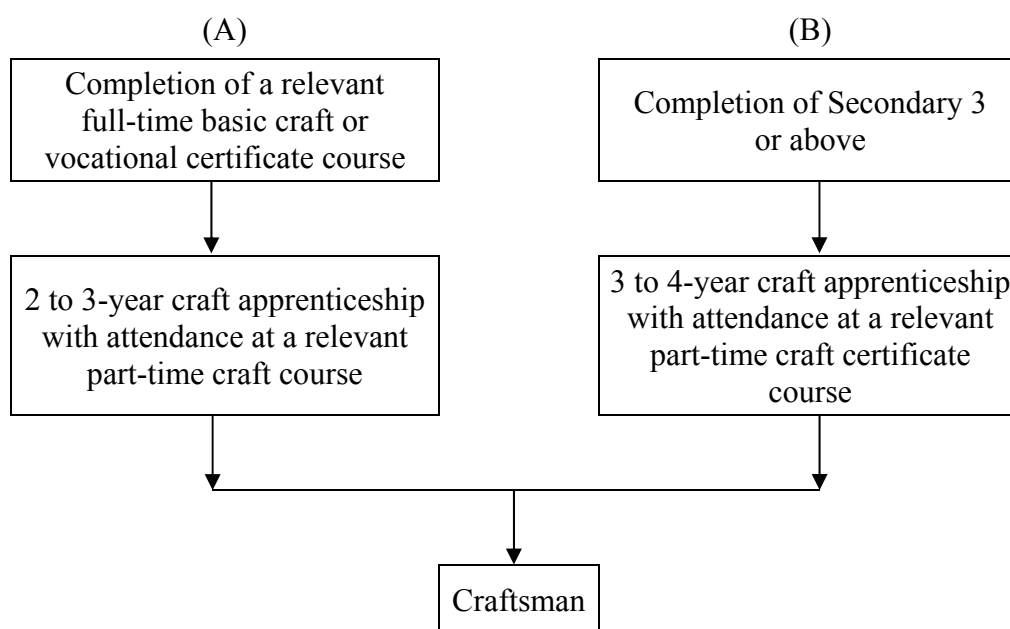


4.14 As mentioned in paragraph 4.11 above, many higher diploma graduates join the industry as technicians after completion of their courses, and they are an important source of technician supply for the metal products and related industries. The VTC, in particular, the Pro-Act Training and Development Centre (Mechanical) and the Pro-Act Training and Development Centre (Welding) also offer full-time and part-time Diploma in Vocational Education (DVE) Programme for Secondary 5 and/or Senior Secondary 3 School leavers. Total number of planned places for the DVE Programme in the Mechanical Engineering Stream is 220 in 2013/14. However, the DVE Programme is designed as a “multi-entry-multi-exit” programme. Therefore, not all of the trainees studying the DVE Programme would graduate with the DVE Award. Some of the students might opt to enter the employment market earlier by taking fewer subjects and graduate with the Basic Craft Certificate (BCC) Award and then continue to study part-time for the Craft Certificate Award.

Training of Craftsmen

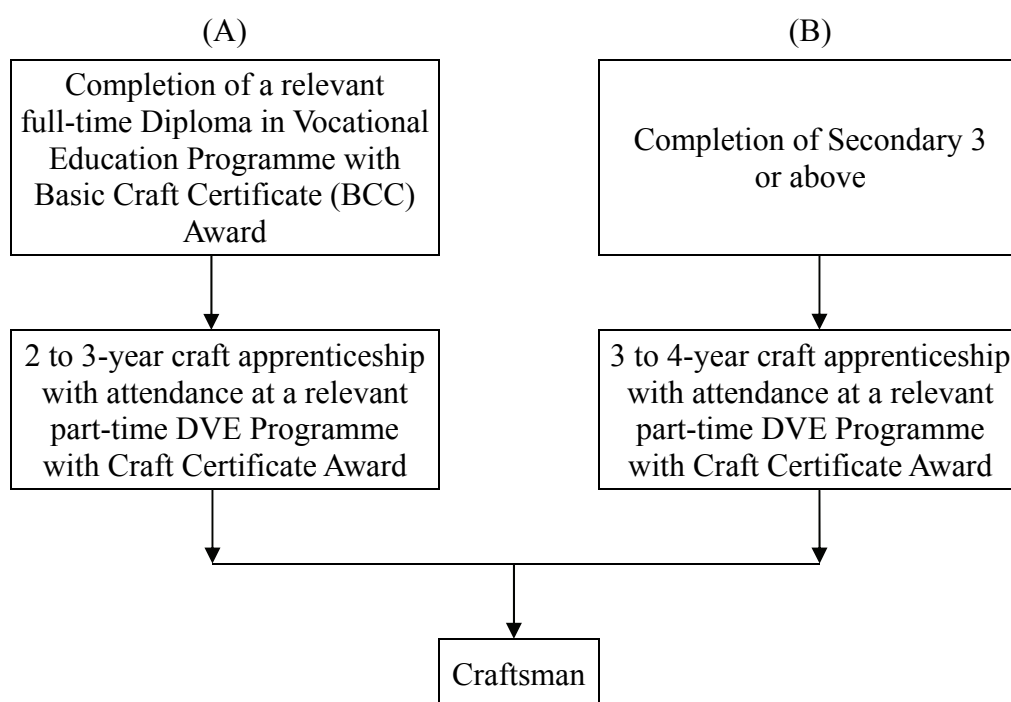
4.15 A craftsman is a skilled worker who is able to apply a wide range of skills to his work with minimum direction and supervision. He requires not only practical skills but also related theoretical knowledge to enable him to adapt himself to new technologies. A proper craft apprenticeship would contain both components. Prior to the introduction of the “3+3+4” academic structure under the Education Reform and the development of the Qualifications Framework (QF), the common routes available for training craftsmen are shown in Figure 4.4.

Figure 4.4: Training of Craftsmen
(Original Routes)



4.16 After the introduction the new “3+3+4” academic structure under the Education Reform and the development of the Qualifications Framework (QF), the new routes available for training craftsmen are shown in Figure 4.5.

Figure 4.5: Training of Craftsmen
(New Routes)



4.17 The Training Board recommends route (A) because the apprenticeship period is shorter and the apprentices have already undergone proper basic training and would be productive right from the start of their apprenticeship.

(b) Training in the Jewellery Industry

Training of Jewellery Technologists

4.18 Technologists in the jewellery industry should preferably be corporate member of an appropriate professional institution. Alternatively, they should preferably possess either a university degree or a higher diploma in jewellery or in design. They should have undergone a period of organized training and acquired sufficient experience in a responsible position. At the time of the survey, there were 2 401 technologists in the jewellery industry. Some received their education and subsequent practical training abroad. Some were experienced technicians promoted to technologists after acquiring additional professional qualifications.

4.19 Starting from the 2004/05 academic year, the Hong Kong Institute of Vocational Education (Lee Wai Lee) has offered a full-time higher diploma course in jewellery design and technology. The estimated number of graduates from this course are 60 for both 2012/13 and 2013/14. After completion of the higher diploma course, students can pursue further study in related degree courses offered by overseas universities.

Training of Jewellery Technicians

4.20 The recommended training routes of jewellery technician are similar to those shown in Figure 4.2 and Figure 4.3. Jewellery technician courses are offered by the VTC's Pro-Act Training and Development Centre (Jewellery). Previously, trainees were enrolled to the Centre's 1-year Technician Foundation Certificate in Jewellery Design & Manufacturing. Starting from 2007/08, the Centre had also offered a 1-year Intensive Diploma in Vocational Studies in Jewellery Arts and Design. The two 1-year jewellery technician courses also provided a total of about 110 training places from 2007/08 onward. Now, the Centre offers both full-time and part-time Diploma in Vocational Education (DVE) Programme for Secondary 5 and/or Senior Secondary 3 School leavers. Total number of planned places for the DVE Programme in the Jewellery, Arts & Design Stream is 180 in 2013/14. However, the DVE Programme is designed as a "multi-entry-multi-exit" programme. Therefore, not all of the trainees studying the DVE Programme would graduate with the DVE Award. Some of the students might opt to enter the employment market earlier by taking fewer subjects and graduate with the Basic Craft Certificate (BCC) Award and then continue to study part-time for the Craft Certificate Award.

Training of Jewellery Craftsmen

4.21 The training routes of jewellery craftsmen are similar to those described in Figure 4.4 and Figure 4.5. The Pro-Act Training and Development Centre (Jewellery) plays a key role in providing basic training for Secondary 3 school leavers to become apprentices/trainees in the jewellery industry. Previously, the Centre offers two 1-year Basic Craft Certificate (BCC) courses in goldsmithing and precious stone setting, as well as a 3-year Diploma in Vocational Studies (DVS) in Jewellery Arts and Design. Now the Centre offers both full-time and part-time Diploma in Vocational Education (DVE) Programme for Secondary 5 and/or Senior Secondary 3 School leavers.

Educational and Training Institutions

4.22 The VTC's Hong Kong Institute of Vocational Education (IVE), the Pro-Act Training and Development Centre (Jewellery), as well as several tertiary institutions offer a wide range of pre-employment and in-service training courses for workers in the metals industry. The Training Board strongly urges employers in the industry to make full use of the training facilities in these institutions by recruiting their graduates as apprentices/trainees and sponsoring employees to attend relevant upgrading courses.

Training Services of the Vocational Training Council

4.23 The Vocational Training Council offers free services to help employers organize training schemes including:

- (a) The statutory **Apprenticeship Scheme**, through which technicians and craftsmen are effectively trained to meet the

needs of the industry;

- (b) The **Engineering Graduate Training Scheme**, which helps engineering students and graduates complete their professional training as engineers;
- (c) The voluntary **Trade Testing and Certification Scheme**, which ascertains the standards of skilled workers; and
- (d) The **New Technology Training Scheme**, which provides financial assistance to local companies that wish to have their employees trained overseas or locally in new technologies. The maximum grant is 50% of the training cost.

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

金屬業

2012 年人力調查報告摘要

目的

職業訓練局屬下金屬業訓練委員會於 2012 年 6 月 11 日至 7 月 10 日期間進行人力調查，蒐集金屬業（包括珠寶業）最新的人力資料。

調查範圍

2. 是次調查覆蓋金屬業兩大範疇的 13 個門類：

行業 A：金屬品製造及相關行業

門類 1：食品、飲品及煙草製造業的廠房保養部門 (HSIC 101-108、110、120)

門類 2：普通金屬的製造 (HSIC 241-243)

門類 3：金屬製品（機械及設備除外）及金屬玩具的製造 (HSIC 251、259、3244)

門類 4：機械設備的製造 (HSIC 281-282)

門類 5：醫療設備的製造 (HSIC 266, 2672, 3251, 3259)

門類 6：電器設備的製造 (HSIC 271-275、279)

門類 7：機械及設備的維修及安裝 (HSIC 331-332)

門類 8：鐘錶的製造 (HSIC 2652)

門類 9：機械設備、鐘錶的批發及出入口貿易 (HSIC 451434, 451446, 451621, 451633, 451635, 451699, 451711, 452434, 452446, 452621, 452633, 452635, 452699, 452711, 460434, 460446, 460621, 460633, 460635, 460699 及 460711)

門類 10 : 與金屬有關的工程服務、包括物料測試、冶金服務、生產工序發展及測試、生產線顧問／設計及品質控制服務 (HSIC 712及719)

門類 11 : 補充樣本:訓練機構及教育院校的有關部門及學系

行業 B : 珠寶業

門類 12 : 珠寶首飾及有關物品的製造 (HSIC 321)

門類 13 : 珠寶首飾及有關物品的批發及出入口貿易 (HSIC 451432、451433、452432、452433、460432及460433)

(HSIC 代表香港標準行業分類)

3. 調查前，統計處錄得以上金屬業 13 個門類在全港約有 22 280 間機構。鑑於調查資源所限，本會採用了分層隨機抽樣法，選出 1 008 間作為調查樣本。所得數字其後用統計方法倍大，以反映業內整體人力情況。

調查結果

4. 調查顯示，2012 年 6／7 月間共有 **43 472** 人受僱從事金屬業主要職務。其中 **30 501** 人 (70.2%) 受僱於金屬品製造及相關行業，**12 971** 人 (29.8%) 從事珠寶業。兩大行業範疇各技能等級的人力分佈如下：

技能等級	僱員人數	佔整體僱員 人數百分率
(a) 金屬品製造及相關行業		
技師級／經理級	5 990	19.64%
技術員級／督導級	15 136	49.62%
技工級	6 207	20.35%
操作工級／非技術工人級	3 168	10.39%
總數	30 501	100.00%
(b) 珠寶業		
技師級／經理級	2 401	18.51%
技術員級／督導級	9 001	69.39%
技工級	1 239	9.55%
操作工級／非技術工人級	330	2.55%
總數	12 971	100.00%

受訓者人數及空缺數目

5. 調查期間，金屬品製造及相關行業有受訓者 115 人，空缺有 554 個；珠寶業有受訓者 11 人，空缺有 91 個。分佈如下：

技能等級	金屬品製造及相關行業					珠寶業				
	人力	受訓者		空缺		人力	受訓者		空缺	
		人數	佔人力 百分率	數目	佔人力 百分率		人數	佔人力 百分率	數目	佔人力 百分率
技師級／ 經理級	5 990	10	0.17%	44	0.73%	2 401	-	-	10	0.42%
技術員級／ 督導級	15 136	33	0.22%	245	1.62%	9 001	1	0.01%	77	0.86%
技工級	6 207	67	1.08%	144	2.32%	1 239	10	0.81%	2	0.16%
操作工級／ 非技術工人 級	3 168	5	0.16%	121	3.82%	330	-	-	-	-
總數	30 501	115	0.38%	554	1.82%	12 971	11	0.08%	91	0.70%

6. 按僱主對一年後的人力預測，2013年6月時金屬品製造及相關行業和珠寶業的僱員分別將有31 148人及13 112人，按技能等級分佈如下：

技能等級	2012年6月 僱員人數	預測2013年6月 僱員人數
(a) 金屬品製造及相關行業		
技師級／經理級	5 990	6 043
技術員級／督導級	15 136	15 447
技工級	6 207	6 368
操作工級／非技術工人級	3 168	3 290
總數	30 501	31 148
(b) 珠寶業		
技師級／經理級	2 401	2 411
技術員級／督導級	9 001	9 119
技工級	1 239	1 250
操作工級／非技術工人級	330	332
總數	12 971	13 112

業務前景

7. 全球經濟自2008年金融海嘯後快速復甦，但從波羅的海綜合指數[*BDI*]顯示，復甦勢頭並不持久。2008年12月*BDI*由金融海嘯時的663點「穀底」開始反彈飆升，至2009年初到達11 771點「高峰」。但之後一直反覆向下，至2012年2月更跌至創紀錄的647新低點。隨後數月*BDI*徘徊於低位，分別於2012年9月及2012年12月出現661和698的兩個低點。2013年3月間*BDI*稍見上升，一度錄得900點高位。但縱觀*BDI*走勢，似乎顯示未來幾年全球經濟發展將持續放緩。

8. 不少財經專家，如《世界經濟展望》[*World Economic Outlook, WEO*]等卻推斷全球經濟仍會繼續增長，但步伐將放慢。而經濟增長的幅度則需視乎歐美國家的減赤政策是否奏效，但中間存在很多不明朗的因素。另一方面，日本經濟持續衰退。但可預期日本政府將努力在未來數年繼續推出刺激經濟措施，期望能成功走出「穀底」。而中國、印度、俄羅斯、東歐和拉丁美洲等新興國家的政府亦將會繼續推行穩定的經濟增長政策，促進經濟發展。

行業 A： 金屬品製造及相關行業

9. 過去二十年來國內經濟發展迅速，香港製造商在國內的生產業務亦因此受惠，持續錄得佳績。近年國內引入多項新法規和監管條例，如《勞動合同法》、《企業所得稅法》及環保措施等，並同時收緊對企業營運的各項要求。加上近年人民幣升值、國內勞工短缺、原料成本急升、內地企業湧現。這一切令在國內營運的香港廠商成本大增之餘，同時亦要面對來自內地企業的激烈競爭。結果，一些營運能力稍遜的香港製造商已遭淘汰。餘下來仍在國內活躍於生產業務的香港製造商亦需面對不少挑戰。

10. 面對這種種挑戰，港商一直謀求對策，不斷更新進步，靈活運用「特色化」(differentiation) 策略，藉以保持競爭優勢。如創新產品設計、提升產品質素、減少資源浪費，並強化供應鏈管理，以別出心裁的營運方式擊敗競爭對手。不少港商更投放大量資金，令生產設備更為先進及現代化，從而提高生產力和產品質素；同時積級培訓人才，提升員工水準，務求加強競爭優勢。部分僱主甚至把某部分業務，如產品增值部門等從國內遷回香港。

11. 如統計顯示，在變幻莫測的業務環境中，業界對優質模具、工業機械、設備及零部件、技術支援、與製造相關的服務等人才有龐大需求；對產品及工程設計、能熟悉生產和工作流程並具營商及成本核算概念的銷售及推廣等人才需求亦有上升趨勢。

12. 本會認為，金屬品製造及相關行業，特別是機械設備、鐘錶的批發及出入口貿易門類（僱用本行業約 50%人力）將繼續扮演重要角色，對香港和國內製造業的進一步發展發揮寶貴貢獻。

行業 B： 珠寶業

13. 香港是世界最大的珠寶產品出口商和製造中心之一。不過，香港珠寶出口商亦面對來自中國內地及其他國家對手愈趨激烈的競爭，特別是印度和泰國，加上貴金屬、鑽石、寶石及原材料價格波動，邊際溢利近年已削弱。許多生產商為了保持競爭力，靈活運用「特色化」(differentiation) 策略，於產品設計及製造過程中引入先進精密及自動化生產設備，包括電腦輔助設計及製造 (CAD/CAM) 系統、快速原型技術及電腦數控 (CNC) 機床等。他們更進一步把先進生產技術，例如電鑄技術與人手工藝配合，進一步提升效率。

14. 內地與香港建立更緊密經貿關係的安排（CEPA）後，零進口關稅的優惠吸引製造商投向高消費市場，生產更多品牌產品，及於生產過程中引入更多高增值元素或原創設計。然而，CEPA 亦要求這些製品的主要生產工序須在香港進行，包括貴金屬製模工序、製造珠寶成品過程中的珍珠、寶石／半寶石製模／鑲嵌工序、裝嵌工序等。因此，儘管珠寶製造商把生產工序遷往深圳和番禺等內地廠房，但 CEPA 所要求的高增值工序仍需留在香港境內進行。而且，對品牌形象甚為著緊的部分港商，為確保其產品擁有由「香港製造」這品牌所具備的優秀特質（如產品可靠、設技獨特及品質精良等），亦將某些重要的設計工序及／或有增值工序的營運部門遷返香港。

15. 人民幣升值，加上中國政府先前鼓勵消費的政策，大大刺激人民的購買力及對進口商品的需求，多少有助珠寶製品銷往國內；近年內地訪港旅客大增，亦有助刺激本地珠寶零售業務。不過，近日中國政府遏抑官員奢華消費的措施或會暫時令國內過熱的消費情緒降溫，香港珠寶出口商的業務可能會面對一些潛在挑戰。

16. 本會深信中國經濟活力將會持續。儘管會有一些潛在挑戰，情況難測，但內地訪港旅客增加，加上人民幣升值，預期珠寶業未來將會繼續蓬勃增長。

未來人力需求

17. 本會從業界的最新發展，以及僱主對未來人力需求及業務轉變的預測等因素加入考慮後，認為未來金屬品製造及相關行業對幹練的技師、技術員及技工人才將續有需求，以應付未來發展並在劇烈競爭中站穩。當中以技術、產品及工程設計、銷售／推廣及生產工序方面的專才需求尤其大。預計大部分技術人員將受僱於技術支援／推廣／保養維修服務門類，為生產商提供機器和設備的市場推廣及售後維修保養服務。另一方面，操作工及非技術工人的需求卻會進一步下降。

18. 至於珠寶業，本會認為珠寶批發、出入口門類未來將持續增長，而珠寶製造門類將持續收縮。另一方面，以出口為主的業務將渴求設計及發展、市場推廣及銷售的技師／技術員級人力。然而，從事生產相關工作的技工需求增幅只屬有限，而操作工／非技術工人的人數將進一步下降。

19. 本會亦估計本業各職級的自然流失情況。自然流失指因退休、轉業或其他原因離開金屬業。預期本業大多數技能等級的每年流失率仍為 3%，不過，近年由於金屬品製造及相關行業的技工級僱員老化，須把該職級的每年流失率調整為 5%。

20. 本會預計，2013 至 2016 年為填補人手流失及應付業務增長，金屬業需增加人手如下表：

2013 至 2016 年
金屬業平均每年所需增加的人力

技能等級	平均每年需增加的僱員人數	
	行業 A 金屬品製造及相關行業	行業 B 珠寶業
技師級／經理級	113 - 138	375 - 459
技術員級／督導級	898 - 1 098	155 - 189
技工級	308 - 376	27 - 33

21. 本會將於 2014 年進行另一次人力調查，以更新金屬業的人力數據和檢討訓練需求。

第一章

緒論

金屬業訓練委員會

1.1 金屬業訓練委員會隸屬於職業訓練局[VTC]，是香港特區政府所委任的法定組織，負責所有金屬業（亦包括珠寶業）的人力訓練事宜。本會委員由主要行業商會、專業團體、工會、教育培訓院校提名出任，亦有政府部門代表。成員名單及職權範圍分別見附錄 1、2。

1.2 本會按職權範圍確定業內的人力需求，並向 VTC 建議發展專業教育與培訓設施，配合有關需求。

人力調查

1.3 本會於2012年6月11日至7月10日期間進行人力調查，蒐集金屬業的最新人力資料。是次調查由政府統計處協助進行。於2012年10月完成跟進工作，並於2012年11至12月進行數據處理。

1.4 是次調查蒐集下列人力數據及資料：

- (i) 調查期間業內主要職務的僱員人數；
- (ii) 現有空缺數目；
- (iii) 受訓人數；
- (iv) 僱主對2013年6月時的僱員人數預測；
- (v) 僱員每月平均收入
- (vi) 僱主對僱員宜有教育程度、訓練方式及訓練期的意見。

1.5 是次調查亦請僱主提供過去12個月內部晉升的技師／經理級、技術員／督導級及技工級人數，以及調查進行之前12個月內，派駐港外地區工作超過6個月的各級僱員人數。

調查範圍

1.6 調查覆蓋金屬業兩大範疇的13個門類：

行業 A：金屬品製造及相關行業

門類 1：食品、飲品及煙草製造業的廠房保養部門 (HSIC 101-108、110、120)

門類 2：基本金屬的製造 (HSIC 241-243)

門類 3：金屬製品（機械及設備除外）及金屬玩具的製造 (HSIC 251、259、3244)

門類 4：機械設備的製造 (HSIC 281-282)

門類 5：醫療設備的製造 (HSIC 266, 2672, 3251, 3259)

門類 6：電器設備的製造 (HSIC 271-275、279)

門類 7：機械及設備的維修及安裝 (HSIC 331-332)

門類 8：鐘錶的製造 (HSIC 2652)

門類 9：機械設備、鐘錶的批發及出入口貿易 (HSIC 451434, 451446, 451621, 451633, 451635, 451699, 451711, 452434, 452446, 452621, 452633, 452635, 452699, 452711, 460434, 460446, 460621, 460633, 460635, 460699 及 460711)

門類 10：與金屬有關的工程服務、包括物料測試、冶金服務、生產工序發展及測試、生產線顧問／設計及品質控制服務 (HSIC 712及719)

門類 11：補充樣本：訓練機構及教育院校的有關部門及學系

行業 B：珠寶業

門類 12：珠寶首飾及有關物品的製造 (HSIC 321)

門類 13：珠寶首飾及有關物品的批發及出入口貿易 (HSIC 451432、451433、452432、452433、460432 及 460433)

(HSIC 代表香港標準行業分類)

1.7 調查前，統計處錄得以上金屬業 13 個門類在全港約有 22 280 間機構。鑑於調查資源所限，本會採用了分層隨機抽樣法，選出 1 008 間作為調查樣本。所得數字其後用統計方法倍大，以反映業內整體人力情況。

調查方法

1.8 本會分別為行業 A (附錄 13、15 及 17)，以及行業 B (附錄 14、16 及 18) 設計調查表、附註及業內主要職務說明。大約在調查前一星期左右，本會將有關調查表、附註及工作說明寄予選出的 1 008 間機構。此外又透過本地報章宣傳調查工作，邀請僱主合作，亦請有關行業組織協助籲請其會員合作。

1.9 調查期間，統計處職員造訪所有 1 008 間選定機構，收集填妥的調查表，並在有需要時協助僱主填表。收回的調查表均經詳細審閱，有需要時與填表者複核，然後交由政府統計處處理。

受訪機構回應

1.10 1 008 間機構中，658 間填覆調查表，19 間拒絕作覆。其餘 331 間則或已搬遷、停業而無法跟查，又或不再從事本業。調查填覆率達 97.2 %。

調查報告

1.11 跟進實地調查及處理數據後，本會於 2013 年 3 月編寫調查報告，分析調查所得的人力數據。報告已上載職業訓練局網頁供公眾參考。

1.12 本報告載列調查結果、本會對培訓需求的預測，以及應付需求的建議。文中「僱員」、「工人」及「人力」等詞，指調查期間業內從事主要職務的人手，但不包括受訓者及學徒。「受訓者」指正在接受各種形式訓練的人士，以及簽有學徒訓練合約的學徒。

第二章

調查結果摘要

僱員數目

2.1 調查顯示，2012年6/7月間共有43 472人受僱從事金屬業主要職務。其中30 501人(70.2%)受僱於金屬品製造及相關行業(行業A)，12 971人(29.8%)從事珠寶業(行業B)。詳細的人力統計數字載於附錄3、4及5。

2.2 調查期間，金屬業亦有47 129名其他範疇的僱員，例如會計主任及文員。其中，38 093人(80.8%)受僱於金屬品製造及相關行業，9 036人(19.2%)受僱於珠寶業。

2.3 以下各段只顯示受僱於金屬業主要職務的人力情況。

各技能等級僱員人數分布

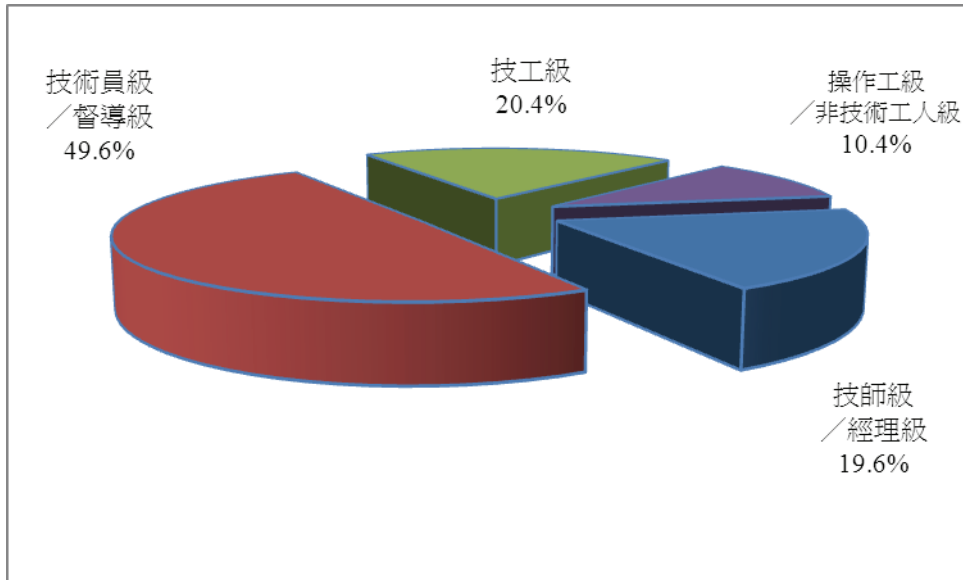
2.4 按技能等級劃分的各主要職務僱員人數分布列載於表2.1及圖2.1：

表 2.1： 僱員人數分布（按技能等級劃分）

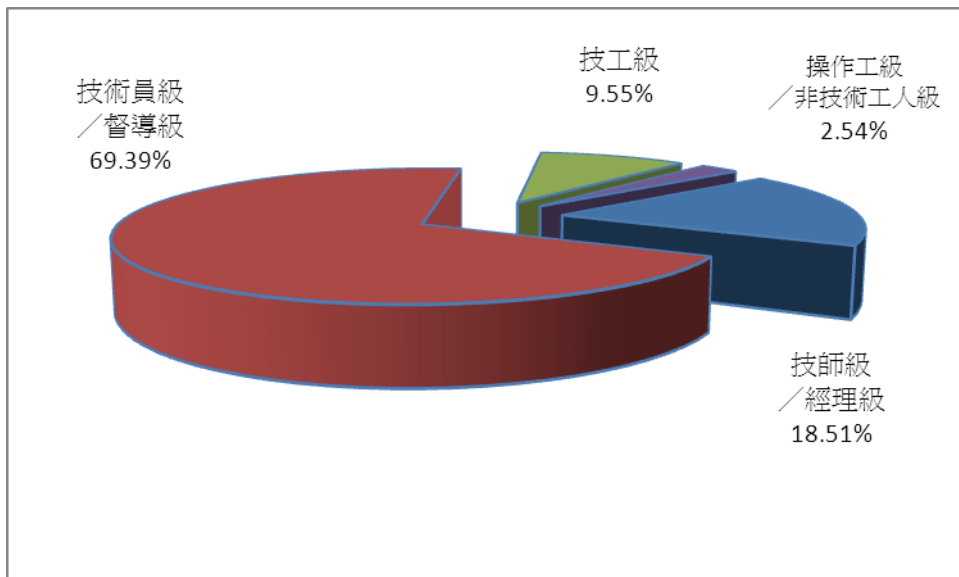
技能等級長	行業 A 金屬品製造 及相關行業	行業 B 珠寶業
技師級／經理級	5 990	2 401
技術員級／督導級	15 136	9 001
技工級	6 207	1 239
操作工級／非技術工人級	3 168	330
總數	30 501	12 971

圖 2.1 (a 及 b) : 僱員人數分布 (按能等級劃分)

(a) 金屬品製造及相關行業



(b) 珠寶業



受訓者人數

2.5 調查期間，金屬品製造及相關行業有受訓者 115 人，珠寶業有 11 人。詳細的受訓者統計數字載於附錄 3 及 5。按技能等級劃分的受訓者人數分布見表 2.2：

表 2.2：受訓者人數（按技能等級劃分）

技能等級	金屬品製造及相關行業		珠寶業	
	受訓者人數	佔同一技能等級僱員總數百分率	受訓者人數	佔同一技能等級僱員總數百分率
技師級／經理級	10	0.17%	-	-
技術員級／督導級	33	0.22%	1	0.01%
技工級	67	1.08%	10	0.81%
操作工級／非技術工人級	5	0.16%	-	-
總數	115	0.38%	11	0.08%

調查期間空缺數目 及預測 2013 年 6 月時的人力

2.6 調查期間，金屬品製造及相關行業和珠寶業的空缺總數分別有 554 個及 91 個，佔僱員總數的 1.82% 及 0.7%。

2.7 僱主預測 2013 年 6 月時金屬品製造及相關行業和珠寶業的僱員分別有 31 148 人及 13 112 人，較調查期間受僱的 30 501 人及 12 971 人有所增加。

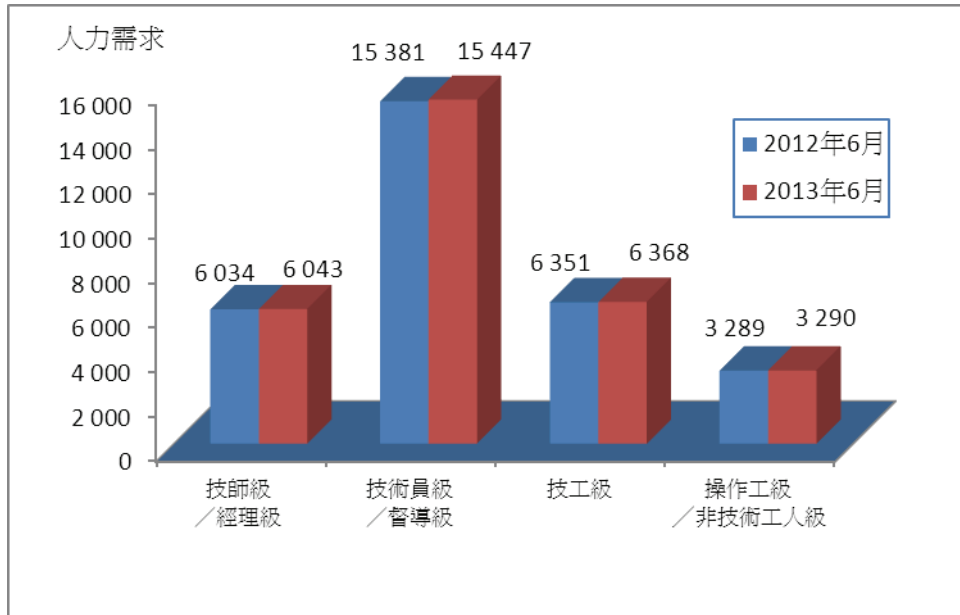
2.8 詳細的空缺及預測人力統計數字載於附錄 3 及 5。調查期間的人力需求以及僱主預測 2013 年 6 月時的僱員人數比較見表 2.3 及圖 2.2：

表 2.3：2012 年 6 月與 2013 年 6 月
人力需求比較

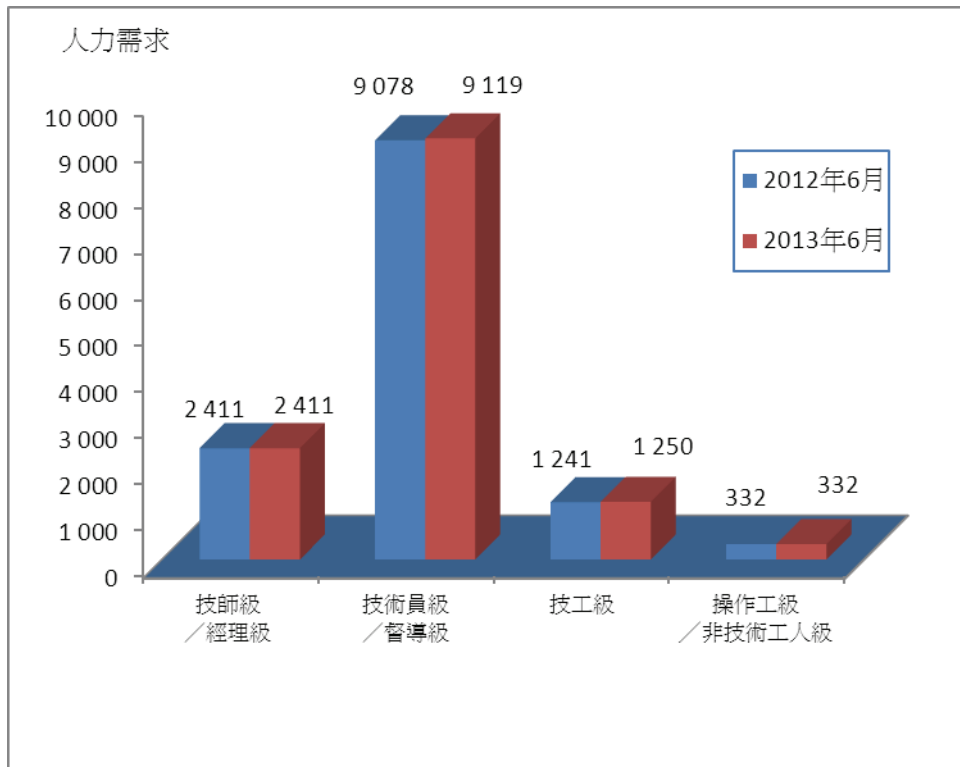
技能等級	調查期間（2012 年 6 月）			預測 2013 年 6 月 時的僱員總數	僱員人數 預測增幅
	僱員人數	空缺數目	人力需求 總數		
(a) 金屬品製造及相關行業					
技師級／ 經理級	5 990	44	6 034	6 043	0.15%
技術員級／ 督導級	15 136	245	15 381	15 447	0.43%
技工級	6 207	144	6 351	6 368	0.27%
操作工級／ 非技術工人級	3 168	121	3 289	3 290	0.03%
總數	30 501	554	31 055	31 148	0.30%
(b) 珠寶業					
技師級／ 經理級	2 401	10	2 411	2 411	-
技術員級／ 督導級	9 001	77	9 078	9 119	0.45%
技工級	1 239	2	1 241	1 250	0.73%
操作工級／ 非技術工人級	330	2	332	332	-
總數	12 971	91	13 062	13 112	0.38%

圖 2.2 (a 及 b) : 2012 年 6 月與 2013 年 6 月
人力需求比較

(a) 金屬品製造及相關行業



(b) 珠寶業



僱員總月入幅度

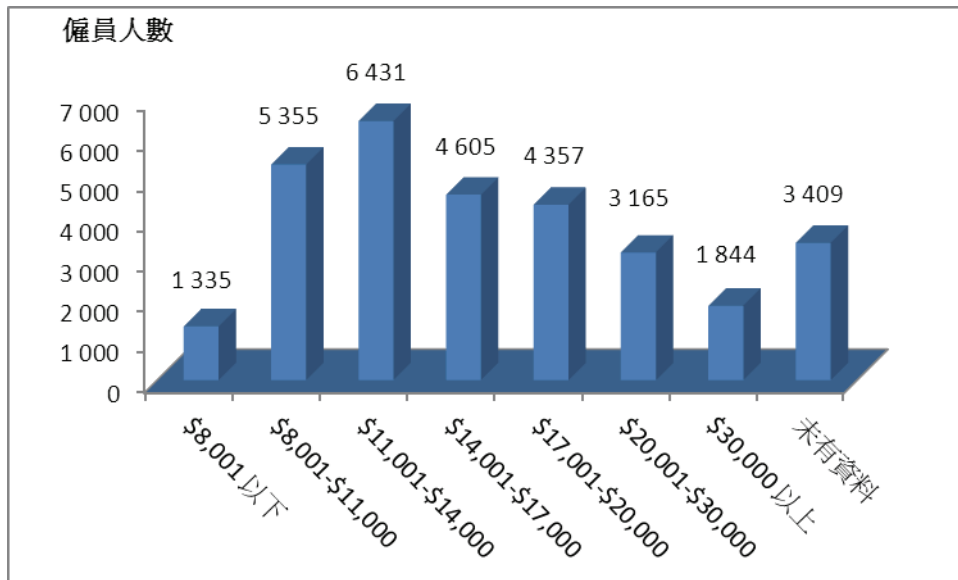
2.9 兩大金屬行業的僱員每月總收入幅度的分布情況分別載於表 2.4 及圖 2.3，詳細資料載於附錄 6 及 7：

表 2.4：僱員總月入幅度分布情況

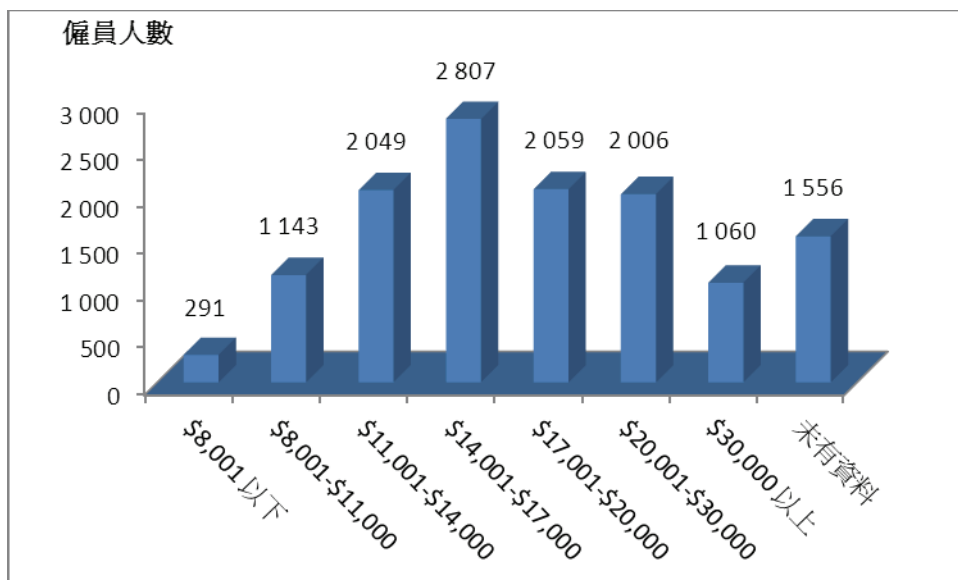
技能等級	\$8,001 以下	\$8,001- \$11,000	\$11,001- \$14,000	\$14,001- \$17,000	\$17,001- \$20,000	\$20,001- \$30,000	\$30,000 以上	未有 註明	總數
(a) 金屬品製造及相關行業									
技師級／ 經理級	-	-	284	475	940	1 699	1 578	1 014	5 990
技術員級 ／督導級	491	1 581	3 328	3 483	2 933	1 029	266	2025	15 136
技工級	310	1 903	2 465	528	436	390	-	175	6 207
操作工級 ／非技術 工人級	534	1 871	354	119	48	47	-	195	3 168
總數	1 335	5 355	6 431	4 605	4 357	3 165	1 844	3 409	30 501
(b) 珠寶業									
技師級／ 經理級	-	-	80	238	200	653	866	364	2 401
技術員級 ／督導級	146	677	1 354	2 322	1 808	1 353	194	1 147	9 001
技工級	145	320	436	247	51	-	-	40	1 239
操作工級 ／非技術 工人級	-	146	179	-	-	-	-	5	330
總數	291	1 143	2 049	2 807	2 059	2 006	1 060	1 556	12 971

圖 2.3 (a 及 b) : 僱員總月入幅度分布情況

(a) 金屬品製造及相關行業



(b) 珠寶業



來年業務情況預期轉變—僱主看法

2.10 調查顯示，有 51.6%金屬品製造及相關行業的僱主和 76.7%珠寶業僱主預測來年的業務情況將會維持不變。不過，金屬品製造及相關行業有 42.9 %僱主預期來年業務會變差。僱主意見的分布情況見表 2.5：

表 2.5： 僱主對來年業務情況的看法

僱員人數	來年業務情況				
	較佳	不變	較差	未有註明	總數
(a) 金屬品製造及相關行業					
1 – 9 人	182	2 928	2 811	10	5 931
10 – 49 人	144	570	213	1	928
50 人或以上	48	144	7	4	203
機構總數	374 (5.3%)	3 642 (51.6%)	3 031 (42.9%)	15 (0.2%)	7 062 (100.0%)
(b) 珠寶業					
1 – 9 人	81	2 481	601	44	3 207
10 – 49 人	24	431	131	-	586
50 人或以上	4	17	3	-	24
機構總數	109 (2.9%)	2 929 (76.7%)	735 (19.3%)	44 (1.2%)	3 817 (100.0%)

僱員宜有的教育程度、訓練方式及訓練期

2.11 僱主對各級僱員宜有教育程度、訓練方式及訓練期的主流意見載於表 2.6。詳細資料載於附錄 8、9 及 10。

表 2.6：金屬業僱員宜有的教育程度、
訓練方式及訓練期

技能等級	宜有教育程度	宜有訓練方式	宜有訓練期
技師級／ 經理級	學位／ 高級文憑	工科畢業生訓練／ 在職訓練	2 年或以上
技術員級／ 督導級	高級文憑／ 高級證書	在職訓練	1 - 3 年
技工級	技工證書／ 中學程度	在職訓練／ 學徒訓練	1 - 2 年

內部晉升

2.12 調查前 12 個月，共有 149 名業內僱員獲得內部晉升，下表為各等級僱員獲晉升的情況：

表 2.7：金屬業內部晉升情況

內部晉升	獲晉升 僱員數目 (a)	所晉升等級 僱員人數 (b)	所佔比率 $\frac{(a)}{(b)} \times 100\%$
由技術員／督導人員晉升至 技師／經理	112	8 391	1.3%
由技工晉升至 技術員／督導人員	28	24 137	0.1%
由其他等級晉升至技工	9	7 446	0.1%
總數	149	39 974	0.4%

派駐港外地區工作的僱員

2.13 調查前 12 個月，派駐港外地區工作超過 6 個月的僱員人數按僱主填報如下：

表 2.8： 金屬業派駐港外地區工作僱員人數

技能等級	派駐港外地區 工作僱員人數 (a)	該技能等級僱 員總數 (b)	所佔比率 $\frac{(a)}{(b)} \times 100\%$
技師級／經理級	1 033	8 391	12.3%
技術員級／督導級	909	24 137	3.8%
技工級	261	7 446	3.5%
總數	2 203	39 974	5.5%

於中國內地設有業務的機構

2.14 調查顯示，內地業務活躍的金屬業機構有 991 間（2010 年：1 106 間），僱用約 110 042 名內地工人（2010 年：245 351 人）。其中 4 242 名是負責技術工作的技師（包括經理）（2010 年：7 725 人）。僱主預測，至 2013 年 6 月時僱用的內地技師人數將增至 4 254 人（2010 年：預測 2011 年 6 月有 7 898 人）。

第三章

結論

3.1 本會審視調查結果，認為所得數據大致能反映調查期間金屬業的僱傭情況。

各技能等級的人力轉變

3.2 調查顯示，金屬品及相關行業（行業 A）人力的年度增幅為 7.3%，由 2010 年 6 月的 26 507 人上升至 2012 年 6 月的 30 501 人。（相較 2010 年調查結果，人力有明顯的回升趨勢。當年調查顯示人力由 2008 年 6 月的 30 948 人下降至 2010 年 6 月的 26 507 人，年度減幅為 7.5%。）至於珠寶業（行業 B）的同期人力則微升，由 12 706 人升至 12 971 人，年度增幅為 1%。（相較 2010 年調查結果，人力亦已有回升趨勢。當年調查顯示人力由 2008 年 6 月的 13 186 人下降至 2010 年 6 月的 12 706 人，年度減幅為 1.8%。）兩大打業各職級在 2010 年與 2012 年間的人力轉變見表 3.1：

表 3.1: 2010 至 2012 年各技能等級人力轉變

技能等級	僱員人數		每年增減幅度
	2010 年 6 月	2012 年 6 月	
(a) 金屬品製造及相關行業			
技師級／經理級	5 498	5 990	+4.4%
技術員級／督導級	11 959	15 136	+12.5%
技工級	5 782	6 207	+3.6%
操作工級／非技術工人級	3 268	3 168	-1.5%
總數	26 507	30 501	+7.3%
(b) 珠寶業			
技師級／經理級	1 326	2 401	+34.6%
技術員級／督導級	9 779	9 001	-4.1%
技工級	1 142	1 239	+4.2%
操作工級／非技術工人級	459	330	-15.2%
總數	12 706	12 971	+1.0%

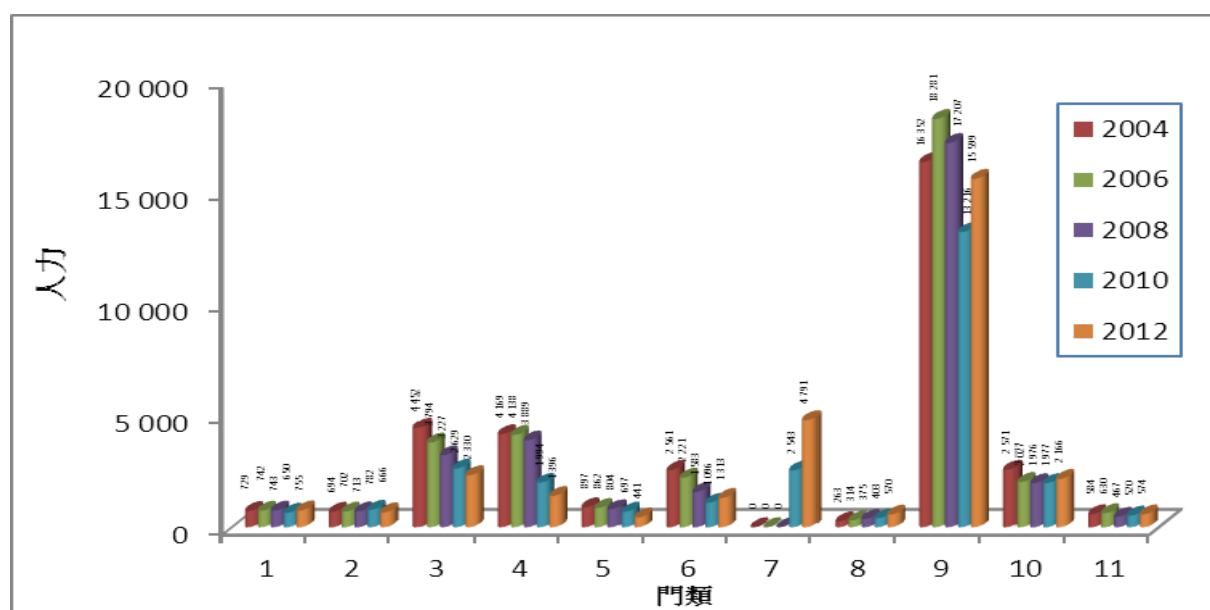
3.3 調查顯示，過去兩年，金屬品製造及相關行業的技術員級／督導級僱員人數顯著上升(12.5%)，技師級／經理級、技工級僱員人數有少許上升(分別為 4.4%及 3.6%)；至於珠寶業，技師級／經理級僱員人數大增(34.6%)，操作工級僱員人數大減(-15.2%)，綜合結果是人力輕微上升。

各門類的人力轉變

3.4 自 2004 年進行調查以來，金屬業人力調查的範圍已大幅擴闊，包括更多門類。圖 3.1(a) 及 3.1(b) 顯示 2004 至 2012 年兩大金屬行業按門類劃分的人力轉變。

圖 3.1(a): 2004 至 2012 年各門類人力轉變

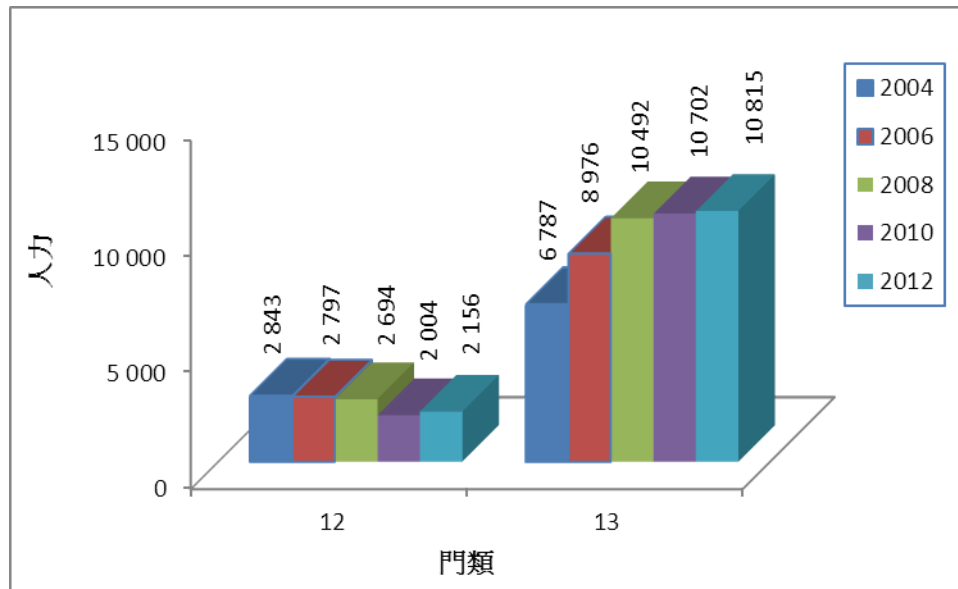
行業 A: 金屬品製造及相關行業



- 門類：
1. 食品、飲品及煙草製造業的廠房保養部門
 2. 基本金屬的製造
 3. 金屬製品（機械及設備除外）及金屬玩具的製造
 4. 機械設備的製造
 5. 醫療設備的製造
 6. 電器設備的製造
 7. 機械及設備的維修及安裝
 8. 鐘錶的製造
 9. 機械設備、鐘錶的批發及出入口貿易
 10. 與金屬有關的工程服務、包括物料測試、冶金服務、生產工序發展及測試、生產線顧問／設計及品質控制服務
 11. 補充樣本 - 訓練機構及教育院校的有關部門及學系

圖 3.1(b)：2004 至 2012 年各門類人力轉變

行業 B: 珠寶業



門類： 12. 珠寶首飾及有關物品的製造
13. 珠寶首飾及有關物品的批發及出入口貿易

3.5 如圖 3.1(a)所示，「機械設備、鐘錶的批發及出入口貿易」(門類 9) 的僱員佔金屬品製造及相關行業約 50% 人力，由 2010 年 6 月的 13 216 人大增至 2012 年 6 月的 15 599 人，每年平均上升 8.6%¹。

3.6 另一僱員人數明顯增加的是「機械及設備的維修及安裝」(門類 7)，人力由 2010 年 6 月的 2 543 人增至 2012 年 6 月的 4 791 人，年度平均增幅甚巨，為 37.3%。

3.7 然而，亦有其他門類在 2010 年 6 月至 2012 年 6 月間人力明顯下跌，如：「基本金屬的製造」(門類 2 – 由 782 人減至 666 人)；「金屬製品(機械及設備除外)及金屬玩具的製造」(門類 3 – 由 2 629 人減至 2 230 人)；「機械設備的製造」(門類 4 – 由 1 994 人減至 1 396 人)。

¹ 2010 年調查中，這個門類的僱員數目由 2008 年的 17 207 人下降至 13 216 人。「重新劃分門類」是部分原因，有些本來屬這個門類的僱員，已另外歸入門類 7。

3.8 以上三個業內製造門類人力持續萎縮（門類 2、3、4），顯示本港金屬業將會一直重整業務流程（例如：由生產為主／勞力密集形式轉型至增值／質素為重的營運模式，包括精確財務管理、銷售與市場推廣、研究與開發、設計、品牌發展、售前與售後支援服務等）。

3.9 此外，金屬業的公司數目一直維持穩定（在 2006、2008、2010、2012 年調查維持在 15 000 間至 16 000 間，而會計主任與文員等其他範疇的僱員人數大增（2008 年 6 月：35 165 人，2010 年 6 月：35 218 人，2012 年 6 月：47 129 人），顯示金屬業（尤其是門類 7、9），不單已走出 2008-09 年的低谷，更擴充了業務規模和業務種類，業務性質以增值／品質為重。

3.10 珠寶業（行業 B）方面，珠寶製造（門類 12）、珠寶批發及出入口貿易（門類 13）的人力微升（2010 年 6 月：2 004 人及 10 702 人，增至 2012 年 6 月：2 156 人及 10 815 人）（見圖 3.1(b)）。本地市場業務擴展，包括遊客珠寶銷售，亦受惠於中國經濟迅速發展，刺激珠寶業的商貿和消費活動。而業界亦逐漸建立起品牌和形象，無論是以香港作為製造地或生產地，相關的珠寶產品都以精巧設計，品質可靠見稱，對促進人力增長亦起一定作用。

業務前景

3.11 過去幾年，金屬業（包括珠寶業）勞僱雙方攜手努力，僱主不斷在人才、機器、科技方面投放大量資金。而僱員則勤奮盡責，持續努力提升貨品質素。這一切皆可由從調查數字中反映出來。金屬業不單從 2008-09 年經濟低谷中復甦，更在這兩年間有大幅增長。然而，可預見業界仍需在未來面對其他挑戰，克服困難。

3.12 全球經濟自 2008 年金融海嘯後快速復甦，但從波羅的海綜合指數 [*BDI*²] 顯示，復甦勢頭並不持久。2008 年 12 月 *BDI* 由金融海嘯時的 663 點「穀底」開始反彈飆升，至 2009 年初到達 11 771 點「高峰」。但之後一直反覆向下，至 2012 年 2 月更跌至創紀錄的 647 新低點。隨後數月 *BDI* 徘徊於低位，分別於 2012 年 9 月及 2012 年 12 月出現 661 和 698 的兩個低點。2013 年 3 月間 *BDI* 稍見上升，一度錄得 900 點高位。但縱觀 *BDI*

² 波羅的海綜合指數 (*BDI*) 是由倫敦波羅的海交易所每日公報的一項數字，「評估主要原材料的海運價格」，經濟學專家大都以此作為「未來」經濟增長和貨品生產的重要經濟指標。可以說，*BDI* 獲廣泛採用作預測行情／經濟前景的領先指標。

走勢，似乎顯示未來幾年全球經濟發展將持續放緩。

3.13 不少財經專家，如《世界經濟展望》[*World Economic Outlook, WEO*]等卻推斷全球經濟仍會繼續增長，但步伐將放慢。而經濟增長的幅度則需視乎歐美國家的減赤政策是否奏效，但中間存在很多不明朗的因素。另一方面，日本經濟持續衰退。但可預期日本政府將努力在未來數年繼續推出刺激經濟措施，期望能成功走出「穀底」。而中國、印度、俄羅斯、東歐和拉丁美洲等新興國家的政府亦將會繼續推行穩定的經濟增長政策，促進經濟發展。但仍有許多新興市場國家需在疲弱外需與國內樽頸之中掙紮。總之，假以這些大危機最終沒有發生，財務環境亦順利續有改善，可預見全球經濟將會更快推進。不過，如政府政策不奏效，則可能出現歐元區新一輪衰退（就如賽普勒斯近期的危機），加上美國推出短期財政整頓政策，亦會阻礙現有的增長趨勢。

行業 A： 金屬品製造及相關行業

3.14 由於國內經濟發展急速，加上香港與珠江三角洲[珠三角]合作關係穩固，本地製造商能於過去二十年擴大業務規模，提升產能。自九十年代中期，在廣東擁有生產設施的香港製造商逐步將業務拓展到長江三角洲[長三角]地區。除了生產製成品，亦提供模具、零部件、機器維修及技術服務，支援其他行業發展。受惠於過去二十年來國內經濟的持續發展，香港製造商在國內的生產業務一直增長，甚為成功。

3.15 可是，自從國內引入《勞動合同法》、《企業所得稅法》及環保措施，並調整對加工業的政策後，近年在中國的營商環境轉變甚大；加上人民幣升值、國內勞工短缺、原料成本急升、內地企業湧現而引起的激烈競爭，令香港廠商在價格成本難佔優勢。仍在國內活躍於生產業務的香港製造商營運成本大增，要面對艱難日子。相較2012年與2010年的人力調查，業內機構已由2008年6月的2 847間，減至2010年6月的1 106間，再跌至2012年的991間，僱用內地工人數目亦由487 400名，減至245 351名，再減至110 042名。由以上數字所見，一些營運能力稍遜的香港製造商已被淘汰。

3.16 面對這種種挑戰，港商一直謀求對策，不斷更新進步，靈活運用「特色化」(differentiation)策略，藉以保持競爭優勢。如創新產品設計、提升產品質素、減少資源浪費，並強化供應鏈管理，以別

出心裁的營運方式擊敗競爭對手。不少港商更投放大量資金，令生產設備更為先進及現代化，從而提高生產力和產品質素；同時積級培訓人才，提升員工水準，務求加強競爭優勢。部分僱主甚至把某部分業務，如產品增值部門等從國內遷回香港。

3.17 如統計顯示，在變幻莫測的業務環境中，業界對優質模具、工業機械、設備及零部件、技術支援、與製造相關的服務等人才有龐大需求；對產品及工程設計、能熟悉生產和工作流程並具營商及成本核算概念的銷售及推廣等人才需求亦有上升趨勢。本會認為，金屬品製造及相關行業，特別是技術支援、推廣及保養維修門類(僱用本行業約50%人力)將繼續扮演重要角色，對香港和國內製造業的進一步發展發揮寶貴貢獻。

行業 B： 珠寶業

3.18 香港與意大利、美國和瑞士並列全球四大珠寶首飾出口商，亦是世界第二大的仿製首飾出口商。同時也是純金首飾和玉石珠寶的主要製造中心，最近更成為主要的珍珠首飾貿易和分發中心。過往多年，珠寶製品的出口均有增長。珠寶、金銀器、其他貴重金屬或半貴重金屬製品(SITC 897)在2012年的出口總值為港幣621億8,600萬元³，較2011年上升約12%。2005至2012年出口值的詳細資料載於表3.2及圖3.2。

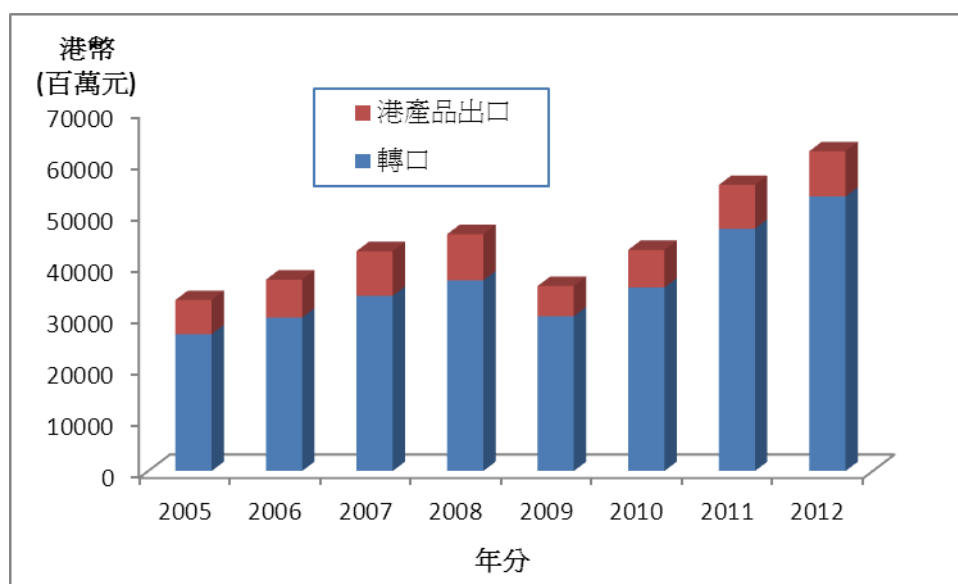
圖 3.2: 珠寶產品出口值
(SITC 897)

珠寶產品 (SITC 897)	價值 (港幣百萬元)							
	2005	2006	2007	2008	2009	2010	2011	2012
港產品出口	6 642	7 376	8 705	8 978	5 884	7 320	8 492	8 821
轉口	26 607	29 820	34 049	37 064	30 084	35 671	47 118	53 365
總出口	33 249	37 196	42 754	46 042	35 968	42 991	55 610	62 186

資料來源：統計處《香港對外商品貿易》數字及香港貿易發展局

³ SITC 是《國際貿易標準分類》的簡稱。如把加工或未加工的珍珠、寶石、半寶石(SITC 667)計算在內，則2012年的出口總值為1,178億500萬元。

表 3.2：珠寶產品出口值



3.19 香港珠寶出口商所面對中國內地及其他國家對手的競爭愈趨激烈，特別是印度和泰國⁴，加上貴金屬、鑽石、寶石及原材料價格波動，邊際溢利近年已削弱。許多生產商為了保持競爭力，靈活運用「特色化」(differentiation) 策略，於產品設計及製造過程中引入先進精密及自動化生產設備，包括電腦輔助設計及製造 (CAD/CAM) 系統、快速原型技術及電腦數控 (CNC) 機床等。他們更進一步把先進生產技術，例如電鑄技術與人手工藝配合，進一步提升效率。

3.20 內地與香港建立更緊密經貿關係的安排[CEPA]後，同意由2006年1月1日起，所有原產自香港的產品，包括珠寶首飾，均可獲豁免關稅。零進口關稅吸引製造商投向高消費市場，生產更多品牌產品，又或於生產過程中加入更多高增值元素或原創設計。然而，CEPA亦要求這些製品的主要生產工序須在香港進行，包括貴金屬製模工序、製造珠寶成品過程中的珍珠、寶石／半寶石製模／鑲嵌工序、裝嵌工序等。因此，儘管珠寶製造商把生產工序遷往深圳和番禺等內地廠房，但CEPA所要求的高增值工序仍需留在香港境內進行。而且，對品牌形象甚為著緊的部分港商，為確保其產品擁有由「香港製造」這品牌所具備的優秀特質（如產品可靠、設技獨特及品質精良等），亦將某些重要的設計工序及／或有增值工序的營運部門遷返香港。

⁴ 其中例子是去年（2012年）泰國已超越香港成為最大的珠寶出口國。

3.21 人民幣升值對珠寶業的影響比起其他行業可算溫和，因國內珠寶製品所佔價值相對較少。最昂貴的珠寶製品基本上只運往內地作出口加工。另一方面，中國政府先前鼓勵消費的政策大大刺激人民的購買力及對進口商品的需求，多少有助珠寶製品銷往國內；近年內地訪港旅客大增，亦有助刺激本地珠寶零售業務。不過，近日中國政府遏抑官員奢華消費的措施或會暫時令國內過熱的消費情緒降溫，香港珠寶出口商的業務可能會面對一些潛在挑戰。

3.22 本會深信中國經濟活力將會持續。儘管會有一些潛在挑戰，情況難測，但內地訪港旅客增加，加上人民幣升值，預期珠寶業未來將會繼續蓬勃增長。

未來人力需求

3.23 本會從業界的最新發展，以及僱主對未來人力需求及業務轉變的預測等因素加入考慮後，認為未來金屬品製造及相關行業對幹練的技師、技術員及技工人才將續有需求，以應付未來發展並在劇烈競爭中站穩。當中以技術、產品及工程設計、銷售／推廣及生產工序方面的專才需求尤其大。預計大部分技術人員將受僱於技術支援／推廣／保養維修服務門類，為生產商提供機器和設備的市場推廣及售後維修保養服務。另一方面，操作工及非技術工人的需求卻會進一步下降。

3.24 至於珠寶業，本會認為珠寶批發、出入口門類未來將持續增長，而珠寶製造門類將持續收縮。另一方面，以出口為主的業務將渴求設計及發展、市場推廣及銷售的技師／技術員級人力。然而，從事生產相關工作的技工需求增幅只屬有限，而操作工／非技術工人的人數將進一步下降。

3.25 本會亦估計本業各職級的自然流失情況。自然流失指因退休、轉業或其他原因離開金屬業。預期本業大多數技能等級的每年流失率仍為3%，不過，近年由於金屬品製造及相關行業的技工級僱員老化，須把該職級的每年流失率調整為5%。

3.26 本會預計，2013至2016年為填補人手流失及應付業務增長，金屬業需增加人手如表3.3：

表 3.3: 2013 至 2016 年金屬業每年所需人力

技能等級	平均每年需增加的僱員人數	
	行業 A 金屬品製造及相關行業	行業 B 珠寶業
技師級／經理級	113 – 138	375 – 459
技術員級／督導級	898 – 1 098	155 – 189
技工級	308 – 376	27 – 33

3.27 本會將於2014年進行另一次人力調查，以更新金屬業的人力數據和檢討訓練需求。

第四章

建議

4.1 過去二十年，香港金屬業（包括珠寶業）僱主（尤其是製造商）成功擴展生產業務至珠三角地區，令兩地的業務分工更精細。港商遷移勞動力密集的生產工序到珠三角工廠，將財務管理、銷售及市場推廣、研發、設計、品牌發展等高增值工作保留於香港總部進行。這種分工導致本地人力資源結構大幅轉變，使從事生產相關工作的技工及操作工職位大減。相反，對技術支援、市場推廣、工模製造、產品設計及開發等與製造相關服務的需求則保持穩定。不過，內地近年的營商環境急劇轉變，令港商面臨重大挑戰，並飽受沉重壓力，亟需提高人力質素，以保持競爭力。

4.2 為應付上述挑戰，港商一直謀求對策，不斷更新進步，靈活運用「特色化」(differentiation) 策略，藉以保持競爭優勢。如創新產品設計、提升產品質素、減少資源浪費，並強化供應鏈管理，以別出心裁的營運方式擊敗競爭對手。不少港商更投放大量資金，令生產設備更為先進及現代化，從而提高生產力和產品質素；同時積極培訓人才，提升員工水準，務求加強競爭優勢。部分僱主甚至把某部分業務，如產品增值部門等從國內遷回香港。

4.3 針對上述挑戰，本會建議本業僱主應加強員工培訓，以確保有足夠的幹練人才，滿足本業的最新需求，尤其是產品設計及創新、增值生產、成本核算、運作管理、物流和供應鏈管理、工作操守及態度等方面的培訓。本業如要發展優質的高增值產品和服務，就必需借助幹練員工的知識和技術；因此，僱主除了投放資源添置先進機械及設備外，亦應不時為員工安排有系統的訓練，以便提升員工的知識技術，使他們與時並進。為挽留員工及減少離職和流失，僱主應給予員工長線事業發展和培訓機會。再者，長遠而言，本業僱主可能會將部分的內地生產工序遷回本港，因此在擬訂招聘／培訓計劃時或需一併顧及此趨勢。

4.4 本會鼓勵金屬業僱員擴闊視野，特別是年輕一代，應善用內地及其他新興市場的新機遇，努力學習相關知識及技能，以備日後於內地及本港，甚或其他新興地區工作；更應終身學習維持競爭力，特別是修讀頒授認可資歷的課程及培訓計劃。

每年的受訓者人數

4.5 調查期間，金屬品製造及相關行業只有 115 名受訓者，而珠寶業則只有 11 名。訓練新人一般需時三至四年，業界現時的受訓人數明顯不足以應付需求。

4.6 本會建議業界應參考第 3.26 段的規模舉辦培訓計劃。不同主要職務的培訓需求分析載於附錄 11 及 12。

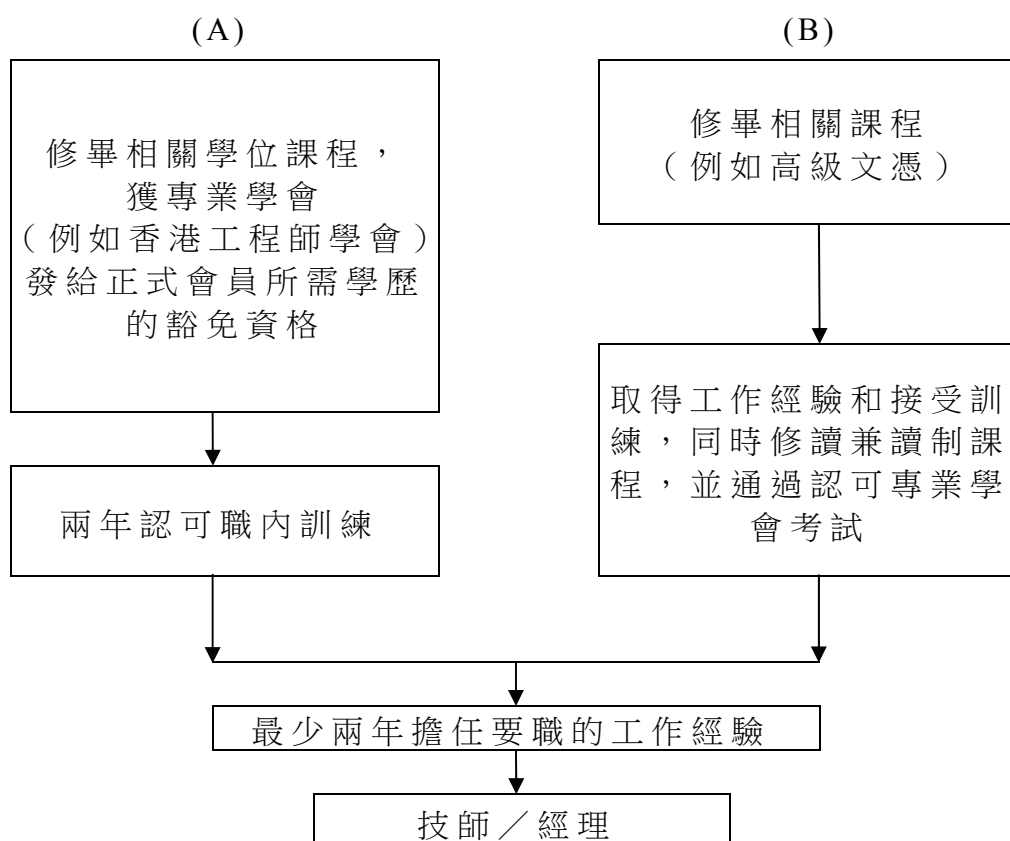
4.7 本會建議循以下途徑訓練技師／經理、技術員和技工：

(a) 金屬品製造及相關行業的人力培訓

技師／經理訓練

4.8 技師／經理在改善管理及革新科技方面，均擔當重要角色。本會建議僱主循下列途徑訓練技師：

圖 4.1: 技師／經理訓練



4.9 大學教育資助委員會（教資會）多間本地院校均有開辦各類機械／製造工程及相關學科的學位課程。2012/13 及 2013/14 年度此類全日制工程學位課程的畢業生估計人數如下：

表 4.1: 教資會院校畢業生估計人數

全日制學位課程	畢業生估計人數	
	2012/13	2013/14
機械工程	347	306
製造／工業／系統工程及工程管理	400	403
機電一體化工程	33	31
物料工程	49	42
總數	829	782

4.10 職業訓練局[VTC]屬下香港專業教育學院[IVE]提供一系列機械／製造工程及相關學科的高級文憑課程。此外，某教資會資助院校亦有提供工業及系統工程、電腦輔助工程設計，以及產品創新技術高級文憑課程。下表列載了這些院校開辦的相關全日制高級文憑課程的畢業生估計人數：

表 4.2: 高級文憑課程畢業生估計人數

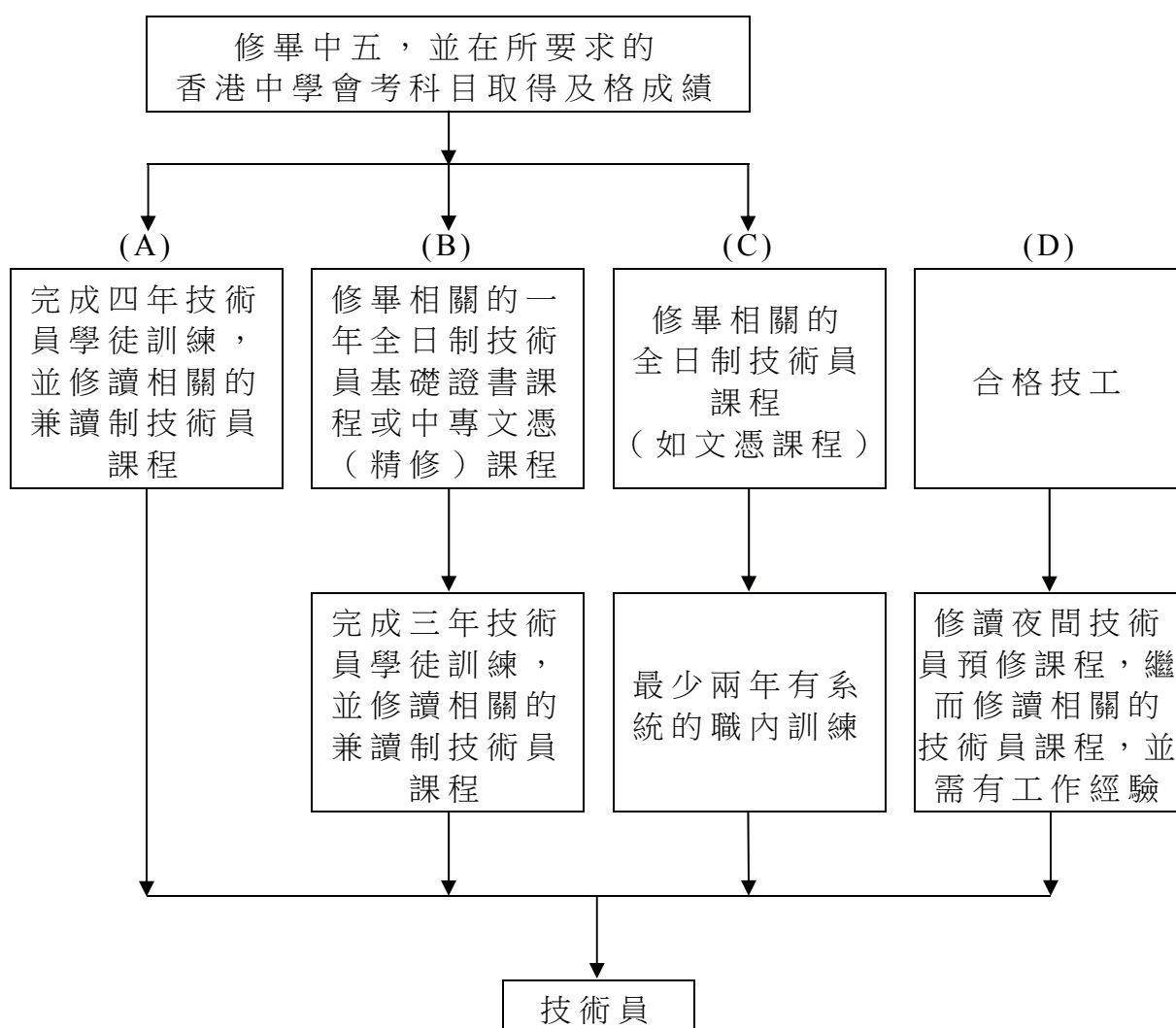
全日制高級文憑課程	畢業生估計人數	
	2012/13	2013/14
機械工程（包括電腦輔助工程設計）	166	366
製造／工業／系統工程及工程管理	250	169
產品設計／創新科技／工程	260	229
時計科技	40	32
總數	716	796

4.11 許多機械／製造工程及相關學科的學位和高級文憑畢業生亦獲其他經濟界別聘用，如機電服務業、建造業和塑膠業。此外，亦有不少高級文憑畢業生入行後擔任技術員級職務，而非技師級工作。

技術員訓練

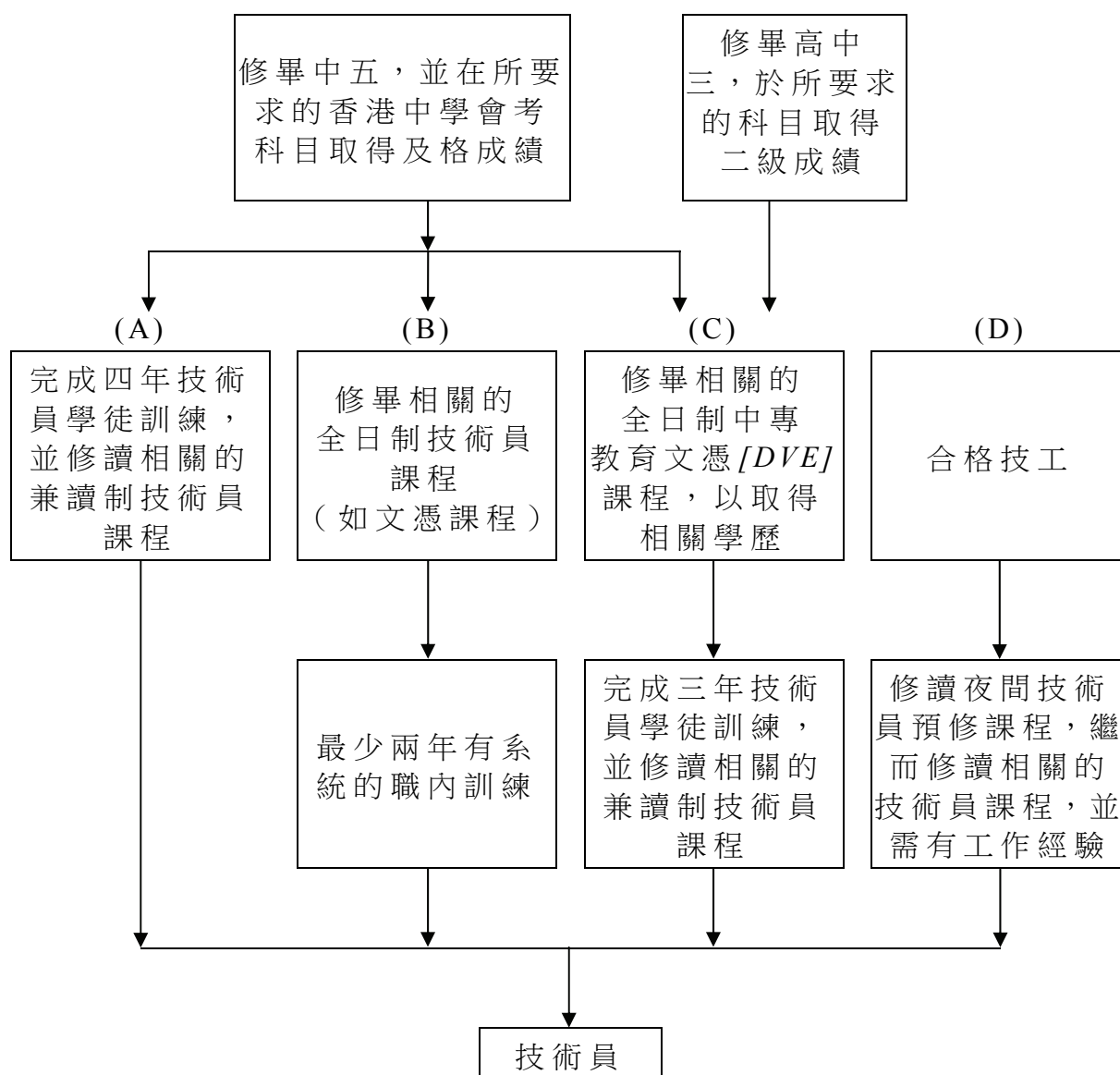
4.12 技術員乃指技能等級介乎技師與技工之間的人員。他們曾受一定的教育、訓練，並具備實務經驗，能運用已確立的方法解決技術問題；一般能在技師的指示下，肩負部分技術責任。政府現已落實教育改革，推出「334」新學制，以及制訂資歷架構機制；在此之前，訓練技術員的途徑如圖 4.2 所示。

圖 4.2: 技術員訓練
(舊途徑)



4.13 政府推出「334」新學制及資歷架構機制後，訓練技術員的新途徑如下圖所示。

圖 4.3: 技術員訓練
(新途徑)



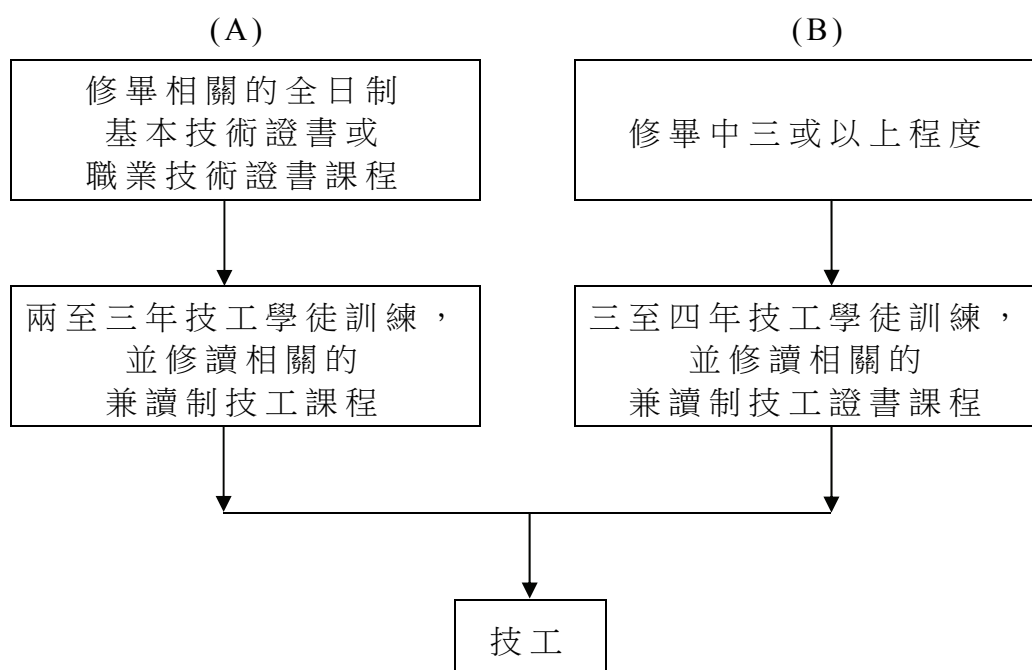
4.14 如上文第 4.11 段所述，許多高級文憑畢業生完成課程後，投身業界成為技術員，是金屬品製造及相關行業技術員的重要來源。VTC 的院校之中，特別是卓越培訓發展中心（機械業）及卓越培訓發展中心（焊接業），亦有為中五和高中三離校生提供全日制及兼讀制中專教育文憑 [DVE] 課程。2013/14 年 DVE 課程（機械工程分流）計劃取錄 220 人。然而，DVE 課程採用「多階進出」模式；因此，並非所有學

生最終都以 DVE 學歷畢業；部分學生會選擇修讀較少科目，並於取得基本技術證書後提早投身就業市場，隨後繼續修讀兼讀制課程，以取得技工證書。

技工訓練

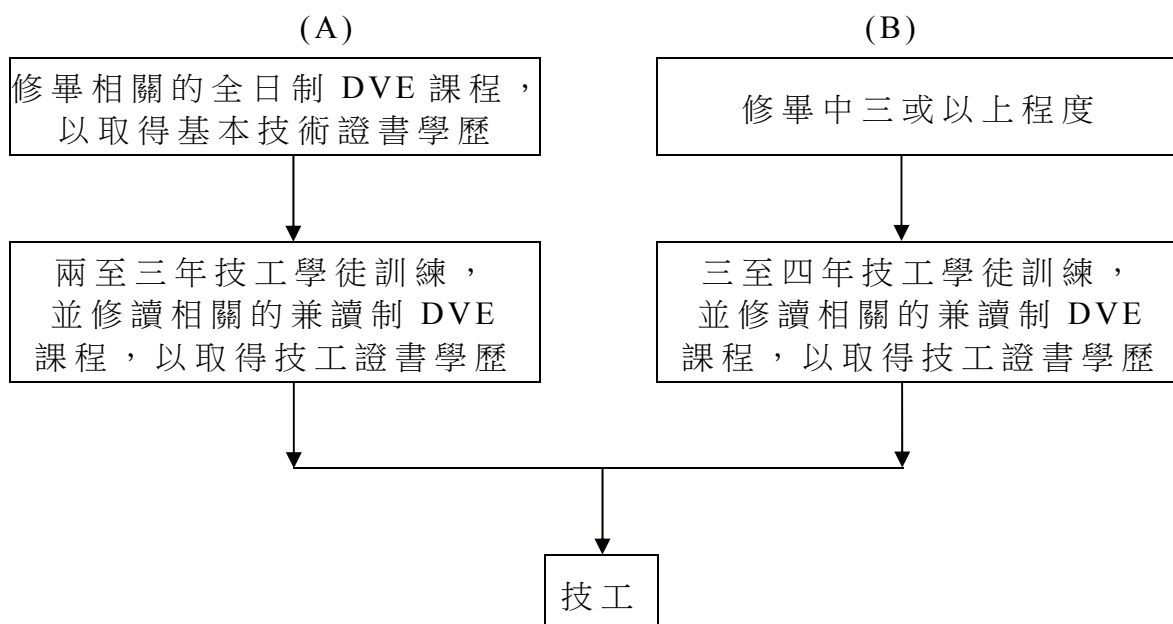
4.15 技工乃技術工人，能夠在極少指示及督導下，應用多種技術完成工作。技工不單要有實際技能，亦需具備相關的理論知識，才能適應科技發展。完善的技工學徒訓練定必兼備上述兩者。政府現已落實教育改革，推出「334」新學制，以及制訂資歷架構機制；在此之前，訓練技工的途徑如圖 4.4 所示。

圖 4.4: 技工訓練
(舊途徑)



4.16 政府推出「334」新學制及資歷架構機制後，訓練技工的新途徑如圖 4.5 所示。

圖 4.5: 技工訓練
(新途徑)



4.17 本會建議採用途徑 (A)，因為訓練期較短，而且因已受過適當的基本技術訓練，成為學徒後，很快便能投入工作。

(b) 珠寶業的人力培訓

珠寶技師訓練

4.18 珠寶業的技師級人員宜具相關專業學會的正式會員資格，或持有珠寶或設計學科的大學學位／高級文憑學歷、曾接受有系統的訓練，以及具備擔任要職的經驗。調查期間，業內共有 2 401 名珠寶技師。他們部分於海外接受教育及實務訓練，另一些則是資深技術員，在取得專業資格後獲晉升成為技師。

4.19 自 2004/05 學年開始，香港專業教育學院 [IVE] (李惠利) 開辦全日制珠寶設計及科技高級文憑課程，2012/13 及 2013/14 學年預計各有 60 名畢業生。學生可於畢業後修讀海外大學的相關學位課程。

珠寶技術員訓練

4.20 本會建議訓練珠寶技術員的途徑與圖 4.2 及圖 4.3 所載的相近。建議可修讀職業訓練局[VTC]轄下的卓越培訓發展中心(珠寶業)所開辦的珠寶技術員課程。以往，中心開辦一年制珠寶設計及製造技術員基礎證書課程，但由 2007/08 學年起增辦一年制珠寶設計與工藝中專文憑精修課程；往後，兩個課程每年合共提供約 110 個訓練名額。現時，中心亦為中五及高中三離校生提供全日制和兼讀制中專教育文憑[DVE]課程，2013/14 學年此類課程(珠寶設計與工藝分流)計劃招收 180 名學生。然而，DVE 課程採用「多階進出」模式；因此，並非所有學生最終都以 DVE 學歷畢業；部分學生會選擇修讀較少科目，並於取得基本技術證書後提早投身就業市場，隨後繼續修讀兼讀制課程，以取得技工證書。

珠寶技工訓練

4.21 訓練珠寶技工的途徑與圖 4.4 及圖 4.5 所載的相近。卓越培訓發展中心(珠寶業)為中三離校生提供珠寶業學徒／受訓者基本訓練，在培訓技工方面擔當重要角色。以往，中心開辦打金及首飾鑲嵌兩項一年制基本技術證書課程，以及三年制珠寶設計與工藝中專文憑課程。現時則為中五及高中三離校生開辦全日制及兼讀制的 DVE 課程。

教育及培訓機構

4.22 VTC 轄下的 IVE、卓越培訓發展中心(珠寶業)，以及幾間專上教育院校，均有為金屬業從業員開辦各類職前及在職培訓課程。本會強烈籲請本業僱主充分利用這些院校的訓練設施，聘用其畢業生為學徒／受訓者，並保送僱員修讀相關技術提升課程。

VTC 的培訓服務

4.23 VTC 免費協助僱主籌辦培訓計劃，包括：

- (a) 法定的**學徒訓練計劃** — 有效培訓技術員和技工，以應付業內需求；
- (b) **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培訓；
- (c) 自願性質的**技能測驗及證書頒發計劃** — 旨在確立及認可技術工人的水平；
- (d) **新科技培訓計劃** — 向有意保送僱員到海外或於本地學習新科技的本地公司提供財政資助，金額最高可達培訓開支的 50%。

本會建議僱主在擬訂訓練計劃和僱用學徒／受訓者時與 VTC 聯絡，以取得協助。

Appendices

附錄

Membership of the Metals Training Board
(March 2013)

金屬業訓練委員會委員名單
(二〇一三年三月)

Chairman:

主席

Mr LEUNG Fai-man, Moses (nominated by the Federation of Hong Kong Watch Trades and Industries)
梁輝文先生 (香港鐘表業總會提名)

Vice-Chairman:

副主席

Dr NG Wang-pun, Dennis, MH (ad personam)
吳宏斌博士, MH (獨立人士)

Members:

委員

Ir Dr CHAN Luen-chow (nominated by a local university)
陳聯洲博士、工程師 (本地某大學提名)

Mr HUI Leung-wah (nominated by a manufacturer of metal frame spectacles)
許亮華先生 (某金屬框眼鏡製造公司提名)

Mr KONG Hon-po (nominated by the Hong Kong Diecasting and Foundry Association)
江漢波先生 (香港壓鑄及鑄造業總會提名)

Mr KWOK Hon-lam, Steven (ad personam)
郭漢林先生 (獨立人士)

Mr KWOK Ngok-wing, Jimi (nominated by the Federation of Hong Kong Industries)
郭岳榮先生 (香港工業總會提名)

Mr LAI Poon-shing, Daniel (nominated by the Hong Kong Mould and Die Council)
黎潘成先生 (香港模具協會提名)

Ms Susanna LAM (nominated by the Hong Kong Gold and Silver Ornament Workers and Merchants General Union)
林蔚雯女士 (香港金銀首飾工商總會提名)

Dr LAU Ying-kei, Henry (nominated by a local university)
劉應機博士 (本地某大學提名)

Ir LEE Kwok-keung 李國強工程師	(nominated by the Hong Kong Productivity Council) (香港生產力促進局提名)
Ms LEUNG Wing-yan, Irene 梁詠茵女士	(nominated by the Hong Kong Jewelry Manufacturers' Association) (香港珠寶製造業廠商會提名)
Mr NG Ka-yan, Ben 吳家仁先生	(nominated by a machinery sales/marketing/services company) (某機器銷售、推廣及維修公司提名)
Mr SIN Kam-leung 冼錦良先生	(nominated by the Hong Kong Metals Manufacturers Association) (香港金屬製造業協會提名)
Mr YU Man-pui 余文培先生	(nominated by the Hong Kong Metal and Electronics Industries General Union) (香港五金電子科技業總工會提名)
Mr YU Tak-ming, Michael 余德明先生	(nominated by the Chinese Manufacturers' Association of Hong Kong) (香港中華廠商聯合會提名)
Mr CHONG Vai-keong, Steven 鍾偉強先生	(representing the Director-General of Trade and Industry) (工業貿易署署長代表)
Ir TANG Sing-sum 鄧勝森工程師	(representing the Executive Director of the Vocational Training Council) (職業訓練局執行幹事代表)

In Attendance:

列席者

Mr HO Ching-tak, Joe 何正德先生	(Hong Kong Institute of Vocational Education (Lee Wai Lee)) (香港專業教育學院(李惠利分校))
Mr LAM Ki-yook, Ronald 林祺煜先生	(Pro-Act Training and Development Centre (Jewellery)) (卓越培訓發展中心(珠寶業))
Mr WAN Siu-chung 溫兆聰先生	(Pro-Act Training and Development Centre (Mechanical)) (卓越培訓發展中心(機械業))

Secretary:

秘書

Mr HUI Yin-ho, Henry 許賢浩先生	(Vocational Training Council) (職業訓練局)
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Terms of Reference of the Metals Training Board

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 the 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 elements.
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 organize 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 the 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.

金屬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。

MANPOWER STATISTICS OF THE METAL PRODUCTS AND RELATED INDUSTRIES

金屬品製造及相關行業人力統計數字

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
TECHNOLOGIST LEVEL 技師級					
101	Mechanical Engineer 機械工程師	1 211	-	5	1 216
102	Manufacturing/Production/Industrial Engineer 製造/生產/工業工程師	318	-	1	318
103	Materials Engineer/Metallurgist 用料工程師/冶金技師	119	-	-	119
104	Electrical Engineer 電機工程師	471	-	3	474
105	Electronics Engineer 電子工程師	221	-	1	222
106	Technical Services Engineer 技術支援工程師	321	10	-	331
107	Technical Marketing Manager 技術市務經理	1 567	-	3	1 570
108	Logistic Manager 物流經理	84	-	-	84
109	Merchandising Manager 採購經理	511	-	6	517
110	Training Manager 訓練經理	4	-	-	4
111	Engineering Manager 工程經理	378	-	-	378
112	Factory Manager 工廠經理	59	-	3	62
113	Production Manager 生產部經理	337	-	-	337
114	Quality Control Manager 品質控制經理	108	-	-	108
115	Product/Graphic Designer 產品/平面設計師	281	-	22	303
	Sub-total 小計	5 990	10	44	6 043

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
TECHNICIAN LEVEL 技術員級					
201	Mechanical Draughtsman 機械繪圖員	113	-	1	114
202	Mechanical Engineering Technician 機械工程技術員	1 527	9	34	1 570
203	Manufacturing/Production/Industrial Engineering Technician 製造/生產/工業工程技術員	204	-	1	205
204	Electrical Engineering Technician 電機工程技術員	380	-	21	401
205	Foreman/Supervisor 管工/監督	924	-	1	925
206	Electronics Technician 電子技術員	217	-	1	218
207	Technical Services Technician 支援技術員	1 515	9	34	1 554
208	Technical Marketing Executive 技術市場主任	3 520	-	24	3 544
209	Co-ordinator 協理員/聯絡員	705	-	3	708
210	Logistic Executive/Supervisor 物流主任	591	-	9	600
211	Merchandiser 採購員	4 727	-	66	4 837
212	Production Supervisor 生產主管	267	-	-	267
213	Quality Control Supervisor 品質控制主管	227	7	-	227
214	Training Officer 訓練主任	4	-	-	4
215	Research and Development Technician 研究及發展技術員	215	8	50	273
	Sub-total 小計	15 136	33	245	15 447
CRAFTSMAN LEVEL 技工級					
301	Machinist 機床工	423	-	3	426
302	Precision Machinist 精密加工機床工	25	-	-	25
303	Machine Setter 機器調校工	81	-	-	81

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
CRAFTSMAN LEVEL (Continued) 技工級 (續)					
304	Tool and Die Maker 工具及工模製造工	34	-	-	34
305	Instrument Maker/Repairer 儀器製造/修理工	646	5	31	677
306	Electrician 電工	179	2	4	185
307	Mechanical Fitter 機械打磨裝配工	2 802	51	74	2 884
309	Furnaceman 熔爐工	25	-	-	25
310	Electric Arc and Gas Welder 電焊氣焊工	493	-	7	500
311	Sheetmetal Fabricator 薄片金屬構造工	215	-	5	220
312	Steel Fabricator (Thick Plate) 鋼板構造工	71	-	20	91
313	Plumber and Pipe Fitter 喉管工	45	-	-	45
314	Pattern/Model/Prototype Maker 樣本/模型/生產原型製造工	127	-	-	127
315	Electroplating and Metal Coating Worker 電鍍及金屬塗層工	179	-	-	179
316	Painter 髹漆工	80	-	-	80
317	Metal Printing Craftsman 金屬印製技工	37	-	-	37
318	Rolling Mill/Extrusion Press Craftsman 軋壓/擠壓技工	36	-	-	36
319	Silk Screen Printer 絲網印刷工	2	-	-	2
320	Cameraman/Darkroom Processor 攝影員/黑房整理員	8	-	-	8
321	Mould Maker 製模技工	205	-	-	205
322	Repairer (Watches and Clocks) 鐘錶修理工	387	7	-	394
323	Heat Treatment Craftsman 熱處理技工	1	-	-	1
324	Edging/Shaping Craftsman 車邊工	88	2	-	88

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
CRAFTSMAN LEVEL (Continued) 技工級 (續)					
333	Precious Stone Setter 首飾鑲嵌工	18	-	-	18
	Sub-total 小計	6 207	67	144	6 368
OPERATIVE LEVEL 操作工級					
401	Semi-skilled Machine Operator 機器操作工	696	-	27	723
402	Fettler 鑄件整理工	3	-	-	3
404	Die-Casting Machine Operator 金屬壓鑄機操作工	32	-	-	32
405	Electric-resistance Welder 電阻焊接工	78	-	12	90
406	Polishing Worker 磨光工	125	-	1	126
408	Press Operator 啤機操作工	115	-	-	115
410	Semi-skilled Electroplating and Metal Coating Worker 電鍍及金屬塗層半技工	4	-	-	4
411	Quality Control Operator 品質控制操作工	262	-	12	274
412	Assembler 裝配工	1 064	5	44	1 109
413	Injection Moulding Machine Operator 注塑機操作工	28	-	-	28
414	Crane Operator 起重機操作工	26	-	-	26
415	Polishing Worker (Lens) 磨鏡片工	56	-	-	56
435	Stone Selector/Sorter 配石工	1	-	-	1
	Sub-total 小計	2 490	5	96	2 587
UNSKILLED LEVEL 非技術工人級					
501	Labourer 雜工	678	-	25	703
	Sub-total 小計	678	-	25	703
	Grand Total 總計	30 501	115	554	31 148

DISTRIBUTION OF EMPLOYEES BY BRANCH OF THE METAL PRODUCTS AND RELATED INDUSTRIES
金屬品製造及相關行業的僱員人數分佈情況

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/testing, production line consulting/design and quality control 與金屬業有關的工程服務, 包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/department in training/education institutions 訓練機構及教育院校的有關部門及學系	
TECHNOLOGIST LEVEL 技師級													
101	Mechanical Engineer 機械工程師	23	3	3	90	2	13	236	1	508	238	94	1 211
102	Manufacturing/Production/ Industrial Engineer 製造/生產/工業工程師	39	4	-	29	-	9	-	1	167	12	57	318
103	Materials Engineer/Metallurgist 用料工程師/冶金技師	-	-	-	2	-	-	-	-	26	64	27	119

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品（機械及設備除外）及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
TECHNOLOGIST LEVEL (Continued) 技師級（續）													
104	Electrical Engineer 電機工程師	6	7	4	1	2	88	13	-	100	224	26	471
105	Electronics Engineer 電子工程師	1	1	-	19	-	8	20	-	9	102	61	221
106	Technical Services Engineer 技術支援工程師	2	12	3	8	10	-	17	-	139	121	9	321
107	Technical Marketing Manager 技術市務經理	-	6	30	19	9	44	19	9	1 413	18	-	1 567
108	Logistic Manager 物流經理	-	2	1	4	2	8	6	-	61	-	-	84
109	Merchandising Manager 採購經理	-	2	5	16	2	8	5	6	467	-	-	511
110	Training Manager 訓練經理	-	-	-	1	2	-	-	-	-	-	1	4
111	Engineering Manager 工程經理	10	4	-	59	-	20	82	4	131	61	7	378

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
TECHNOLOGIST LEVEL (Continued) 技師級(續)													
112	Factory Manager 工廠經理	-	4	7	14	2	12	-	-	18	2	-	59
113	Production Manager 生產部經理	-	8	5	15	9	17	1	18	259	5	-	337
114	Quality Control Manager 品質控制經理	-	4	6	27	3	5	2	-	55	6	-	108
115	Product/Graphic Designer 產品/平面設計師	-	2	8	-	8	10	4	37	196	16	-	281
	Sub-total 小計	81	59	72	304	51	242	405	76	3 549	869	282	5 990
TECHNICIAN LEVEL 技術員級													
201	Mechanical Draughtsman 機械繪圖員	1	6	2	4	-	22	12	-	56	10	-	113
202	Mechanical Engineering Technician 機械工程技術員	64	45	-	75	-	3	861	-	320	109	50	1 527

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
TECHNICIAN LEVEL (Continued) 技術員級 (續)													
203	Manufacturing/Production/Industrial Engineering Technician 製造/生產/工業工程技術員	14	3	14	17	-	-	-	2	92	35	27	204
204	Electrical Engineering Technician 電機工程技術員	34	12	2	12	-	75	43	-	81	117	4	380
205	Foreman/Supervisor 管工/監督	21	104	58	67	10	63	286	23	210	58	24	924
206	Electronics Technician 電子技術員	-	-	-	12	2	15	55	-	63	29	41	217
207	Technical Services Technician 支援技術員	1	5	18	6	-	-	135	-	836	501	13	1 515
208	Technical Marketing Executive 技術市場主任	-	4	29	68	44	11	50	38	3 269	5	2	3 520
209	Co-ordinator 協理員/聯絡員	-	1	52	4	7	30	60	1	530	20	-	705

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		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
TECHNICIAN LEVEL (Continued) 技術員級(續)													
210	Logistic Executive/Supervisor 物流主任	-	16	11	5	3	12	12	-	526	6	-	591
211	Merchandiser 採購員	-	23	222	26	54	61	216	72	4 026	25	2	4 727
212	Production Supervisor 生產主管	-	8	36	15	13	18	-	13	164	-	-	267
213	Quality Control Supervisor 品質控制主管	-	3	7	5	3	12	2	23	71	101	-	227
214	Training Officer 訓練主任	-	-	-	2	-	-	-	-	-	-	2	4
215	Research and Development Technician 研究及發展技術員	-	-	-	-	-	-	-	6	58	62	89	215
	Sub-total 小計	135	230	451	318	136	322	1 732	178	10 302	1 078	254	15 136

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
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CRAFTSMAN LEVEL 技工級													
301	Machinist 機床工	4	6	169	77	4	50	73	8	18	2	12	423
302	Precision Machinist 精密加工機床工	-	3	-	8	5	-	-	7	-	-	2	25
303	Machine Setter 機器調校工	-	-	12	-	-	-	-	3	66	-	-	81
304	Tool and Die Maker 工具及工模製造工	-	-	-	24	4	4	-	-	-	-	2	34
305	Instrument Maker/Repairer 儀器製造/修理工	45	1	94	10	4	8	308	4	170	2	-	646
306	Electrician 電工	38	4	3	5	-	57	71	-	-	-	1	179
307	Mechanical Fitter 機械打磨裝配工	268	10	98	171	-	34	1 678	8	436	97	2	2 802

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
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CRAFTSMAN LEVEL (Continued) 技工級 (續)													
309	Furnaceman 熔爐工	-	25	-	-	-	-	-	-	-	-	-	25
310	Electric Arc and Gas Welder 電焊氣焊工	1	6	233	19	-	-	197	-	7	30	-	493
311	Sheetmetal Fabricator 薄片金屬構造工	-	-	56	55	-	58	46	-	-	-	-	215
312	Steel Fabricator (Thick Plate) 鋼板構造工	-	-	55	-	-	1	15	-	-	-	-	71
313	Plumber and Pipe Fitter 喉管工	-	5	15	1	-	-	24	-	-	-	-	45
314	Pattern/Model/Prototype Maker 樣本/模型/生產原型製造工	-	-	56	12	-	-	-	3	-	55	1	127
315	Electroplating and Metal Coating Worker 電鍍及金屬塗層工	-	7	171	-	-	1	-	-	-	-	-	179

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務, 包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
CRAFTSMAN LEVEL (Continued) 技工級 (續)													
316	Painter 髹漆工	2	-	-	-	-	-	78	-	-	-	-	80
317	Metal Printing Craftsman 金屬印製技工	-	-	28	1	-	-	-	8	-	-	-	37
318	Rolling Mill/Extrusion Press Craftsman 軋壓/擠壓技工	-	20	-	-	16	-	-	-	-	-	-	36
319	Silk Screen Printer 絲網/印刷工	-	-	-	-	-	1	-	1	-	-	-	2
320	Cameraman/Darkroom Processor 攝影員/黑房整理員	-	-	-	-	-	-	-	-	8	-	-	8
321	Mould Maker 製模技工	-	-	15	186	4	-	-	-	-	-	-	205
322	Repairer (Watches and Clocks) 鐘錶修理工	-	-	-	-	-	-	-	18	369	-	-	387

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
OPERATIVE LEVEL (Continued) 操作工級 (續)													
404	Die-Casting Machine Operator 金屬壓鑄機操作工	-	12	20	-	-	-	-	-	-	-	-	32
405	Electric-resistance Welder 電阻焊接工	-	-	66	-	-	-	12	-	-	-	-	78
406	Polishing Worker 磨光工	-	-	14	3	-	-	15	-	93	-	-	125
407	Striker 打鐵工	-	-	-	-	-	-	-	-	-	-	-	-
408	Press Operator 啤機操作工	-	7	88	12	2	6	-	-	-	-	-	115
409	Paint Spraying Gun Operator/ Zinc Sprayer 噴漆/噴鋅工	-	-	-	-	-	-	-	-	-	-	-	-
410	Semi-skilled Electroplating and Metal Coating Worker 電鍍及金屬塗層半技工	-	-	3	-	1	-	-	-	-	-	-	4

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
OPERATIVE LEVEL (Continued) 操作工級 (續)													
411	Quality Control Operator 品質控制操作工	-	10	100	4	-	39	6	63	40	-	-	262
412	Assembler 裝配工	58	27	181	80	29	398	12	155	124	-	-	1 064
413	Injection Moulding Machine Operator 注塑機操作工	-	2	-	2	4	-	-	-	-	20	-	28
414	Crane Operator 起重機操作工	-	7	-	1	-	-	18	-	-	-	-	26
415	Polishing Worker 磨鏡片工	-	-	-	-	56	-	-	-	-	-	-	56
435	Stone Selector/Sorter 配石工	-	-	-	-	-	-	-	1	-	-	-	1
	Sub-total 小計	158	263	629	194	104	531	63	223	301	20	4	2 490

Code No. 編號	Job Title 職稱	Branch 門類											Total 總數
		Branch 1 門類一	Branch 2 門類二	Branch 3 門類三	Branch 4 門類四	Branch 5 門類五	Branch 6 門類六	Branch 7 門類七	Branch 8 門類八	Branch 9 門類九	Branch 10 門類十	Branch 11 門類十一	
		Plant maintenance section of food, beverage and tobacco manufacturing industries 食品、飲品及煙草製造業的廠房保養部門	Manufacture of basic metals 基本金屬的製造	Manufacture of fabricated metal products, (except machinery and equipment) and metal toys 金屬製品(機械及設備除外)及金屬玩具的製造	Manufacture of machinery and equipment 機械設備的製造	Manufacture of medical equipment. 醫療設備的製造	Manufacture of electrical equipment 電器設備的製造	Repair and installation of machinery and equipment 機械及設備的維修及安裝	Manufacture of watches and clocks 鐘錶的製造	Wholesale, import/export trading of machinery, equipment, watches and clocks 機械設備、鐘錶的批發及出入口貿易	Engineering services related to Metals industry including material testing, metallurgist, process development/ testing, production line consulting/ design and quality control 與金屬業有關的工程服務，包括物料測試、冶金服務、生產工序發展及測試、生產線顧問/設計及品質控制服務	Supplementary samples - Relevant division/ department in training/ education institutions 訓練機構及教育院校的有關部門及學系	
UNSKILLED LEVEL 非技術工人級													
501	Labourer 雜工	23	27	73	11	-	4	101	21	367	13	14	678
	Sub-total 小計	23	27	73	11	-	4	101	21	367	13	14	678
	Grand Total 總計	755	666	2 230	1 396	441	1 313	4 791	570	15 599	2 166	574	30 501

MANPOWER STATISTICS OF THE JEWELLERY INDUSTRY

珠寶業人力統計數字

Code Number 編號	Job Title 職稱	Branch 12 門類十二 Manufacture of Jewellery, Bijouterie and Related Articles 珠寶首飾及有關物品的製造	Branch 13 門類十三 Wholesale, Import/Export Trading of Jewellery, Bijouterie and Related Products 珠寶首飾及有關物品的批發及出入口貿易	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
TECHNOLOGIST LEVEL 技師級							
108	Logistic Manager 物流經理	-	15	15	-	1	16
110	Training Manager 訓練經理	-	1	1	-	-	1
131	Gemmologist 寶石鑒定師	49	26	75	-	2	77
132	Assay Officer 驗金師	2	-	2	-	2	4
133	Jewellery Marketing Manager 珠寶市務經理	97	863	960	-	-	960
134	Production Manager 生產部經理	13	159	172	-	-	172
135	Design and Development Manager 設計及發展經理	4	34	38	-	2	40
136	Merchandizing Manager 營銷採購經理	6	1 123	1 129	-	1	1 130
137	Brand Development Manager 品牌發展經理	3	6	9	-	2	11
	Sub-total 小計	174	2 227	2 401	-	10	2 411
TECHNICIAN LEVEL 技術員級							
210	Logistic Executive/Supervisor 物流主任	3	102	105	-	-	105
231	Jewellery Designer (Hand Sketch) 珠寶設計員 (手繪)	89	604	693	-	7	700
232	Jewellery Designer (CAD) 珠寶設計員 (電腦輔助設計)	86	299	385	-	-	385

Code Number 編號	Job Title 職稱	Branch 12 門類十二 Manufacture of Jewellery, Bijouterie and Related Articles 珠寶首飾及有關物品的製造	Branch 13 門類十三 Wholesale, Import/Export Trading of Jewellery, Bijouterie and Related Products 珠寶首飾及有關物品的批發及出入口貿易	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
TECHNICIAN LEVEL (Continued) 技術員級 (續)							
233	Foreman/Supervisor 工場主管	60	84	144	-	-	144
234	Marketing Co-ordinator 業務協理員	22	239	261	-	-	301
235	Quality Controller 品質管理員	46	497	543	1	-	544
236	Merchandizer 營銷採購員	462	3 896	4 358	-	62	4 420
237	Jewellery Marketing Executive 珠寶市務主任	127	2 196	2 323	-	8	2 331
238	Diamond Grader 鑽石評級員	31	158	189	-	-	189
	Sub-total 小計	926	8 075	9 001	1	77	9 119
CRAFTSMAN LEVEL 技工級							
307	Mechanical Fitter 機械打磨裝配工	26	-	26	-	-	26
331	Goldsmith (K-gold) 打金工 (西金)	393	122	515	1	-	515
332	Goldsmith (Fine-gold) 打金工 (足金)	3	3	6	-	-	6
333	Precious Stone Setter 首飾鑲嵌工	238	109	347	5	1	353
334	Jewellery Pattern Maker (Metal) 首飾鑄造金屬樣板工	24	16	40	-	-	40
335	Jewellery Patter Maker (Wax) 首飾鑄造蠟板工	6	-	6	1	-	7
336	Mould Maker/Caster 製模鑄造工	72	-	72	-	-	72
337	Jewellery Plater 首飾電鍍工	60	40	100	3	1	104
338	Jewellery Engraver/Milligrainer 珠寶雕刻工	16	-	16	-	-	16
339	Gemstone Cutter/Polisher 寶石割切/打磨工	85	19	104	-	-	104

Code Number 編號	Job Title 職稱	Branch 12 門類十二 Manufacture of Jewellery, Bijouterie and Related Articles 珠寶首飾及有關物品的製造	Branch 13 門類十三 Wholesale, Import/Export Trading of Jewellery, Bijouterie and Related Products 珠寶首飾及有關物品的批發及出入口貿易	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Forecast of Number of Employees by June 2013 (Excluding Trainees) 預計二〇一三年六月時的僱員人數 (受訓者除外)
CRAFTSMAN LEVEL 技工級 (續)							
340	Diamond Cutter/Polisher 鑽石割切/打磨工	1	1	2	-	-	2
341	Rapid Prototyping (RP) Craftsman 快速原型製造技工	-	5	5	-	-	5
	Sub-total 小計	924	315	1 239	10	2	1 250
OPERATIVE LEVEL 操作工級							
432	Beads and Pearls Stringing Workers 穿珠工	23	11	34	-	-	34
433	Wax Pattern Mounter/Maker 蠟樣工	1	-	1	-	-	1
434	Jewellery Polisher 首飾打磨工	28	1	29	-	-	29
435	Stone Selector/Sorter 配石工	66	186	252	-	2	254
	Sub-total 小計	118	198	316	-	2	318
UNSKILLED LEVEL 非技術工人級							
501	Labourer 雜工	14	-	14	-	-	14
	Sub-total 小計	14	-	14	-	-	14
	Grand Total 總計	2 156	10 815	12 971	11	91	13 112

**DISTRIBUTION OF EMPLOYEES BY MONTHLY INCOME RANGE
(METAL PRODUCTS AND RELATED INDUSTRIES)**

根據每月收入幅度區分的僱員人數分佈情況（金屬品製造及相關行業）

Code No. 編號	Job Title 職稱	Under \$8,001 以下	\$8,001 - \$11,000	\$11,001 - \$14,000	\$14,001 - \$17,000	\$17,001 - \$20,000	\$20,001 - \$30,000	Over \$30,000 以上	Unspecified 未有說明	Sub-total 小計
TECHNOLOGIST LEVEL 技師級										
101	Mechanical Engineer 機械工程師	-	-	-	22	183	267	465	274	1 211
102	Manufacturing/Production/ Industrial Engineer 製造／生產／工業工程師	-	-	47	-	40	142	72	17	318
103	Materials Engineer/Metallurgist 用料工程師／冶金技師	-	-	-	-	2	66	38	13	119
104	Electrical Engineer 電機工程師	-	-	-	-	76	313	49	33	471
105	Electronics Engineer 電子工程師	-	-	-	2	7	58	70	84	221
106	Technical Services Engineer 技術支援工程師	-	-	10	32	106	82	7	84	321
107	Technical Marketing Manager 技術市場經理	-	-	100	176	320	312	438	221	1 567
108	Logistic Manager 物流經理	-	-	-	-	2	32	35	15	84
109	Merchandising Manager 採購經理	-	-	2	44	84	142	214	25	511
110	Training Manager 訓練經理	-	-	2	-	-	-	1	1	4
111	Engineering Manager 工程經理	-	-	-	10	32	137	99	100	378
112	Factory Manager 工廠經理	-	-	3	7	11	11	17	10	59
113	Production Manager 生產部經理	-	-	87	140	12	56	19	23	337
114	Quality Control Manager 品質控制經理	-	-	2	1	35	11	18	41	108
115	Product/Graphic Designer 產品／平面設計師	-	-	31	41	30	70	36	73	281
	Sub-total 小計	-	-	284	475	940	1 699	1 578	1 014	5 990
TECHNICIAN LEVEL 技術員級										
201	Mechanical Draughtsman 機械繪圖員	-	3	55	36	7	6	-	6	113
202	Mechanical Engineering Technician 機械工程技術員	-	27	155	312	759	36	19	219	1 527
203	Manufacturing/Production/ Industrial Engineering Technician 製造／生產／工業 工程技術員	-	51	6	3	120	-	6	18	204
204	Electrical Engineering Technician 電機工程技術員	-	-	148	28	146	23	-	35	380
205	Foreman/Supervisor 管工／監督	-	36	184	178	132	319	27	48	924

Code No. 編號	Job Title 職稱	Under \$8,001 以下	\$8,001 - \$11,000	\$11,001 - \$14,000	\$14,001 - \$17,000	\$17,001 - \$20,000	\$20,001 - \$30,000	Over \$30,000 以上	Unspecified 未有說明	Sub-total 小計
TECHNICIAN LEVEL (Continued) 技術員級 (續)										
206	Electronics Technician 電子技術員	1	4	97	17	72	16	-	10	217
207	Technical Services Technician 支援技術員	46	201	240	173	151	42	-	662	1 515
208	Technical Marketing Executive 技術市場主任	-	189	468	1 475	664	143	12	569	3 520
209	Co-ordinator 協理員/聯絡員	56	63	314	141	17	2	-	112	705
210	Logistic Executive/Supervisor 物流主任	-	24	278	101	51	41	-	96	591
211	Merchandiser 採購員	338	950	1 201	860	694	298	176	210	4 727
212	Production Supervisor 生產主管	-	11	87	23	56	80	7	3	267
213	Quality Control Supervisor 品質控制主管	-	22	95	72	4	1	7	26	227
214	Training Officer 訓練主任	-	-	-	1	-	1	-	2	4
215	Research and Development Technician 研究及發展技術員	50	-	-	63	60	21	12	9	215
	Sub-total 小計	491	1 581	3 328	3 483	2 933	1 029	266	2 025	15 136
CRAFTSMAN LEVEL 技工級										
301	Machinist 機床工	15	102	191	75	19	-	-	21	423
302	Precision Machinist 精密加工機床工	-	7	15	-	2	1	-	-	25
303	Machine Setter 機器調校工	-	3	78	-	-	-	-	-	81
304	Tool and Die Maker 工具及工模製造工	11	15	2	4	-	2	-	-	34
305	Instrument Maker/Repairer 儀器製造/修理工	49	58	376	149	4	-	-	10	646
306	Electrician 電工	-	6	115	27	-	-	-	31	179
307	Mechanical Fitter 機械打磨裝配工	227	793	1 050	243	270	122	-	97	2 802
309	Furnaceman 熔爐工	-	-	25	-	-	-	-	-	25
310	Electric Arc and Gas Welder 電焊氣焊工	-	353	95	2	36	7	-	-	493
311	Sheetmetal Fabricator 薄片金屬構造工	-	127	88	-	-	-	-	-	215
312	Steel Fabricator (Thick Plate) 鋼板構造工	-	-	71	-	-	-	-	-	71
313	Plumber and Pipe Fitter 喉管工	-	16	8	21	-	-	-	-	45
314	Pattern/Model/Prototype Maker 樣本/模型/生產原型 製造工	-	94	28	1	-	-	-	4	127
315	Electroplating and Metal Coating Worker 電鍍及金屬塗層工	-	55	32	6	85	-	-	1	179
316	Painter 髹漆工	-	46	14	-	20	-	-	-	80
317	Metal Printing Craftsman 金屬印製技工	8	3	25	-	-	-	-	1	37

Code No. 編號	Job Title 職稱	Under \$8,001 以下	\$8,001 - \$11,000	\$11,001 - \$14,000	\$14,001 - \$17,000	\$17,001 - \$20,000	\$20,001 - \$30,000	Over \$30,000 以上	Unspecified 未有說明	Sub-total 小計
CRAFTSMAN LEVEL (Continued) 技工級 (續)										
318	Rolling Mill/Extrusion Press Craftsman 輓壓/擠壓技工	-	4	32	-	-	-	-	-	36
319	Silk Screen Printer 絲網印刷工	-	-	1	-	-	1	-	-	2
320	Cameraman/Darkroom Processor 攝影師/黑房整理員	-	-	8	-	-	-	-	-	8
321	Mould Maker 製模技工	-	129	76	-	-	-	-	-	205
322	Repairer (Watches and Clocks) 鐘錶修理工	-	16	110	-	-	257	-	4	387
323	Heat Treatment Craftsman 熱處理技工	-	-	1	-	-	-	-	-	1
324	Edging/Shaping Craftsman 車邊工	-	64	24	-	-	-	-	-	88
333	Precious Stone Setter 首飾鑲嵌工	-	12	-	-	-	-	-	6	18
	Sub-total 小計	310	1 903	2465	528	436	390		175	6 207
OPERATIVE LEVEL 操作工級										
401	Semi-skilled Machine Operator 機器操作工	74	454	134	32	-	-	-	2	696
402	Fettler 鑄件整理工	-	3	-	-	-	-	-	-	3
404	Die-Casting Machine Operator 金屬壓鑄機操作工	-	20	12	-	-	-	-	-	32
405	Electric-resistance Welder 電阻焊接工	-	39	39	-	-	-	-	-	78
406	Polishing Worker 磨光工	14	15	2	-	48	45	-	1	125
408	Press Operator 啤機操作工	86	18	-	11	-	-	-	-	115
410	Semi-skilled Electroplating and Metal Coating Worker 電鍍及金屬塗層半技工	-	-	4	-	-	-	-	-	4
411	Quality Control Operator 品質控制操作工	13	205	10	1	-	-	-	33	262
412	Assembler 裝配工	243	607	124	64	-	-	-	26	1 064
413	Injection Moulding Machine Operator 注塑機操作工	4	20	2	-	-	2	-	-	28
414	Crane Operator 起重機操作工	-	9	7	-	-	-	-	10	26
415	Polishing Worker 磨鏡片工	-	50	6	-	-	-	-	-	56
435	Stone Selector/Sorter 配石工	-	1	-	-	-	-	-	-	1
	Sub-total 小計	434	1 441	340	108	48	47	-	72	2 490
UNSKILLED LEVEL 非技術工人級										
501	Labourer 雜工	100	430	14	11	-	-	-	123	678
	Sub-total 小計	100	430	14	11	-	-	-	123	378
	Grand Total 總計	1 335	5 355	6 431	4 605	4 357	3 165	1 844	3 409	30 501

**DISTRIBUTION OF EMPLOYEES BY MONTHLY INCOME RANGE
(JEWELLERY INDUSTRY)**

根據每月收入幅度區分的僱員人數分佈情況（珠寶業）

Code No. 編號	Job Title 職稱	Under \$8,001 以下	\$8,001 - \$11,000	\$11,001 - \$14,000	\$14,001 - \$17,000	\$17,001 - \$20,000	\$20,001 - \$30,000	Over \$30,000 以上	Unspecified 未有說明	Sub-total 小計
TECHNOLOGIST LEVEL 技師級										
108	Logistic Manager 物流經理	-	-	-	-	-	9	6	-	15
110	Training Manager 訓練經理	-	-	-	-	-	1	-	-	1
131	Gemmologist 寶石鑒定師	-	-	-	17	30	28	-	-	75
132	Assay Officer 驗金師	-	-	-	2	-	-	-	-	2
133	Jewellery Marketing Manager 珠寶市務經理	-	-	-	8	166	122	572	92	960
134	Production Manager 生產部經理	-	-	-	83	1	58	25	5	172
135	Design and Development Manager 設計及發展經理	-	-	-	-	-	4	22	12	38
136	Merchandizing Manager 營銷採購經理	-	-	80	128	3	427	236	255	1 129
137	Brand Development Manager 品牌發展經理	-	-	-	-	-	4	5	-	9
	Sub-total 小計	-	-	80	238	200	653	866	364	2 401
TECHNICIAN LEVEL 技術員級										
210	Logistic Executive/Supervisor 物流主任	-	-	3	37	52	-	5	8	105
231	Jewellery Designer (Hand Sketch) 珠寶設計員 (手繪)	-	24	202	25	288	34	18	102	693
232	Jewellery Designer (CAD) 珠寶設計員 (電腦輔助設計)	-	-	20	17	257	-	-	91	385
233	Foreman/Supervisor 工場主管	-	12	70	11	33	10	-	8	144
234	Marketing Co-ordinator 業務協理員	-	12	90	43	112	-	-	4	261
235	Quality Controller 品質管理員	-	67	80	209	100	-	51	36	543
236	Merchandizer 營銷採購員	146	350	401	964	702	1 175	104	516	4 258
237	Jewellery Marketing Executive 珠寶市務主任	-	134	468	1 007	182	134	16	382	2 323
238	Diamond Grader 鑽石評級員	-	78	20	9	82	-	-	-	189
	Sub-total 小計	146	677	1 354	2 322	1 808	1 353	194	1 147	9 001

Code No. 編號	Job Title 職稱	Under \$8,001 以下	\$8,001 - \$11,000	\$11,001 - \$14,000	\$14,001 - \$17,000	\$17,001 - \$20,000	\$20,001 - \$30,000	Over \$30,000 以上	Unspecified 未有說明	Sub-total 小計
CRAFTSMAN LEVEL 技工級										
307	Mechanical Fitter 機械打磨裝配工	-	26	-	-	-	-	-	-	26
331	Goldsmith (K-gold) 打金工 (西金)	80	55	138	209	15	-	-	18	515
332	Goldsmith (Fine-gold) 打金工 (足金)	-	3	3	-	-	-	-	-	6
333	Precious Stone Setter 首飾鑲嵌工	39	88	165	16	26	-	-	13	347
334	Jewellery Pattern Maker (Metal) 首飾鑄造金屬樣板工	-	24	-	16	-	-	-	-	40
335	Jewellery Patter Maker (Wax) 首飾鑄造蠟板工	-	-	3	-	-	-	-	3	6
336	Mould Maker/Caster 製模鑄造工	26	40	5	-	-	-	-	1	72
337	Jewellery Plater 首飾電鍍工	-	54	35	6	-	-	-	5	100
338	Jewellery Engraver/Milligrainer 珠寶雕刻工	-	-	16	-	-	-	-	-	16
339	Gemstone Cutter/Polisher 寶石割切/打磨工	-	24	70	-	10	-	-	-	104
340	Diamond Cutter/Polisher 鑽石割切/打磨工	-	1	1	-	-	-	-	-	2
341	Rapid Prototyping (RP) Craftsman 快速原型製造技工	-	5	-	-	-	-	-	-	5
	Sub-total 小計	145	320	436	247	51	-	-	40	1 239
OPERATIVE LEVEL 操作工級										
432	Beads and Pearls Stringing Workers 穿珠工	-	31	1	-	-	-	-	-	34
433	Wax Pattern Mounter/Maker 蠟樣工	-	1	-	-	-	-	-	-	1
434	Jewellery Polisher 首飾打磨工	-	21	7	-	-	-	-	1	29
435	Stone Selector/Sorter 配石工	-	77	171	-	-	-	-	4	252
	Sub-total 小計	-	132	179	-	-	-	-	5	316
UNSKILLED LEVEL 非技術工人級										
501	Labourer 雜工	-	14	-	-	-	-	-	-	14
	Sub-total 小計	-	14	-	-	-	-	-	-	14
	Grand Total 總計	291	1 143	2 049	2 807	2 059	2 006	1 060	1 556	12 971

PREFERRED EDUCATION OF EMPLOYEES
僱員宜有的教育程度

Number 號碼	Branch 門類	Degree or above 大學學位 或 以上	Higher Diploma 高級文憑	Diploma 文憑	Higher Certificate / Certificate / Secondary 7 高級證書 / 證書 / 中七	Secondary 5 - Secondary 6 中五 至 中六	Craft Certificate / Secondary 4 技工證書 / 中四	Secondary 3 or below 中三 或 以下	Unspecified 未有說明	Sub-total 小計
TECHNOLOGIST LEVEL 技師級										
1	Plant Maintenance 廠房保養	37	3	36	-	-	-	-	5	81
2	Manufacture of Basic Metal 基本金屬製造	28	11	16	4	-	-	-	-	59
3	Manufacture of Metal Products 金屬製品製造	28	12	17	15	-	-	-	-	72
4	Manufacture of Machinery and Equipment 機械設備製造	266	33	5	-	-	-	-	-	304
5	Manufacture of Medical Equipment 醫療設備製造	43	-	8	-	-	-	-	-	51
6	Manufacture of Electrical Equipment 電器設備製造	72	50	100	-	-	-	-	20	242
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	261	25	119	-	-	-	-	-	405
8	Manufacture of Watches and Clocks 鐘錶製造	6	10	60	-	-	-	-	-	76
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	1 517	735	1 279	-	-	-	-	18	3 549
10	Engineering Services 工程服務	495	79	117	12	-	-	-	166	869
11	Training/Educational Institutions 訓練機構/教育院校	250	32	-	-	-	-	-	-	282
12	Manufacture of Jewellery 珠寶製造	32	46	41	-	-	-	-	4	123
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	823	232	782	5	328	-	-	57	2 227
14	Gemmological Laboratory 寶石鑒定所	51	-	-	-	-	-	-	-	51
	Sub-total 小計	3 909	1 268	2 580	36	328	-	-	270	8 391

Number 號碼	Branch 門類	Degree or above 大學學位 或 以上	Higher Diploma 高級文憑	Diploma 文憑	Higher Certificate / Certificate / Secondary 7 高級證書 / 證書 / 中七	Secondary 5 - Secondary 6 中五 至 中六	Craft Certificate / Secondary 4 技工證書 / 中四	Secondary 3 or below 中三 或 以下	Unspecified 未有說明	Sub-total 小計
TECHNICIAN LEVEL 技術員級										
1	Plant Maintenance 廠房保養	4	17	36	26	2	45	-	5	135
2	Manufacture of Basic Metal 基本金屬製造	-	30	155	31	-	-	14	-	230
3	Manufacture of Metal Products 金屬製品製造	-	30	62	219	98	14	14	14	451
4	Manufacture of Machinery and Equipment 機械設備製造	3	139	100	70	-	-	6	-	318
5	Manufacture of Medical Equipment 醫療設備製造	6	10	12	108	-	-	-	-	136
6	Manufacture of Electrical Equipment 電器設備製造	4	15	25	218	30	-	20	10	322
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	26	143	960	511	92	-	-	-	1 732
8	Manufacture of Watches and Clocks 鐘錶製造	16	3	24	93	40	-	-	2	178
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	591	785	2 867	5 687	235	-	-	137	10 302
10	Engineering Services 工程服務	22	246	165	507	104	-	-	34	1 078
11	Training/Educational Institutions 訓練機構/教育院校	157	51	39	7	-	-	-	-	254
12	Manufacture of Jewellery 珠寶製造	86	35	240	502	-	-	-	29	892
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	313	464	1 544	4 848	802	40	-	64	8 075
14	Gemmological Laboratory 寶石鑒定所	8	3	23	-	-	-	-	-	34
	Sub-total 小計	1 236	1 971	6 252	12 827	1 403	99	54	295	24 137

Number 號碼	Branch 門類	Degree or above 大學學位 或 以上	Higher Diploma 高級文憑	Diploma 文憑	Higher Certificate / Certificate / Secondary 7 高級證書 / 證書 / 中七	Secondary 5 - Secondary 6 中五 至 中六	Craft Certificate / Secondary 4 技工證書 / 中四	Secondary 3 or below 中三 或 以下	Unspecified 未有說明	Sub-total 小計
CRAFTSMAN LEVEL 技工級										
1	Plant Maintenance 廠房保養	-	-	-	-	111	81	146	20	358
2	Manufacture of Basic Metal 基本金屬製造	-	-	-	-	58	13	16	-	87
3	Manufacture of Metal Products 金屬製品製造	-	-	80	-	175	112	638	-	1 005
4	Manufacture of Machinery and Equipment 機械設備製造	-	-	-	-	228	118	223	-	569
5	Manufacture of Medical Equipment 醫療設備製造	-	-	-	-	51	9	66	-	126
6	Manufacture of Electrical Equipment 電器設備製造	-	-	-	-	99	26	89	-	214
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	-	-	121	-	597	689	1 060	23	2 490
8	Manufacture of Watches and Clocks 鐘錶製造	-	-	-	-	31	9	29	3	72
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	-	-	-	-	579	114	387	-	1 080
10	Engineering Services 工程服務	-	-	-	-	57	4	125	-	186
11	Training/Educational Institutions 訓練機構/教育院校	-	2	-	-	13	5	-	-	20
12	Manufacture of Jewellery 珠寶製造	-	-	-	-	90	136	682	16	924
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	-	-	-	-	34	109	172	-	315
14	Gemmological Laboratory 寶石鑒定所	-	-	-	-	-	-	-	-	-
	Sub-total 小計	-	2	201	-	2 123	1 425	3 633	62	7 446
	Grand Total 總計	5 145	3 241	9 033	12 863	3 854	1 524	3 687	627	39 974

PREFERRED MODE OF TRAINING OF EMPLOYEES

僱員宜有的訓練方式

Number 號碼	Branch 門類	Graduate Traineeship 工科畢業生 訓練	On-the-job Training 在職訓練	Apprentice- ship 學徒訓練	Others 其他	Unspecified 未有說明	Sub-total 小計
TECHNOLOGIST LEVEL 技師級							
1	Plant Maintenance 廠房保養	13	63	-	-	5	81
2	Manufacture of Basic Metal 基本金屬製造	4	55	-	-	-	59
3	Manufacture of Metal Products 金屬製品製造	8	64	-	-	-	72
4	Manufacture of Machinery and Equipment 機械設備製造	43	261	-	-	-	304
5	Manufacture of Medical Equipment 醫療設備製造	-	51	-	-	-	51
6	Manufacture of Electrical Equipment 電器設備製造	16	206	-	-	20	242
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	39	366	-	-	-	405
8	Manufacture of Watches and Clocks 鐘錶製造	9	67	-	-	-	76
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及出入口貿易	500	3 31	-	-	18	3 549
10	Engineering Services 工程服務	213	490	-	-	166	869
11	Training/Educational Institutions 訓練機構／教育院校	91	168	-	-	23	282
12	Manufacture of Jewellery 珠寶製造	11	108	-	-	4	123
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	144	2 026	-	-	57	2 227
14	Gemmological Laboratory 寶石鑒定所	30	21	-	-	-	51
	Sub-total 小計	1 121	6 977	-	-	293	8 391
TECHNICIAN LEVEL 技術員級							
1	Plant Maintenance 廠房保養	1	84	45	-	5	135
2	Manufacture of Basic Metal 基本金屬製造	-	218	12	-	-	230
3	Manufacture of Metal Products 金屬製品製造	-	423	14	-	14	451
4	Manufacture of Machinery and Equipment 機械設備製造	15	303	-	-	-	318
5	Manufacture of Medical Equipment 醫療設備製造	-	136	-	-	-	136
6	Manufacture of Electrical Equipment 電器設備製造	-	312	-	-	10	322
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	75	1 657	-	-	-	1 732
8	Manufacture of Watches and Clocks 鐘錶製造	4	172	-	-	2	178

Number 號碼	Branch 門類	Graduate Traineeship 工科畢業生 訓練	On-the-job Training 在職訓練	Apprentice- ship 學徒訓練	Others 其他	Unspecified 未有說明	Sub-total 小計
TECHNICIAN LEVEL (Continued) 技術員級 (續)							
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及出入口貿易	-	10 165	-	-	137	10 302
10	Engineering Services 工程服務	50	994	-	-	34	1 078
11	Training/Educational Institutions 訓練機構／教育院校	-	226	-	-	28	254
12	Manufacture of Jewellery 珠寶製造	15	848	-	-	29	892
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	124	7 887	-	-	64	8 075
14	Gemmological Laboratory 寶石鑒定所	-	34	-	-	-	34
	Sub-total 小計	284	23 459	71	-	323	24 137
CRAFTSMAN LEVEL 技工級							
1	Plant Maintenance 廠房保養	-	231	107	-	20	358
2	Manufacture of Basic Metal 基本金屬製造	-	78	9	-	-	87
3	Manufacture of Metal Products 金屬製品製造	-	753	252	-	-	1 005
4	Manufacture of Machinery and Equipment 機械設備製造	29	414	126	-	-	569
5	Manufacture of Medical Equipment 醫療設備製造	-	87	39	-	-	126
6	Manufacture of Electrical Equipment 電器設備製造	-	104	110	-	-	214
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	-	1 347	1 120	-	23	2 490
8	Manufacture of Watches and Clocks 鐘錶製造	16	32	21	-	3	72
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及出入口貿易	-	686	394	-	-	1 080
10	Engineering Services 工程服務	-	61	125	-	-	186
11	Training/Educational Institutions 訓練機構／教育院校	-	16	2	-	2	20
12	Manufacture of Jewellery 珠寶製造	20	342	546	-	16	924
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	-	77	238	-	-	315
14	Gemmological Laboratory 寶石鑒定所	-	-	-	-	-	-
	Sub-total 小計	65	4 228	3 089	-	64	7 446
	Grand Total 總計	1 470	34 664	3 160	-	680	39 974

PREFERRED PERIOD OF TRAINING OF EMPLOYEES

僱員宜有的訓練期

Number 號碼	Branch 門類	4 Years or above 4 年或 以上	3 Years to less than 4 Years 3 年至 4 年以下	2 Years to less than 3 Years 2 年至 3 年以下	1 Year to less than 2 Years 1 年至 2 年以下	6 months to less than 1 Year 6 個月至 1 年以下	Below 6 Months 6 個月 以下	Unspecified 未有說明	Sub-total 小計
TECHNOLOGIST LEVEL 技師級									
1	Plant Maintenance 廠房保養	24	7	45	-	-	-	5	81
2	Manufacture of Basic Metal 基本金屬製造	7	11	41	-	-	-	-	59
3	Manufacture of Metal Products 金屬製品製造	4	31	22	15	-	-	-	72
4	Manufacture of Machinery and Equipment 機械設備製造	68	197	37	-	-	2	-	304
5	Manufacture of Medical Equipment 醫療設備製造	9	3	17	-	22	-	-	51
6	Manufacture of Electrical Equipment 電器設備製造	43	43	126	7	-	3	20	242
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	196	15	164	-	-	30	-	405
8	Manufacture of Watches and Clocks 鐘錶製造	10	6	60	-	-	-	-	76
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	679	818	1 951	-	-	83	18	3 549
10	Engineering Services 工程服務	97	201	383	-	22	-	166	869
11	Training/Educational Institutions 訓練機構／教育院校	218	41	-	-	-	-	23	282
12	Manufacture of Jewellery 珠寶製造	22	49	48	-	-	-	4	123
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	243	143	1 411	299	54	20	57	2 227
14	Gemmological Laboratory 寶石鑒定所	21	-	30	-	-	-	-	51
	Sub-total 小計	1 641	1 565	4 335	321	98	138	293	8 391
TECHNICIAN LEVEL 技術員級									
1	Plant Maintenance 廠房保養	12	13	78	27	-	-	5	135
2	Manufacture of Basic Metal 基本金屬製造	-	62	74	94	-	-	-	230
3	Manufacture of Metal Products 金屬製品製造	14	62	95	238	-	28	14	451
4	Manufacture of Machinery and Equipment 機械設備製造	22	9	144	128	-	15	-	318
5	Manufacture of Medical Equipment 醫療設備製造	6	26	16	88	-	-	-	136

Number 號碼	Branch 門類	4 Years or above 4年或 以上	3 Years to less than 4 Years 3年至 4年以下	2 Years to less than 3 Years 2年至 3年以下	1 Year to less than 2 Years 1年至 2年以下	6 months to less than 1 Year 6個月至 1年以下	Below 6 Months 6個月 以下	Unspecified 未有說明	Sub-total 小計
TECHNICIAN LEVEL (Continued) 技術員級 (續)									
6	Manufacture of Electrical Equipment 電器設備製造	15	-	54	214	-	29	10	322
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	42	914	323	378	75	-	-	1 732
8	Manufacture of Watches and Clocks 鐘錶製造	13	15	69	75	4	-	2	178
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	1 306	1 168	2 093	5 515	-	83	137	10 302
10	Engineering Services 工程服務	-	15	150	741	114	24	34	1 078
11	Training/Educational Institutions 訓練機構／教育院校	30	139	53	4	-	-	28	254
12	Manufacture of Jewellery 珠寶製造	67	50	333	413	-	-	29	892
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	51	487	1 755	4 955	654	109	64	8 075
14	Gemmological Laboratory 寶石鑒定所	2	-	-	32	-	-	-	34
	Sub-total 小計	1 580	2 960	5 237	12 902	847	288	323	24 137
CRAFTSMAN LEVEL 技工級									
1	Plant Maintenance 廠房保養	9	51	64	214	-	-	20	358
2	Manufacture of Basic Metal 基本金屬製造	7	6	-	74	-	-	-	87
3	Manufacture of Metal Products 金屬製品製造	30	-	187	788	-	-	-	1 005
4	Manufacture of Machinery and Equipment 機械設備製造	44	33	211	252	-	29	-	569
5	Manufacture of Medical Equipment 醫療設備製造	-	16	7	95	-	8	-	126
6	Manufacture of Electrical Equipment 電器設備製造	20	-	54	140	-	-	-	214
7	Repair and Installation of Machinery and Equipment 機械設備維修及安裝	388	259	191	1 629	-	-	23	2 490
8	Manufacture of Watches and Clocks 鐘錶製造	3	2	4	60	-	-	3	72
9	Wholesale, Import/Export Trading of Machinery, Equipment, Watches and Clocks 機械設備、鐘錶的批發及 出入口貿易	83	128	264	605	-	-	-	1 080
10	Engineering Services 工程服務	-	-	2	154	30	-	-	186
11	Training/Educational Institutions 訓練機構／教育院校	3	-	-	15	-	-	2	20
12	Manufacture of Jewellery 珠寶製造	8	111	95	646	-	48	16	924

Number 號碼	Branch 門類	4 Years or above 4 年或 以上	3 Years to less than 4 Years 3 年至 4 年以下	2 Years to less than 3 Years 2 年至 3 年以下	1 Year to less than 2 Years 1 年至 2 年以下	6 months to less than 1 Year 6 個月至 1 年以下	Below 6 Months 6 個月 以下	Unspecified 未有說明	Sub-total 小計
CRAFTSMAN LEVEL (Continued) 技工級 (續)									
13	Wholesale, Import/Export Trading of Jewellery 珠寶批發及出入口貿易	-	24	10	203	-	78	-	315
14	Gemmological Laboratory 寶石鑒定所	-	-	-	-	-	-	-	-
	Sub-total 小計	595	630	1 089	4 875	30	163	64	7 446
	Grand Total 總計	3 816	5 155	10 661	18 098	975	589	680	39 974

**RECOMMENDED ANNUAL TRAINING REQUIREMENTS
FOR 2013 TO 2016 (METAL PRODUCTS AND RELATED INDUSTRIES)**

金屬品及相關行業於 2013 年至 2016 年間建議的每年訓練人數

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Recommended Number of Trainees to be Taken on Annually 建議招收的每年受訓者人數
TECHNOLOGIST LEVEL 技師級					
101	Mechanical Engineer 機械工程師	1 211	-	5	23 – 28
102	Manufacturing/Production/ Industrial Engineer 製造/生產/工業工程師	318	-	1	6 – 7
103	Materials Engineer/Metallurgist 用料工程師/冶金技師	119	-	-	2 – 3
104	Electrical Engineer 電機工程師	471	-	3	9 – 11
105	Electronics Engineer 電子工程師	221	-	1	4 – 5
106	Technical Services Engineer 技術支援工程師	321	10	-	6 – 7
107	Technical Marketing Manager 技術市務經理	1 567	-	3	30 – 36
108	Logistic Manager 物流經理	84	-	-	2
109	Merchandising Manager 採購經理	511	-	6	10 – 12
110	Training Manager 訓練經理	4	-	-	-
111	Engineering Manager 工程經理	378	-	-	7 – 9
112	Factory Manager 工廠經理	59	-	3	1
113	Production Manager 生產部經理	337	-	-	6 – 8
114	Quality Control Manager 品質控制經理	108	-	-	2 – 3
115	Product/Graphic Designer 產品/平面設計師	281	-	22	5 – 6
	Sub-total 小計	5 990	10	44	113 – 138
TECHNICIAN LEVEL 技術員級					
201	Mechanical Draughtsman 機械繪圖員	113	-	1	7 – 8

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Recommended Number of Trainees to be Taken on Annually 建議招收的每年受訓者人數
TECHNICIAN LEVEL (Continued) 技術員級 (續)					
202	Mechanical Engineering Technician 機械工程技術員	1 527	9	34	91 – 111
203	Manufacturing/Production/ Industrial Engineering Technician 製造/生產/工業工程技術員	204	-	1	12 – 15
204	Electrical Engineering Technician 電機工程技術員	380	-	21	22 – 28
205	Foreman/Supervisor 管工/監督	924	-	1	55 – 67
206	Electronics Technician 電子技術員	217	-	1	13 – 16
207	Technical Services Technician 支援技術員	1 515	9	34	90 – 110
208	Technical Marketing Executive 技術市場主任	3 520	-	24	209 – 255
209	Co-ordinator 協理員/聯絡員	705	-	3	42 – 51
210	Logistic Executive/Supervisor 物流主任	591	-	9	35 – 43
211	Merchandiser 採購員	4 727	-	66	280 – 343
212	Production Supervisor 生產主管	267	-	-	16 – 19
213	Quality Control Supervisor 品質控制主管	227	7	-	13 – 16
214	Training Officer 訓練主任	4	-	-	-
215	Research and Development Technician 研究及發展技術員	215	8	50	13 – 16
	Sub-total 小計	15 136	33	245	898 – 1 098
CRAFTSMAN LEVEL 技工級					
301	Machinist 機床工	423	-	3	21 – 26
302	Precision Machinist 精密加工機床工	25	-	-	1 – 2
303	Machine Setter 機器調校工	81	-	-	4 – 5
304	Tool and Die Maker 工具及工模製造工	34	-	-	2
305	Instrument Maker/Repairer 儀器製造/修理工	646	5	31	32 – 39
306	Electrician 電工	179	2	4	9 – 11

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Recommended Number of Trainees to be Taken on Annually 建議招收的每年受訓者人數
CRAFTSMAN LEVEL (Continued) 技工級 (續)					
307	Mechanical Fitter 機械打磨裝配工	2 802	51	74	139 – 170
309	Furnaceman 熔爐工	25	-	-	1 – 2
310	Electric Arc and Gas Welder 電焊氣焊工	493	-	7	25 – 30
311	Sheetmetal Fabricator 薄片金屬構造工	215	-	5	11 – 13
312	Steel Fabricator (Thick Plate) 鋼板構造工	71	-	20	4
313	Plumber and Pipe Fitter 喉管工	45	-	-	2 – 3
314	Pattern/Model/Prototype Maker 樣本/模型/生產原型製造工	127	-	-	6 – 8
315	Electroplating and Metal Coating Worker 電鍍及金屬塗層工	179	-	-	9 – 11
316	Painter 髹漆工	80	-	-	4 – 5
317	Metal Printing Craftsman 金屬印製技工	37	-	-	2
318	Rolling Mill/Extrusion Press Craftsman 軋壓/擠壓技工	36	-	-	2
319	Silk Screen Printer 絲網印刷工	2	-	-	-
320	Cameraman/Darkroom Processor 攝影師/黑房整理員	8	-	-	-
321	Mould Maker 製模技工	205	-	-	10 – 12
322	Repairer (Watches and Clocks) 鐘錶修理工	387	7	-	19 – 23
323	Heat Treatment Craftsman 熱處理技工	1	-	-	-
324	Edging/Shaping Craftsman 車邊工	88	2	-	4 – 5
333	Precious Stone Setter 首飾鑲嵌工	18	-	-	1
	Sub-total 小計	6 207	67	144	308 – 376
	Grand Total 總計	27 333	110	433	1 319 – 1 612

**RECOMMENDED ANNUAL TRAINING REQUIREMENTS
FOR 2013 TO 2016 (JEWELLERY INDUSTRY)**

珠寶業於 2013 年至 2016 年間建議的每年訓練人數

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Recommended Number of Trainees to be Taken on Annually 建議招收的每年受訓者人數
TECHNOLOGIST LEVEL 技師級					
108	Logistic Manager 物流經理	15	-	1	2 – 3
110	Training Manager 訓練經理	1	-	-	-
131	Gemmologist 寶石鑒定師	75	-	2	12 – 14
132	Assay Officer 驗金師	2	-	2	-
133	Jewellery Marketing Manager 珠寶市務經理	960	-	-	150 – 184
134	Production Manager 生產部經理	172	-	-	27 – 33
135	Design and Development Manager 設計及發展經理	38	-	2	6 – 7
136	Merchandizing Manager 營銷採購經理	1 129	-	1	176 – 216
137	Brand Development Manager 品牌發展經理	9	-	2	2
	Sub-total 小計	2 401	-	10	375 – 459
TECHNICIAN LEVEL 技術員級					
210	Logistic Executive/Supervisor 物流主任	105	-	-	2
231	Jewellery Designer (Hand Sketch) 珠寶設計員 (手繪)	693	-	7	12 – 15
232	Jewellery Designer (CAD) 珠寶設計員 (電腦輔助設計)	385	-	-	7 – 8
233	Foreman/Supervisor 工場主管	144	-	-	2 – 3
234	Marketing Co-ordinator 業務協理員	261	-	-	5
235	Quality Controller 品質管理員	543	1	-	9 – 11
236	Merchandizer 營銷採購員	4 358	-	62	75 – 92

Code No. 編號	Job Title 職稱	Number of Employees at Date of Survey (Excluding Trainees) 調查期間的僱員人數 (受訓者除外)	Number of Trainees at Date of Survey 調查期間的受訓者人數	Number of Vacancies at Date of Survey (Excluding Trainees) 調查期間的空缺數目 (受訓者除外)	Recommended Number of Trainees to be Taken on Annually 建議招收的每年受訓者人數
TECHNICIAN LEVEL (Continued) 技術員級 (續)					
237	Jewellery Marketing Executive 珠寶市務主任	2 323	-	8	40 – 49
238	Diamond Grader 鑽石評級員	189	-	-	3 – 4
	Sub-total 小計	9 001	1	77	155 – 189
CRAFTSMAN LEVEL 技工級					
307	Mechanical Fitter 機械打磨裝配工	26	-	-	1
331	Goldsmith (K-gold) 打金工 (西金)	515	1	-	11 – 14
332	Goldsmith (Fine-gold) 打金工 (足金)	6	-	-	-
333	Precious Stone Setter 首飾鑲嵌工	347	5	1	8 – 9
334	Jewellery Pattern Maker (Metal) 首飾鑄造金屬樣板工	40	-	-	1
335	Jewellery Patter Maker (Wax) 首飾鑄造蠟板工	6	1	-	-
336	Mould Maker/Caster 製模鑄造工	72	-	-	2
337	Jewellery Plater 首飾電鍍工	100	3	1	2 – 3
338	Jewellery Engraver/Milligrainer 珠寶雕刻工	16	-	-	-
339	Gemstone Cutter/Polisher 寶石割切/打磨工	104	-	-	2 – 3
340	Diamond Cutter/Polisher 鑽石割切/打磨工	2	-	-	-
341	Rapid Prototyping (RP) Craftsman 快速原型製造技工	5	-	-	-
	Sub-total 小計	1 239	10	2	27 – 33
	Grand Total 總計	12 641	11	89	557 – 681

(A) Job 工作 (See Appendix CM) (參閱附錄CM)			(B) Average Monthly Income 每月 平均 收入	(C) Number of Employees at Date of Survey (excl. Trainees) 現有 僱員人數 (受訓者除外)	(D) Number of Vacancies at Date of Survey (excl. Trainees) 現有 空缺額 (受訓者 除外)	(E) Forecast of Number Employed 12 Months from Now (excl. Trainees) 預計 十二個月後 僱員人數 (受訓者除外)	(F) Number of Trainees [#] at Date of Survey 現有 受訓者 [#] 人數
Title 職稱	Rec. Type	Job Code 職稱編號	Code* 編號*	12-15	16-18	19-22	23-25
For Official Use Only 此欄毋須填寫 →		8-10	11				
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36	2						
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Average Monthly
Code* Income Range
編號* 每月平均收入幅度

1 Under \$8,001 以下
2 \$8,001 - \$11,000
3 \$11,001 - \$14,000
4 \$14,001 - \$17,000
5 \$17,001 - \$20,000
6 \$20,001 - \$30,000
7 Over \$30,000 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。

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

<p>Internal Promotion 內部晉升</p> <p>Q1. Number of internal promotion <u>in the past 12 months</u> 過去十二個月內，內部晉升的人數</p> <table style="width:100%; border: none;"> <tr> <td style="width:25%; text-align: center;">From Technician/ Supervisor to Technologist/Manager 由技術員／督導員 晉升至技師／經理</td> <td style="width:25%; text-align: center;">From Craftsman to Technician/Supervisor 由技工晉升至 技術員／督導員</td> <td style="width:25%; text-align: center;">From Others to Craftsman 由其他職級 晉升至技工</td> <td style="width:25%;"></td> </tr> </table> <table style="width:100%; border: none; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;">3</td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td>1</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> </tr> </table>	From Technician/ Supervisor to Technologist/Manager 由技術員／督導員 晉升至技師／經理	From Craftsman to Technician/Supervisor 由技工晉升至 技術員／督導員	From Others to Craftsman 由其他職級 晉升至技工		3								1	8	9	10	11	12	13	14	15	16	<p>Hong Kong Technical Staff Posted Outside Hong Kong 被派往香港以外地方任職的香港技術員工</p> <p>Q2. Number of technologists/managers, technicians/supervisors and craftsmen who had been posted outside Hong Kong for <u>more than half year in the past 12 months</u> 過去十二個月內，被派往香港以外地方任職超過半年的技師／經理、技術員／督導員及技工人數</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%; text-align: center;">Number of Technologists/Managers 技師／經理人數</td> <td style="width:33%; text-align: center;">Number of Technicians/Supervisors 技術員／督導員人數</td> <td style="width:33%; text-align: center;">Number of Craftsmen 技工人數</td> </tr> </table> <table style="width:100%; border: none; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td>17</td> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> </tr> </table>	Number of Technologists/Managers 技師／經理人數	Number of Technicians/Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數													17	18	19	20	21	22	23	24	25	26	27	28	<p>With Metals Industry Related Operations in the Mainland of China 於中國內地擁有與金屬業有關業務</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;">Q3. Total number of <u>mainland workers</u> (excluding Hong Kong Residents) employed in operations in the mainland of China 中國內地機構內僱用的內地員工總數 (不包括香港人)</td> <td style="width:33%;">Q4. Number of <u>mainland technologists</u> (excluding Hong Kong Residents) employed in operations in the mainland of China, as included in Q3 中國內地機構內僱用，及已包括在 Q3 項內的內地技師人數 (不包括香港人)</td> <td style="width:33%;">Q5. 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Q8. Recruitment
招聘

(a) Number of new recruits in the past 12 months
過去十二個月內，新招聘的僱員人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
62 63 64 65	66 67 68 69	70 71 72 73	74 75 76 77

(b) From the new recruits reported in (a) above, how many of them have performed metals industry related duties in their last job
上列 (a) 項新招聘的僱員中，在上一個工作崗位是從事金屬業相關職務的人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
78 79 80 81	82 83 84 85	86 87 88 89	90 91 92 93

Q9. Employees Left
僱員離職

Number of employees who had left your establishment in the past 12 months
過去十二個月內，離職的僱員人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
94 95 96 97	98 99 100 101	102 103 104 105	106 107 108 109

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Q8(a) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q8(b) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q9 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q10 <input type="text"/> <input type="text"/> <input type="text"/>
110 111 112 113	114 115 116 117	118 119 120 121	122 123 124
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
125	126	127	128

Q10. Skills an Employee Need to Enhance
僱員需加強培訓的技能

The three most important skills that your employees need to enhance
(Please see the table on the right for the choice of skills)
貴機構現有僱員最需要加強培訓的三項技能
(請參閱右面的編號表以選擇技能)

Technologist/ Manager 技師／經理	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	129 130 131	132 133 134	135 136 137
Technician/ Supervisor 技術員／督導員	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	138 139 140	141 142 143	144 145 146
Craftsman 技工	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	147 148 149	150 151 152	153 154 155

Code Types of skills / knowledge / attributes
編號 技能/知識/個人特質的類別

Management skills

- 管理技能
- 101 Production and engineering management
工業生產及工程管理
 - 102 Marketing management
經銷管理
 - 103 Project management
計劃管理
 - 104 Quality management
品質管理
 - 105 Purchasing management
採購管理
 - 106 Personnel management
人事管理
 - 107 Leadership
領導能力

China-related knowledge and world vision

- 有關中國的知識及世界視野
- 201 Social and economic development in the mainland of China
在中國內地的社會和經濟發展
 - 202 Laws and regulatory restrictions for access to China's market
進入中國市場的法律和規條限制
 - 203 Trade practices in the mainland of China
在中國內地的營商常規
 - 204 Cross-cultural knowledge
跨文化的知識
 - 205 World vision
世界視野

Language skills

- 語文技能
- 301 Spoken English
英語會話
 - 302 Written English
英文書寫
 - 303 Putonghua
普通話
 - 304 Written Chinese
中文書寫

Interpersonal and intrapersonal skills for the workplace

工作間的人際及個人才能

- 401 Problem solving
解決問題
- 402 Creativity
創意力
- 403 Critical thinking
批判思考能力
- 404 Communication skills
溝通技巧
- 405 Team building
團隊建立
- 406 Time management
時間管理
- 407 Optimism/Positive
樂觀／積極
- 408 Self-esteem
自尊
- 409 Perseverance
毅力
- 410 Change management
變革管理
- 411 Customer services
客戶服務
- 412 Numerical skills
數學運用技巧

- 413 Ability to learn/adapt to new skills/knowledge
學習或適應新技能、新知識的能力

- 699 Others (Please specify)
其他(請說明)

Part I 第一部份

(A) Job 工作 (See Appendix CJ) (參閱附錄CJ)		(B) Average Monthly Income 每月 平均 收入		(C) Number of Employees at Date of Survey (excl. Trainees) 現有 僱員人數 (受訓者除外)	(D) Number of Vacancies at Date of Survey (excl. Trainees) 現有 空缺額 (受訓者 除外)	(E) Forecast of Number Employed 12 Months from Now (excl. Trainees) 預計 十二個月後 僱員人數 (受訓者除外)	(F) Number of Trainees [#] at Date of Survey 現有 受訓者 [#] 人數	Average Monthly Code* Income Range 每月平均收入幅度	
Title 職稱	Rec. Type	Job Code 職稱編號	Code* 編號*	12-15	16-18	19-22	23-25		
For Official Use Only 此欄毋須填寫 →		8-10	11	12-15	16-18	19-22	23-25		
1 Logistics Manager 物流經理	2	1 0 8						1	Under \$8,001 以下
2 Training Manager 訓練經理	2	1 1 0						2	\$8,001 - \$11,000
3 Gemmologist 寶石鑑定師	2	1 3 1						3	\$11,001 - \$14,000
4 Assay Officer 驗金師	2	1 3 2						4	\$14,001 - \$17,000
5 Jewellery Marketing Manager 珠寶市場經理	2	1 3 3						5	\$17,001 - \$20,000
6 Production Manager 生產部經理	2	1 3 4						6	\$20,001 - \$30,000
7 Design and Development Manager 設計及發展經理	2	1 3 5						7	Over \$30,000 以上
8 Merchandising Manager 採購經理	2	1 3 6							
9 Brand Development Manager 品牌發展經理	2	1 3 7							
10 Logistics Executive/Supervisor 物流主任	2	2 1 0							
11 Jewellery Designer (Hand Sketch) 珠寶設計師 (手繪)	2	2 3 1							
12 Jewellery Designer (CAD) 珠寶設計師 (電腦輔助設計)	2	2 3 2							
13 Foreman/Supervisor 工場主管	2	2 3 3							
14 Co-ordinator 協理員/聯絡員	2	2 3 4							
15 Quality Controller 品質管制員	2	2 3 5							
16 Merchandiser 營銷採購員	2	2 3 6							
17 Jewellery Marketing Executive 珠寶市場主任	2	2 3 7							
18 Diamond Grader 鑽石評級員	2	2 3 8							
19 Goldsmith (K-gold) 打金工 (西金)	2	3 3 1							
20 Goldsmith (Fine-gold) 打金工 (足金)	2	3 3 2							
21 Precious Stone Setter 首飾鑲嵌工	2	3 3 3							
22 Jewellery Pattern Maker (Metal) 首飾鑄造金屬樣辦工	2	3 3 4							
23 Jewellery Pattern Maker (Wax) 首飾鑄造蠟辦工	2	3 3 5							
24 Mould Maker/Caster 製模鑄造工	2	3 3 6							
25 Jewellery Plater 首飾電鍍工	2	3 3 7							
26 Jewellery Engraver/Millgrainer 珠寶雕刻工	2	3 3 8							
27 Gemstone Cutter/Polisher 寶石割切/打磨工	2	3 3 9							
28 Diamond Cutter/Polisher 鑽石割切/打磨工	2	3 4 0							
29 Rapid Prototyping (RP) Craftsman 快速原型製造技工	2	3 4 1							
30 Pearl Dyer 珍珠染色工	2	4 3 1							
31 Beads and Pearls Stringing Workers 穿珠工	2	4 3 2							
32 Wax Pattern Moulder/Maker 蠟樣工	2	4 3 3							
33 Jewellery Polisher 首飾打磨工	2	4 3 4							
34 Stone Selector/Sorter 配石工	2	4 3 5							
35 Colouring Worker 著色工	2	4 3 6							
36 Gold Refiner 煉金工	2	4 3 7							
37 Electroforming Operator 電鑄操作工	2	4 3 8							
38	2								

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。

If additional lines are necessary, please tick here and enter on supplementary sheet(s).

如此頁填滿，請先將 (✓) 號填入此 內，然後在附頁繼續填寫。

<p>Internal Promotion 內部晉升</p> <p>Q1. Number of internal promotion <u>in the past 12 months</u> 過去十二個月內，內部晉升的人數</p> <table style="width:100%; text-align: center;"> <tr> <td style="width:25%;">From Technician/ Supervisor to Technologist/Manager 由技術員/督導員 晉升至技師/經理</td> <td style="width:25%;">From Craftsman to Technician/Supervisor 由技工晉升至 技術員/督導員</td> <td style="width:25%;">From Others to Craftsman 由其他職級 晉升至技工</td> <td style="width:25%;"></td> </tr> <tr> <td><input type="text" value="3"/> 1</td> <td><input type="text" value=""/> 8 9 10</td> <td><input type="text" value=""/> 11 12 13</td> <td><input type="text" value=""/> 14 15 16</td> </tr> </table>	From Technician/ Supervisor to Technologist/Manager 由技術員/督導員 晉升至技師/經理	From Craftsman to Technician/Supervisor 由技工晉升至 技術員/督導員	From Others to Craftsman 由其他職級 晉升至技工		<input type="text" value="3"/> 1	<input type="text" value=""/> 8 9 10	<input type="text" value=""/> 11 12 13	<input type="text" value=""/> 14 15 16	<p>Hong Kong Technical Staff Posted Outside Hong Kong 被派往香港以外地方任職的香港技術員工</p> <p>Q2. Number of technologists/managers, technicians/supervisors and craftsmen who had been posted outside Hong Kong for <u>more than half year in the past 12 months</u> 過去十二個月內，被派往香港以外地方任職超過半年的技師/經理、技術員/督導員及技工人數</p> <table style="width:100%; text-align: center;"> <tr> <td style="width:33%;">Number of Technologists/Managers 技師/經理人數</td> <td style="width:33%;">Number of Technicians/Supervisors 技術員/督導員人數</td> <td style="width:33%;">Number of Craftsmen 技工人數</td> </tr> <tr> <td><input type="text" value=""/> 17 18 19 20</td> <td><input type="text" value=""/> 21 22 23 24</td> <td><input type="text" value=""/> 25 26 27 28</td> </tr> </table>	Number of Technologists/Managers 技師/經理人數	Number of Technicians/Supervisors 技術員/督導員人數	Number of Craftsmen 技工人數	<input type="text" value=""/> 17 18 19 20	<input type="text" value=""/> 21 22 23 24	<input type="text" value=""/> 25 26 27 28	<p>With Metals Industry (Jewellery Sector) Related Operations in the Mainland of China 於中國內地擁有與金屬業內珠寶行業有關業務</p> <p>Q3. Total number of <u>mainland workers</u> (excluding Hong Kong Residents) employed in operations in the mainland of China 中國內地機構內僱用的內地員工總數 (不包括香港人)</p> <p>Q4. Number of <u>mainland technologists</u> (excluding Hong Kong Residents) employed in operations in the mainland of China, as included in Q3 中國內地機構內僱用，及已包括在 Q3 項內的內地技師人數 (不包括香港人)</p> <p>Q5. Forecast number of <u>mainland technologists</u> (excluding Hong Kong Residents) employed in operations in the mainland of China <u>12 months from now</u> 預計十二個月後，中國內地機構內僱用的內地技師人數 (不包括香港人)</p> <table style="width:100%; text-align: center;"> <tr> <td style="width:33%;"><input type="text" value=""/> 29 30 31 32 33</td> <td style="width:33%;"><input type="text" value=""/> 34 35 36</td> <td style="width:33%;"><input type="text" value=""/> 37 38 39</td> </tr> </table>	<input type="text" value=""/> 29 30 31 32 33	<input type="text" value=""/> 34 35 36	<input type="text" value=""/> 37 38 39																																																					
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<p>Q6. Employer's View on the Expected Change in Business Situation 僱主對未來業務狀況預期變動的意見</p> <table style="width:100%; text-align: center;"> <tr> <td colspan="3">Coming Year 未來一年</td> <td colspan="3">Coming 3 Years 未來三年</td> </tr> <tr> <td>Better 較佳</td> <td>The Same 不變</td> <td>Worse 較差</td> <td>Better 較佳</td> <td>The Same 不變</td> <td>Worse 較差</td> </tr> <tr> <td><input type="text" value=""/></td> <td><input type="text" value=""/></td> <td><input type="text" value=""/></td> <td><input type="text" value=""/></td> <td><input type="text" value=""/></td> <td><input type="text" value=""/></td> </tr> </table> <p style="text-align: center;">(Please tick as appropriate) (請在適當的格內填上✓號)</p>		Coming Year 未來一年			Coming 3 Years 未來三年			Better 較佳	The Same 不變	Worse 較差	Better 較佳	The Same 不變	Worse 較差	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<input type="text" value=""/>	<p>For official use only 此欄毋須填寫</p> <table style="width:100%; text-align: center;"> <tr> <td>Q1 <input type="text" value=""/> 40 41 42</td> <td>Q2 <input type="text" value=""/> 43 44 45</td> <td>Q3 - Q5 <input type="text" value=""/> 46 47 48</td> <td>Q6 <input type="text" value=""/> 49 50</td> <td>Est. No. _____</td> </tr> <tr> <td><input type="text" value=""/> 51</td> <td><input type="text" value=""/> 52</td> <td colspan="3">Er. No. _____</td> </tr> </table>		Q1 <input type="text" value=""/> 40 41 42	Q2 <input type="text" value=""/> 43 44 45	Q3 - Q5 <input type="text" value=""/> 46 47 48	Q6 <input type="text" value=""/> 49 50	Est. No. _____	<input type="text" value=""/> 51	<input type="text" value=""/> 52	Er. No. _____																																											
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Q8. Recruitment
招聘

(a) Number of new recruits in the past 12 months
過去十二個月內，新招聘的僱員人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
62 63 64 65	66 67 68 69	70 71 72 73	74 75 76 77

(b) From the new recruits reported in (a) above, how many of them have performed metals industry (jewellery sector) related duties in their last job
上列 (a) 項新招聘的僱員中，在上一個工作崗位是從事金屬業內珠寶行業相關職務的人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
78 79 80 81	82 83 84 85	86 87 88 89	90 91 92 93

Q9. Employees Left
僱員離職

Number of employees who had left your establishment in the past 12 months
過去十二個月內，離職的僱員人數

Number of Technologists/ Managers 技師／經理人數	Number of Technicians/ Supervisors 技術員／督導員人數	Number of Craftsmen 技工人數	Number of Operatives 操作工人數
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
94 95 96 97	98 99 100 101	102 103 104 105	106 107 108 109

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Q8(a) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q8(b) <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q9 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Q10 <input type="text"/> <input type="text"/> <input type="text"/>
110 111 112 113	114 115 116 117	118 119 120 121	122 123 124
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
125	126	127	128

Q10. Skills an Employee Need to Enhance
僱員需加強培訓的技能

The three most important skills that your employees need to enhance
(Please see the table on the right for the choice of skills)
貴機構現有僱員最需要加強培訓的三項技能
(請參閱右面的編號表以選擇技能)

Technologist/ Manager 技師／經理	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	129 130 131	132 133 134	135 136 137
Technician/ Supervisor 技術員／督導員	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	138 139 140	141 142 143	144 145 146
Craftsman 技工	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
	147 148 149	150 151 152	153 154 155

Code Types of skills / knowledge / attributes
編號 技能/知識/個人特質的類別

Management skills

- 管理技能
- 101 Production and engineering management
工業生產及工程管理
 - 102 Marketing management
經銷管理
 - 103 Project management
計劃管理
 - 104 Quality management
品質管理
 - 105 Purchasing management
採購管理
 - 106 Personnel management
人事管理
 - 107 Leadership
領導能力

Interpersonal and intrapersonal skills for the workplace

- 工作間的人際及個人才能
- 401 Problem solving
解決問題
 - 402 Creativity
創意力
 - 403 Critical thinking
批判思考能力
 - 404 Communication skills
溝通技巧
 - 405 Team building
團隊建立
 - 406 Time management
時間管理

China-related knowledge and world vision

- 有關中國的知識及世界視野
- 201 Social and economic development in the mainland of China
在中國內地的社會和經濟發展
 - 202 Laws and regulatory restrictions for access to China's market
進入中國市場的法律和規條限制
 - 203 Trade practices in the mainland of China
在中國內地的營商常規
 - 204 Cross-cultural knowledge
跨文化的知識
 - 205 World vision
世界視野

Language skills

- 語文技能
- 301 Spoken English
英語會話
 - 302 Written English
英文書寫
 - 303 Putonghua
普通話
 - 304 Written Chinese
中文書寫

- 407 Optimism/Positive
樂觀／積極
- 408 Self-esteem
自尊
- 409 Perseverance
毅力
- 410 Change management
變革管理
- 411 Customer services
客戶服務
- 412 Numerical skills
數學運用技巧
- 413 Ability to learn/adapt to new skills/knowledge
學習或適應新技能、新知識的能力
- 699 Others (Please specify)
其他(請說明)

The 2012 Manpower Survey of the Metals Industry
金屬業二〇一二年人力調查

Explanatory Note
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 CM**.
填寫調查表前，請參閱附錄 CM 所列的職稱與工作說明。
3. 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 Metals 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，而金屬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

4. Job Title - Column "A"
職稱 – “A” 欄
 - (a) Please enter into column “A” those job titles, together with their appropriate job codes specified in **Appendix CM**, applicable to your establishment in order of their skill levels (i.e. technologist/manager first, followed by technician/supervisor, craftsman, operative and unskilled worker).
請將附錄 CM 內適用於貴機構的職稱連同職稱編號，按其技能等級，填入 “A” 欄內（即先填技師／經理，其後填寫技術員／督導員、技工、操作工及非技工）。
 - (b) Please add in column “A” titles of any technical jobs not mentioned in **Appendix CM**, 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 CM，請一併填入 “A” 欄空格內，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 tool and die maker but is also required to perform the work of a mould and die maker occasionally, should be classified 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工具及工模製造工，但間中亦須擔任為製模技工，則應歸類為工具及工模製造工。

5. Average Monthly Income - Column "B"

每月平均收入 – “B” 欄

Please enter into column "B" the average monthly income range for employees under each type of jobs. Monthly income should include basic wages, regular overtime pay, commission, cash allowance and average monthly amount of year end bonus etc., if any. If you have more than one employee doing the same job, please enter the average figure. (Please refer to the codes in the last column of the same page of the questionnaire)

請在 “B” 欄填入每類工作的僱員每月平均收入幅度的編號；這包括底薪、定期性超時工作工資、佣金、現金津貼及每月平均之年終花紅等。若從事同類工作的僱員多於一名，則請取其平均收入。（請參閱調查表同一頁最後一欄的編號）

6. Number of Employees at Date of Survey (excl. 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.

請填寫貴機構現時每類工作的僱員人數（受訓者除外）。

7. Number of Vacancies at Date of Survey (excl. 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。

8. Forecast of Number Employed 12 Months from now (excl. Trainees) - Column “E”
預計十二個月後僱員人數（受訓者除外）－“E”欄

The forecast of number employed means the 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十二個月後所僱用每類工作的僱員人數（受訓者除外）。

9. 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.

請填寫貴機構內正在接受訓練的每類工作的僱員人數。

10. 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

11. Internal Promotion
內部晉升

An internal promotion is the promotion of an employee to a higher job level by virtue of his/her performance or abilities. In Q1, please fill in the number of internal promotions “from Technician/Supervisor to Technologist/Manager”, “from Craftsman to Technician/Supervisor” and “from Others to Craftsman” in the past 12 months in the respective columns. If an employee has more than one promotion during the year in your establishment, only the last promotion should be counted.

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所屬欄內填寫過去十二個月，機構內部由技術員／督導員晉升至技師／經理，由技工晉升至技術員／督導員，以及由其他職級晉升至技工的人數。如貴機構僱員在一年內有多過一次晉升，只需計算最後一次晉升在調查表內。

12. Hong Kong Technical Staff Posted Outside Hong Kong
被派往香港以外地方任職的香港技術員工

In Q2, please enter the number of technologists/managers, technicians/supervisors and craftsmen who had been posted outside Hong Kong for more than half year in the past 12 months.

請在 Q 2 填寫過去十二個月內，被派往香港以外地方任職超過半年的技師／經理、技術員／督導員及技工人數。

13. With Metals Industry Related Operations in the Mainland of China
於中國內地擁有與金屬業有關業務

Q3 Please enter the total number of mainland workers (excluding Hong Kong residents) employed in metals industry related operations in the mainland of China. 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).

請填寫於中國內地擁有與金屬業有關業務機構內僱用的內地員工總數(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)。

Q4 Please enter the number of mainland technologists (excluding Hong Kong residents) employed in metals industry related operations in the mainland of China, as included in Q3. Mainland managers responsible for technical work should be included as technologists.

請填寫於中國內地擁有與金屬業有關業務機構內僱用及已包括在 Q 3 項內的內地技師人數(不包括香港人)。負責技術工作的內地經理亦作內地技師計算。

Q5 Please enter the forecast number of mainland technologists (excluding Hong Kong residents) to be employed in metals industry related operations in the mainland of China 12 months from now.

請填寫預計十二個月後，於中國內地擁有與金屬業有關業務機構內僱用的內地技師人數(不包括香港人)。

14. Employer's View on the Expected Change in Business Situation
僱主對未來業務狀況預期變動的意見

The purpose of Q6 is to seek employer's view on the expected change in business situation for the coming year and the coming three years: whether the business situation will be better, the same or worse than this year.

Q 6 旨在調查僱主對未來一年及未來三年業務狀況預期變動的意見，即預計業務會比今年較佳、不變或較差。

15. Preferred Education, Mode of Training and Period of Training of Employees

僱員宜有的教育程度、訓練方式及訓練期

In Q7, please enter in the boxes the preferred education, mode of training and period of training which an employee in each of the three job levels (i.e. technologist/managerial level, technician/supervisory level and craftsman level) should have if he/she were to carry out his/her work competently. (Please refer to the codes in the same page of the questionnaire.)

請在 Q 7 格內填寫技師／經理級、技術員／督導級及技工級的僱員宜具備何種教育程度、訓練方式及訓練期，才能勝任其工作。（請參閱調查表同一頁的編號）。

16. Recruitment

招聘

In Q8(a), please enter the number of new recruits in the past 12 months for each job level. And, from the new recruits reported in Q8(a), please indicate in Q8(b) how many of them had performed metals industry related duties in their last job for each job level.

請在 Q 8 (a) 填寫過去十二個月內，貴機構新招聘的各類職級的僱員人數。並在 Q 8 (b) 中，標示當中在上一個工作崗位是從事金屬業相關職務的人數。

17. Employees Left

僱員離職

In Q9, please enter the number of employees who had left your establishment in the past 12 months for each job level.

請在 Q 9 填寫過去十二個月內，貴機構各類職級的離職僱員人數。

18. Skills an Employee Need to Enhance

僱員需加強培訓的技能

In Q10, please indicate the three most important skills that your employees need to enhance for each job level. (Please refer to the codes in the same page of the questionnaire.)

請在 Q 1 0 標示各類職級僱員最需要加強培訓的三項技能。（請參閱調查表同一頁的編號）。

The 2012 Manpower Survey of the Jewellery Sector of the Metals Industry
金屬業（珠寶行業）二〇一二年人力調查

Explanatory Note
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 CJ**.
填寫調查表前，請參閱附錄 C J 所列的職稱與工作說明。
3. 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 Metals 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，而金屬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

4. Job Title - Column "A"
職稱 – “A” 欄
 - (a) The job titles and job codes have been pre-printed.
職稱及職稱編號已代為印上。
 - (b) Please add in column “A” titles of any technical jobs not mentioned in **Appendix CJ**, 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 J，請一併填入 “A” 欄空格內，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 goldsmith but is also required to perform the work of a jewellery plater occasionally, should be classified as a goldsmith.

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打金工，但間中亦須擔任為首飾電鍍工，則應歸類為打金工。

5. Average Monthly Income - Column "B"
每月平均收入 – “B” 欄

Please enter into column "B" the average monthly income range for employees under each type of jobs. Monthly income should include basic wages, regular overtime pay, commission, cash allowance and average monthly amount of year end bonus etc., if any. If you have more than one employee doing the same job, please enter the average figure. (Please refer to the codes in the last column of the same page of the questionnaire)

請在 “B” 欄填入每類工作的僱員每月平均收入幅度的編號；這包括底薪、定期性超時工作工資、佣金、現金津貼及每月平均之年終花紅等。若從事同類工作的僱員多於一名，則請取其平均收入。（請參閱調查表同一頁最後一欄的編號）

6. Number of Employees at Date of Survey (excl. 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.

請填寫貴機構現時每類工作的僱員人數（受訓者除外）。

7. Number of Vacancies at Date of Survey (excl. 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。

8. Forecast of Number Employed 12 Months from now (excl. Trainees) - Column “E”
預計十二個月後僱員人數（受訓者除外）－“E”欄

The forecast of number employed means the 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十二個月後所僱用每類工作的僱員人數（受訓者除外）。

9. 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.

請填寫貴機構內正在接受訓練的每類工作的僱員人數。

10. 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

11. Internal Promotion
內部晉升

An internal promotion is the promotion of an employee to a higher job level by virtue of his/her performance or abilities. In Q1, please fill in the number of internal promotions “from Technician/Supervisor to Technologist/Manager”, “from Craftsman to Technician/Supervisor” and “from Others to Craftsman” in the past 12 months in the respective columns. If an employee has more than one promotion during the year in your establishment, only the last promotion should be counted.

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所屬欄內填寫過去十二個月，機構內部由技術員／督導員晉升至技師／經理，由技工晉升至技術員／督導員，以及由其他職級晉升至技工的人數。如貴機構僱員在一年內有多過一次晉升，只需計算最後一次晉升在調查表內。

12. Hong Kong Technical Staff Posted Outside Hong Kong
被派往香港以外地方任職的香港技術員工

In Q2, please enter the number of technologists/managers, technicians/supervisors and craftsmen who had been posted outside Hong Kong for more than half year in the past 12 months.

請在 Q 2 填寫過去十二個月內，被派往香港以外地方任職超過半年的技師／經理、技術員／督導員及技工人數。

13. With Metals Industry (Jewellery Sector) Related Operations in the Mainland of China
於中國內地擁有與金屬業內珠寶行業有關業務

Q3 Please enter the total number of mainland workers (excluding Hong Kong residents) employed in metals industry (jewellery sector) related operations in the mainland of China. 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).

請填寫於中國內地擁有與金屬業內珠寶行業有關業務機構內僱用的內地員工總數(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)。

Q4 Please enter the number of mainland technologists (excluding Hong Kong residents) employed in metals industry (jewellery sector) related operations in the mainland of China, as included in Q3. Mainland managers responsible for technical work should be included as technologists.

請填寫於中國內地擁有與金屬業內珠寶行業有關業務機構內僱用及已包括在 Q 3 項內的內地技師人數(不包括香港人)。負責技術工作的內地經理亦作內地技師計算。

Q5 Please enter the forecast number of mainland technologists (excluding Hong Kong residents) to be employed in metals industry (jewellery sector) related operations in the mainland of China 12 months from now.

請填寫預計十二個月後，於中國內地擁有與金屬業內珠寶行業有關業務機構內僱用的內地技師人數(不包括香港人)。

14. Employer's View on the Expected Change in Business Situation
僱主對未來業務狀況預期變動的意見

The purpose of Q6 is to seek employer's view on the expected change in business situation for the coming year and the coming three years: whether the business situation will be better, the same or worse than this year.

Q 6 旨在調查僱主對未來一年及未來三年業務狀況預期變動的意見，即預計業務會比今年較佳、不變或較差。

15. Preferred Education, Mode of Training and Period of Training of Employees

僱員宜有的教育程度、訓練方式及訓練期

In Q7, please enter in the boxes the preferred education, mode of training and period of training which an employee in each of the three job levels (i.e. technologist/managerial level, technician/supervisory level and craftsman level) should have if he/she were to carry out his/her work competently. (Please refer to the codes in the same page of the questionnaire.)

請在 Q 7 格內填寫技師／經理級、技術員／督導級及技工級的僱員宜具備何種教育程度、訓練方式及訓練期，才能勝任其工作。（請參閱調查表同一頁的編號）。

16. Recruitment

招聘

In Q8(a), please enter the number of new recruits in the past 12 months for each job level. And, from the new recruits reported in Q8(a), please indicate in Q8(b) how many of them had performed metals industry (jewellery sector) related duties in their last job for each job level.

請在 Q 8 (a) 填寫過去十二個月內，貴機構新招聘的各類職級的僱員人數。並在 Q 8 (b) 中，標示當中在上一個工作崗位是從事金屬業內珠寶行業相關職務的人數。

17. Employees Left

僱員離職

In Q9, please enter the number of employees who had left your establishment in the past 12 months for each job level.

請在 Q 9 填寫過去十二個月內，貴機構各類職級的離職僱員人數。

18. Skills an Employee Need to Enhance

僱員需加強培訓的技能

In Q10, please indicate the three most important skills that your employees need to enhance for each job level. (Please refer to the codes in the same page of the questionnaire.)

請在 Q 1 0 標示各類職級僱員最需要加強培訓的三項技能。（請參閱調查表同一頁的編號）。

Job Descriptions for Principal Jobs in the Metals Products and Related Industries**金屬品製造及相關行業主要職務的工作說明**

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL 技師／經理級		
101	Mechanical Engineer 機械工程師	<p>Researches on mechanical engineering problems and product analysis; designs and advises on mechanical plant, equipment and machinery; plans and supervises their development, parts manufacture, installation, operation and maintenance. Usually specialises in one or more of the followings:</p> <ol style="list-style-type: none"> (1) product analysis, design and development; and quality assurance of products; (2) sales and technical service; (3) plant engineering (installation and maintenance); (4) tooling design and manufacture. <p>研究機械或產品工程問題及產品分析；擔任廠房、設施與機器等的設計工作，並就這方面提供意見；策劃及管理這些器材的發展、零部件製造、安裝、操作與保養。通常專門處理下列一種或多種工作：</p> <ol style="list-style-type: none"> (1) 產品分析，設計與發展，以及品質測試等工作； (2) 推銷及技術方面的服務； (3) 廠房裝置工程（安裝與保養）； (4) 工具工模設計與製造。
102	Manufacturing/Production/ Industrial Engineer 製造／生產／工業工程師	<p>Designs, operates and controls manufacturing/production systems in industrial plants to ensure efficient use of the resources. This includes:</p> <ol style="list-style-type: none"> (1) layout and design of plant and services; (2) choice of tooling, production equipment, materials, and fabrication/assembly methods; (3) provision of services such as manufacturing capability study, production scheduling, work study, quality assurance, and cost control. <p>設計、操作及控制工廠內的製造／生產系統，以確保資源得以有效運用。有關工作包括：</p> <ol style="list-style-type: none"> (1) 安排及設計廠房裝置與服務； (2) 選擇工具、生產設備、物料及構製／裝配方法； (3) 提供服務，例如生產力研究、生產調度、工作研究、品質控制及成本控制。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued)		技師／經理級（續）
103	Materials Engineer; Metallurgist 物料工程師； 冶金技師	Provides a specialist service to the design, quality assurance and production functions by: <ol style="list-style-type: none"> (1) advising on choice of materials for use in products and processes; (2) testing properties of materials, both incoming and during production; (3) advising on production process specifications such as temperature, composition, pressure, time, quenching media etc. for processes such as rolling, heat treatment, foundry, die-casting and plastic processing; (4) investigating production problems and product defects. 在設計、保持產品品質及生產過程方面提供下列專門服務： <ol style="list-style-type: none"> (1) 就選擇產品及工序所用的物料提供意見； (2) 對輸入及生產進行中的物料性質進行測試； (3) 就各種工序如軋壓、熱處理、鑄造、鑄模及塑膠加工等提供有關生產工序規格的意見，例如溫度、組合、壓力、時間、驟冷劑等； (4) 調查生產方面的問題及產品的缺陷。
104	Electrical Engineer 電機工程師	Designs and advises on: <ol style="list-style-type: none"> (1) electrical equipment and systems, and plans and supervises their installation, operation and maintenance; (2) electrical components and devices used in products. 負責下列範圍的設計工作，並提供建議： <ol style="list-style-type: none"> (1) 電氣設備及系統；此外，亦須策劃與監督這些器材的安裝、操作和保養工作； (2) 產品所用的電氣零件及配件。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued)		技師／經理級（續）
105	Electronics Engineer 電子工程師	<p>Designs and advises on:</p> <p>(1) electronic equipment and systems, and plans and supervises their installation, operation and maintenance;</p> <p>(2) electronic components and devices used in products.</p> <p>負責下列範圍的設計工作，並提供建議：</p> <p>(1) 電子設備及系統；此外，亦須策劃與監督這些器材的安裝、操作和保養工作；</p> <p>(2) 產品所用的電子配件及部件。</p>
106	Technical Services Engineer 技術支援工程師	<p>Provides expertise and technical services relating to a specific machinery/equipment/apparatus in one of the following aspects:</p> <p>(1) application of the software/hardware, and related customer training;</p> <p>(2) installation, commissioning, testing, repair and maintenance.</p> <p>為有關機器／設備／儀器提供以下一項或多項技術支援服務：</p> <p>(1) 使用軟件／硬件的說明及客戶培訓；</p> <p>(2) 安裝、啟動、測試及維修服務。</p>
107	Technical Marketing Manager 技術市務／市場經理	<p>Plans, organises, directs and controls technical marketing, sales and promotional activities of professional equipment and products;</p> <p>Co-ordinates with research and development, production control and shipping departments in anticipating, identifying and satisfying customer needs;</p> <p>Reviews performance analysis for forecasting future technical market situation.</p> <p>策劃、籌辦、指導及監督專業技術儀器／產品的市務推廣、營業及宣傳工作；</p> <p>協調機構內的研究開發、生產控制、貨運等部門，作出預測、確定及滿足客戶需求；</p> <p>檢討業績分析，預測未來產品市場狀況。</p>

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued)		技師／經理級（續）
108	Logistics Manager 物流經理	<p>Takes charge of the overall operation of the supply chain management;</p> <p>Plans, directs and controls the materials procurement activities of the company including material flow, from the stage of raw material supply throughout finished goods shipment and to meet in-house or customer's stringent Just-in-time (JIT) requirement;</p> <p>Be responsible to establish cost effective strategy to support the business needs.</p> <p>負責公司供應鏈管理的一切運作；</p> <p>策劃督導及控制公司物料採購工作，包括確保由原材料供應商至製成品／付運之間物料流程暢順，以符合內部或客戶對“悉時付運 JIT”的嚴格要求；</p> <p>負責制定策略以配合機構整頓業務需求，以達到成本效益。</p>
109	Merchandising Manager 採購經理	<p>Keeps abreast of the up-to-date design, feature and quality requirements of the machinery/parts and component market;</p> <p>Leads a team of merchandisers in the co-ordination and presentation of sample and quotation and to negotiate with buyers/clients;</p> <p>Oversees and follow up buyers'/clients' orders, liaise with appropriate departments to ensure prompt shipment of these orders.</p> <p>留意市場對機械、零部件的設計、特色及品質上最新要求；</p> <p>領導一組採購員，配合樣辦及報價過程與客戶／買家商談；</p> <p>統籌及跟進客戶／買家的訂單，與有關部門協作確保準時付運。</p>
110	Training Manager 訓練經理	<p>Plans, implements and coordinates staff training and employee career development programmes.</p> <p>策劃、推行及統籌員工訓練和僱員職業發展計劃的工作。</p>

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued)		技師／經理級（續）
111	Engineering Manager 工程經理	Plans, directs and controls the engineering activities of the company including product development, procurement, installation, maintenance and servicing the company's mechanical, electrical, electronic equipment and systems. 策劃、督導及掌管公司內各項與工程有關的工作，包括產品發展、採購，以及公司內的機械、電氣、電子裝備和系統的安裝和維修。
112	Factory Manager 工廠經理	Takes charge of the overall operation of the factory. Assumes full responsibility of the management of staff and workers in the factory. Enforces fire, safety and other government regulations. Supervises factory activities such as plant layout, assembly and delivery of finished products. 負責工廠運作的一切事務；負起管理工廠內職員及工人的全部責任；執行防火、安全及其他有關的政府規例；監督工廠內各項工作，例如廠房佈置、製成品的收發等。
113	Production Manager 生產部經理	Plans, directs and controls the production activities of the company. Takes charges of the overall production programmes to ensure the maintenance of specified standards of quality, efficiency and economy. 策劃、督導及掌管公司內有關生產的工作；負責全面管理生產計劃，以確保其符合品質、效率及經濟等指標。
114	Quality Control Manager 品質控制經理	Plans, directs, and supervises the quality control of incoming materials/parts, work-in-progress, and finished products of the company. 策劃、督導及管理公司內交來的物料／零件、以及在生產程序中的半製成品及製成品的品質。
115	Product/Graphic Designer 產品／平面設計師	Originates and develops ideas to design, create, modify and arrange the form of manufactured products, layouts and containers for the products based on factors such as design-function relationship, knowledge of design, art concepts, market and pricing characteristics, client specifications, method and cost of production to achieve aesthetically pleasing and functional effect for the products. 能根據設計與功能的關係、設計知識、美術概念、市場與價格特性、顧客規格、生產方法及成本等因素進行創作，並加以發揮，以便設計、創作、修改及安排製成品的形狀、結構及包裝，務求產品既美觀又實用。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL 技術員／督導級		
201	Mechanical Draftsman 機械繪圖員	Prepares arrangement, assembly and detailed drawings of machines, machine parts, tools, other mechanical equipment as well as manufactured products from sketches, specifications and existing parts. 依據草圖、規格及現有零件，繪製機器、機件、工具、其他機械設備及製成品的排列圖、組裝圖及明細圖。
202	Mechanical Engineering Technician 機械工程技術員	Performs technical tasks contributory to design, fabrication, construction, automation, installation, operation, maintenance and repair of mechanical plant and equipment, including maintenance of aircraft, either independently or under the direction of a qualified engineer. 獨自或在合資格工程師指導下，擔任技術工作，如從事設計、構製、建造、自動操作、安裝、操作、維修機械廠房和設備，包括飛機的保養。
203	Manufacturing/Production/ Industrial Engineering Technician 製造／生產／工業工程 技術員	Performs technical tasks contributory to tooling, and the efficient and economical manufacturing/production of products through proper management of machinery and human resources, either independently or under the direction of a qualified engineer. 獨自或在合資格工程師指導下，擔任技術工作，如正確管理機器及人力資源，以便製造工具，以及有效和經濟地製造產品。
204	Electrical Engineering Technician 電機工程技術員	Performs technical tasks contributory to design, development, manufacture, installation, operation, maintenance and repair of electrical systems and equipment, either independently or under the direction of a qualified engineer. 獨自或在合資格工程師指導下，擔任技術工作，如從事設計、發展、製造、安裝、操作及維修電氣系統和設備。
205	Foreman/Supervisor 管工／監督	Controls a group or groups of craftsmen or other workers by virtue of his/her skill, training and experience; maintains production at predetermined quality, rate and cost, discipline and safety; liaison between management and workers. 憑本身的技能、訓練及經驗，管理一組或數組技工或其他工人，使產品達到預定的品質、保持預算的生產率及生產成本不超出預算；維持管理部門與工人之間的溝通，以及工場內良好紀律及安全措施。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL (Continued) 技術員／督導級（續）		
206	Electronics Technician 電子技術員	Performs technical tasks, contributory to design, development, manufacture, installation, operation, maintenance and repairs of electronic components, equipment and systems, either independently or under the direction of a qualified engineer. 獨自或在合資格工程師的指導下，擔任技術工作，如從事設計、發展、製造、安裝、操作、維修電子配件、設備和系統。
207	Technical Services Technician 支援技術員	Performs technical tasks, normally under the direction and supervision of the Technical Services Engineer to assist in: (1) application of the software/hardware, and related customer training; (2) installation, commissioning, testing, repair and maintenance; (3) calibration of equipment, quality control and assurance of process, parts and products at satellite/sub-contractor's plant. 通常在技術支援工程師的指導及監督下，擔任下列技術工作： (1) 使用軟件／硬件的說明及客戶培訓； (2) 安裝、啟動、測試及維修服務； (3) 儀器校準，品質控制及保證，使屬下分廠及分包商的生產加工、零部件及成品符合規格。
208	Technical Marketing Executive 技術市場主任	Assists the Technical Marketing Manager in soliciting business, preparing marketing plans and other promotional activities; Monitors market conditions and reflect customer changing requirements to management. 協助技術市務經理招攬生意，製訂市務、推廣計劃及活動； 監察市場動態，及時反映客戶需求的變化。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL (Continued)		技術員／督導級（續）
209	Co-ordinator 協理員／聯絡員	<p>Plans, schedules and controls workload making optimum use of all equipment, material and labour throughout the company, its workshop/sub-contractors and co-ordinates with clients;</p> <p>Carries out process planning for jobs and estimates the time requirement for operations as to ensure that schedules are met.</p> <p>充分有效使用機構內部資源（包括工廠及分包商的設備、材料及勞務），及制定進度表，與客戶密切聯繫；</p> <p>估計每項職務的操作程序及所需時間，制定流程，以確保工作能夠依期完成。</p>
210	Logistics Executive/ Supervisor 物流主任	<p>Assists the Logistics Manager in following up the operation of the supply chain management;</p> <p>Co-ordinates the material procurement and flow of goods activities with suppliers, shipping companies, production control and shipping departments and customer's receiving department as to ensure that schedules are met on time.</p> <p>協助物流經理跟進供應鏈管理上各項事宜；</p> <p>協調供應商、貨運商、生產控制及船務部門，及客戶的收貨部門，保持材料採購至產品付運的流程暢順，以確保工作依期完成。</p>
211	Merchandiser 採購員	<p>Assists the Merchandising Manager;</p> <p>Negotiates with buyers/clients/customers and preparing quotations and handling production samples and orders;</p> <p>Follows up buyers order including liaising with other departments on the quality requirements and tracing the production progress as to ensure prompt shipment.</p> <p>協助採購經理；</p> <p>買賣商談及報價工作，處理生產訂單及樣辦製作；</p> <p>跟進客戶訂單，包括與其他部門協調品質要求、生產進度以確保依期付運。</p>

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL (Continued) 技術員／督導級（續）		
212	Production Supervisor 生產主管	Works independently or under the direction of Production Manager to set up and carry out production programmes. 獨立工作，或在生產經理的督導下設立及推行生產計劃。
213	Quality Control Supervisor 品質控制主管	Works independently or under the direction of the Quality Control Manager to ensure that incoming materials/parts, work-in-progress, and finished products are in compliance with standards and specifications. 獨立工作或在品質控制經理督導下，確保交來的物料／零件、在生產程序中的半製成品及製成品的品質能符合標準及規格。
214	Training Officer 訓練主任	Assists the Training Manager in participating a wide range of training duties including employee development programmes. 協助訓練經理執行各項訓練職務，包括僱員發展計劃。
215	Research and Development Technician 研究及發展技術員	Performs technical tasks contributory to research of market trend, development of new products and improvement of process efficiency, either independently or under the direction of a qualified engineer. 獨自或在合資格工程師指導下，擔任技術工作，如市場研究、產品開發及流程改善。
CRAFTSMAN LEVEL 技工級		
301	Machinist 機床工	Sets up and operates common machine tools such as lathe, milling machine and surface grinding machine to produce components according to drawings and specifications. 裝設及操作一般機床，例如車床、銑床及平面磨床，並按照圖則及規格，製造配件。
302	Precision Machinist 精密加工機床工	Sets up and operates precision and CNC machine tools, such as jig boring/grinding machine, EDM wirecut/diesinking machine, CNC milling machine and CNC lathe, to produce components according to drawings and specifications. 裝設及操作精密及電腦數控機床，例如座標鏜床／磨床、火花線切機／火花電蝕機、電腦數控銑床及電腦數控車床，以按照圖則及規格，製造配件。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued)		技工級 (續)
303	Machine Setter 機器調校工	Sets up, for others to operate, metal working machines such as automatic lathes to produce components according to drawings and specifications. 裝設金屬加工機床，例如自動車床，供其他工人操作，以生產符合圖則及規格的配件。
304	Tool and Die Maker 工具及工模製造工	Makes, services and repairs press tools and dies in accordance with drawings and specifications. 按照圖則和規格製造及維修沖壓工具及模具。
305	Instrument Maker/Repairer 儀器製造／修理工	Inspects, tests, repairs, calibrates and maintains mechanical/electrical instruments including the making of replacement parts as necessary. 檢查、測試、修理、標正及保養機械／電氣儀器，包括製造所需的替換零件。
306	Electrician 電工	Installs electrical wiring of all types at low voltage (i.e. not exceeding 1 000 Volts) and tests, maintains and repairs low voltage fixed electrical installation in accordance with regulations and specifications under the direction of a supervisory grade of employee. 在管理級人員指導下，按照規例及規格敷設各類不超過 1 000 伏特低電壓的電氣佈線，並測試及維修低壓固定電力裝置。
307	Mechanical Fitter 機械打磨裝配工	Fits, assembles, erects, installs, services, repairs and tests mechanical plant and machinery according to drawings and specifications; keeps records of work. 按照圖則及規格，打磨、裝配、安裝、維修及測試廠房機械裝置及機器；並保存工作記錄。
308	Moulder and Core Maker (Sand) 砂模及模心製造工	Makes sand moulds and cores for castings, constructs runners, risers and feeders, and uses various foundry equipment and machinery. 製造鑄件用的砂模及模心，構築流道、升流管及進料器，並使用各類鑄造用的設備及機器。
309	Furnaceman 熔爐工	Operates melting furnaces to produce castings. 操作各種熔爐以生產鑄鐵。
310	Electric Arc and Gas Welder 電焊氣焊工	Joins, cuts and deposits metals by electric-arc or flame of oxy-acetylene or other gases, or by other welding and brazing processes. 使用電弧、氧乙炔焰、其他氣體、其他焊接法或黃銅焊接法，以接合、割切金屬及補焊。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued)		技工級 (續)
311	Sheetmetal Fabricator 薄片金屬構造工	Makes sheetmetal articles of thickness not exceeding 10 s.w.g. (or 3.2 mm) such as containers, ducts, ornaments either by hand or machine, assembles, joins and repairs components by welding, brazing, soldering, riveting etc. according to specifications. 按照規格，利用手工具或機器製造厚度不超過 10 s.w.g. (或 3.2 毫米) 的薄金屬片器具，如容器、槽管及裝飾品；使用溶焊、銅焊、錫焊、鉚釘等方法裝配、接合及修理該等器具。
312	Steel Fabricator (Thick Plate) 鋼板構造工	Constructs, assembles, inspects and repairs boilers, tanks, and articles of heavy steel sections above 10 s.w.g. (or 3.2 mm thick). 建造、裝配、查驗及修理用超過 10 s.w.g. (或 3.2 毫米) 鋼板製成的鍋爐、水箱及其他重型鋼件。
313	Plumber and Pipe Fitter 喉管工	Assembles, installs and maintains pipes, fittings and fixtures for supplying air, gas, steam, water and other fluids. 裝配、安裝及保養喉管、配件及夾具，以供應空氣、氣體、蒸氣、水及其他流體。
314	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 and other products from drawings and specifications. 按照圖則及規格，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，以便構造或修改塑料製品及其他產品的模型、樣本及／或生產原型。
315	Electroplating and Metal Coating Worker 電鍍及金屬塗層工	Carries out surface treatment of objects by: (1) electro-chemical and chemical processes including deposition of common metals by electrolyses, electro-chemical polishing, galvanizing, etching and anodising; and (2) metal spraying. 使用下列方法對物體進行表面處理： (1) 電化及化學程序，包括以電解、電化磨光、鍍鋅、腐蝕及陽極氧化將一般金屬沉積；及 (2) 噴鍍金屬。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued)		技工級 (續)
316	Painter 髹漆工	Prepares and mixes paint appropriate to the surface to be painted and prepares surfaces for painting; applies paint by spraying or brushing. 配製及混合油漆以配合須髹漆的表面，並處理表面以便髹漆；用噴油法或手掃法塗漆。
317	Metal Printing Craftsman 金屬印製技工	Sets, controls, and operates printing machines to print metals and related products. 調校、控制與操作金屬印製機，以便在金屬及有關產品上進行印刷。
318	Rolling Mill/Extrusion Press Craftsman 輾壓／擠壓技工	Sets, controls and operates rolling mill and/or extrusion press. 調校、控制與操作輾壓機及／或擠壓機。
319	Silk Screen Printer 絲網印刷工	Produces hand and photographic screen stencils, sets up and operates silk screen printing equipment and machinery. 製備手繪及攝影的絲網印版，調校及操作絲網印刷設備及機器。
320	Cameraman; Darkroom Processor 攝影師； 黑房整理員	Prepares and photographs all types of copy for black and white and colour production, and retouches negatives and positives films. 製備及拍攝各類圖片，供黑白及彩色印刷使用；修飾負片及正片。
321	Mould Maker 製模技工	Makes, maintains and repairs moulds and dies for plastics processing machines and die-casting machines according to drawings and specifications. 按照圖則及規格，製造塑膠處理機及壓鑄機所用工模，並負責維修工模。
322	Repairer (Watches and Clocks) 鐘錶修理工	Diagnoses, locates and repairs faults in the manufacture of watches and clocks, systematically records these faults and recommends changes to minimise such occurrence. 在製造鐘錶的程序中，判斷、根查及修理其間的毛病，並有系統地記錄這些毛病，以及建議如何盡量減少此等情況出現。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued)		技工級 (續)
323	Heat Treatment Craftsman 熱處理技工	Sets up and operates heat treatment furnaces, baths and quenching equipment to alter physical and chemical properties of metal parts according to specifications for heat treatment processes such as hardening, tempering, annealing, case-hardening, and normalising. 調校及操作熱處理爐、熱處理槽及驟冷設備，從而改變金屬零件的物理及化學特性，以符合熱處理程序的規格，例如淬火、回火、退火、表面淬火及正火。
324	Edging/Shaping Craftsman 車邊工	Shapes the lenses to fit into the prescribed spectacle frame and comply with the optometrical requirement. 根據驗光度數要求，對眼鏡片加工車邊以便合適裝配於顧客選用的眼鏡框內。
OPERATIVE LEVEL		操作工級
401	Semi-skilled Machine Operator 機器操作工	Operates one or more of the following machines: drilling machine, capstan (turret) lathe, sawing machine, shearing machine, punching machine, rolling machine, grinding machine, or automatic machine which have been set up by other persons. 操作下列已由他人校妥的一種或多種機床：鑽床、六角車床、鋸床、剪床、打孔機、轉軸機、磨床或自動機床。
402	Fettler 鑄件整理工	Removes runners, risers, cores, flash metal at joints, surface imperfection etc. from castings. 除去鑄成品的水口、模心、不平滑的接口及表面。
403	Pourer 澆鑄工	Pours molten metal into moulds. 負責將熔化的金屬倒入模型。
404	Die-casting Machine Operator 金屬壓鑄機操作工	Operates a die-casting machine. 操作金屬壓鑄機器。
405	Electric-resistance Welder 電阻焊接工	Welds metal parts by means of resistance welding machines (i.e. butt, spot and seam welding machines). 使用電阻焊機（例如對頭焊機、點焊機及接縫焊機）焊接。
406	Polishing Worker 磨光工	Buffers and polishes metal. 磨光金屬製品。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
OPERATIVE LEVEL (Continued)		操作工級 (續)
407	Striker 打鐵工	Uses hammer to assist a blacksmith to form and shape articles. 運用鐵鎚協助打鐵匠工作。
408	Press Operator 啤機操作工	Operates a power press to produce metal articles. 操作五金啤機以生產金屬品。
409	Paint Spraying Gun Operator; Zinc Sprayer 噴漆／噴鋅工	Operates spray-gun to spray onto metallic surface to build up its resistance against corrosion. 操控噴漆槍，將一層金屬噴在金屬的表面，以加強抵抗腐蝕的能力。
410	Semi-skilled Electro-plating and Metal Coating Worker 電鍍及金屬塗層半技工	Assists skilled workers in the process of metal coating. 協助技工進行電鍍金屬表面電化處理的工作。
411	Quality Control Operator 品質控制操作工	Assists in the routine examination of components or finished products according to predetermined standards. 協助日常的檢查工作，以確定配件或製成品符合既定標準。
412	Assembler 裝配工	Assembles components into finished products in accordance with specific job instructions. 按照既定的工作指示裝配配件使成製成品。
413	Injection Moulding Machine Operator 注塑機操作工	Operates a plastic injection moulding machine to produce plastic components. 操作塑膠注塑機以生產塑膠零件。
414	Crane Operator 起重機操作工	Operates a crane to lift, move and position equipment, machinery or materials. 使用起重機吊起、搬運及安放設備、機械或物料。
415	Polishing Worker (Lens) 磨鏡片工	Buffers and polishes lens for spectacle to comply with the optometrical requirement. 打磨及拋光眼鏡片以符合驗光度數要求。
UNSKILLED LEVEL		非技術工人級
501	Labourer 雜工	Undertakes general cleaning work, removal of industrial waste from machines and light material handling. 擔任各類清潔工作，清理機床上的工業廢料及運送輕物料。

Job Descriptions for Principal Jobs in the Jewellery Sector

珠寶業主要職務的工作說明

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL		技師／經理級
108	Logistics Manager 物流經理	<p>Takes charge of the overall operation of the supply chain management;</p> <p>Plans, directs and controls the materials procurement activities of the company including material flow, from the stage of raw material supply throughout finished goods shipment and meets in-house or customer's stringent Just-in-time (JIT) requirement;</p> <p>Be responsible to establish cost effective strategy to support the business needs.</p> <p>負責公司供應鏈管理的一切運作；</p> <p>策劃督導及控制公司物料採購工作，包括確保由原材料供應商至製成品／付運之間物料流程暢順，以符合內部或客戶對“悉時付運 JIT”的嚴格要求；</p> <p>負責制定策略以配合機構整頓業務需求，以達到成本效益。</p>
110	Training Manager 訓練經理	<p>Plans, implements and coordinates staff training and employee career development programmes.</p> <p>策劃、推行及統籌員工訓練和僱員職業發展計劃的工作。</p>

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued) 技師／經理級（續）		
131	Gemmologist 寶石鑒定師	<p>Analyses, examines and classifies a wide range of diamonds and gem stones using test equipment and prepare reports.</p> <p>利用測試儀器設備對各類型鑽石及寶石進行分析、檢查及分類，並編製報告。</p> <p>A qualified gemmologist should obtain either one of the following qualifications:</p> <p>合資格寶石鑒定師須具備以下其中一項資格：</p> <p>(i) Fellowship of Gemmological Association of Great Britain (FGA);</p> <p>英國寶石學院院士；</p> <p>(ii) Fellowship of Gemmological Association of Australia (FGAA);</p> <p>澳洲寶石學會院士；</p> <p>(iii) Graduate Gemmologist of Gemmological Institute of America (GG).</p> <p>美國寶石學院寶石鑒定師課程畢業生。</p>
132	Assay Officer 驗金師	<p>Tests and analyses the standard purity of a precious metal (gold or platinum) or the constituents proportions in the jewellery piece by means of touch stone and chemical etching (aqua regia), x-ray or spectrometer.</p> <p>使用試金石及“王水”作化學腐蝕，或用 X-射綫及質譜儀以測試及分析貴金屬（黃金或鉑金）的標準成色（純度），或珠寶首飾件內所含金屬成份的比例。</p>
133	Jewellery Marketing Manager 珠寶市務經理	<p>Plans, organizes, directs and controls jewellery marketing, sales and promotional activities. Co-ordinates with in-house design and development team, in anticipating, identifying and satisfying customer needs. Visits jewellery fairs and exhibitions to keep abreast of world market situation and development trend.</p> <p>策劃、籌辦、指導及監督珠寶市務推廣、營業及宣傳等工作。協調機構內的設計開發部門，預測、確定及滿足客戶需求。參觀珠寶展覽會、交易會、瞭解當前的市場狀況及發展路向。</p>

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNOLOGIST / MANAGERIAL LEVEL (Continued) 技師／經理級（續）		
134	Production Manager 生產部經理	Plans and executes production systems for goldsmithing, precious stone setting, casting and finishing plant. Takes charge of production, manages and directs the production department personnel to maintain quality and productivity and minimizes manpower and raw material wastage in all production processes. 策劃與執行有關打金、首飾鑲嵌、鑄造及潤飾的生產方針；領導下屬，以保持產品質素與生產效率，並盡量避免浪費廠內各生產程序所用人力及原料。
135	Design and Development Manager 設計及發展經理	Analyses the latest trends in jewellery design and keeps abreast with developments in production, and manages all phases of the design and development cycles. Manages and directs the design department personnel to originate jewellery designs in accordance with requirements. 分析研究珠寶設計的最新潮流及生產技術的最新發展，以及管理整個設計及發展的流程；領導珠寶設計部門下屬，以顧客要求設計珠寶首飾。
136	Merchandising Manager 採購經理	Keeps abreast of the up-to-date design and quality requirements of the jewellery market; plans, approves and leads a team of merchandisers in the co-ordination and presentation of sample and quotation, negotiation with buyers/clients. Oversees and follows up buyers'/clients' orders, liaise with appropriate departments to ensure prompt shipment of these orders. 密切留意珠寶市場對設計及品質的最新要求，策劃、批准及領導一隊營銷採購員，配合樣辦及報價過程與客戶／買家商談。統籌及跟進客戶／買家的訂單，與有關部門協作以確保準時付運。
137	Brand Development Manager 品牌發展經理	Plans, develops, and directs promotional efforts for a particular brand. Co-ordinates activities of specialists of production, sales, advertising, market research, distribution and package development. 策劃、發展及指導指定品牌的宣傳工作。協調機構內的專門人才負責的產品銷售、廣告、市場調查、分發及包裝發展。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL 技術員／督導級		
210	Logistics Executive/ Supervisor 物流主任	Assists the Logistics Manager in following up the operation of the supply chain management; Co-ordinates the material procurement and flow of goods activities with suppliers, shipping companies, production control and shipping departments and customer's receiving department as to ensure that schedules are met on time 協助物流經理跟進供應鏈管理上各項事宜； 協調供應商、貨運商、生產控制及船務部門，及客戶的收貨部門，保持材料採購至產品付運的流程暢順，以確保工作依期完成。
231	Jewellery Designer (Hand Sketch) 珠寶設計員 (手繪)	Originates jewellery design by taking into account materials and manufacture processes, cost and customers' requirements; and prepares basic artwork and working drawing of the products by hand. 以人手繪畫產品的基本美術稿及工作圖，因應材料、製造程序、成本及顧客要求設計珠寶首飾。
232	Jewellery Designer (CAD) 珠寶設計員 (電腦輔助設計)	Originates jewellery design by taking into account materials and manufacture processes, cost and customers' requirements; and prepares basic artwork and working drawing of the products using the computer-aided design software. 利用電腦輔助設計軟件繪畫產品的基本美術稿及工作圖，因應材料、製造程序、成本及顧客要求設計珠寶首飾。
233	Foreman/Supervisor 工場主管	Supervises and co-ordinates activities of workers in fabricating, assembling and repairing jewellery, precious stones and metal products by virtue of his skill and experience. 運用本身的技能及經驗，監督、安排工人從事珠寶首飾物品的生產及修改等工作。
234	Co-ordinator 協理員／聯絡員	Plans, schedules and controls workload making optimum use of all equipment, material and labour throughout the factory; and coordinates with clients. Carries out process planning for jobs and estimates the time requirement for operations as to ensure that production schedules are met. 充分及有效利用工廠所有設備、材料及人力，以計劃及控制工作量，並制定工作程序表，與客戶保持聯繫。估計每項職務的操作程序，計劃每個程序所需時間，並確保生產工作依期完成。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
TECHNICIAN / SUPERVISORY LEVEL (Continued)		技術員／督導級（續）
235	Quality Controller 品質管制員	Ensures that materials of the correct quality are used; controls the quality standard of the finished products by measurement and laboratory test; and supervises final inspection. 確保用料正確；利用量度及測試方法管制珠寶首飾產品的品質，並督導最後階段的檢查工作。
236	Merchandiser 營銷採購員	Assists in the negotiation with buyers/clients/customers and preparation of quotations, and handles their production orders and samples. Follows up buyers orders including liaising with other departments on the quality requirements of buyers and tracing the progress of production to ensure prompt shipment. 協助與客戶商談及報價的工作，處理生產訂單及樣辦（首辦）的製作。跟進客戶訂單，包括與其他部門聯絡有關客戶對品質的要求，及跟查生產進度，以確保客戶訂單能依期付運。
237	Jewellery Marketing Executive 珠寶市務主任	Assists the Jewellery Marketing Manager in soliciting business, preparing marketing plans and other promotional activities; Monitors jewellery market situations and reflects customer changing requirements to management. 協助珠寶市務經理招攬生意，製訂市務推廣計劃及活動；監察市場動態，及時反映客戶需求的變化。
238	Diamond Grader 鑽石評級員	Evaluates the quality of diamonds and gem stones used in jewellery or industrial tools. 為珠寶首飾或工業用具上的鑽石及寶石進行品質評級。
CRAFTSMAN LEVEL		技工級
331	Goldsmith (K-gold) 打金工（西金）	Makes and repairs all kinds of K-gold (including platinum or other precious metals) jewellery using hand or power tools. 利用手動或電動工具，製造及修改各種西金（包括白金或其他貴重金屬）珠寶首飾。
332	Goldsmith (Fine-gold) 打金工（足金）	Makes and repairs all kinds of fine-gold jewellery using hand or power tools. 利用手動或電動工具，製造及修改各種足金首飾。
333	Precious Stone Setter 首飾鑲嵌工	Sets precious and semi-precious stones in jewellery mountings in accordance with specifications. 按規格在首飾胚上鑲嵌寶石或半寶石。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
CRAFTSMAN LEVEL (Continued) 技工級 (續)		
334	Jewellery Pattern Maker (Metal) 首飾鑄造金屬樣辦工	Makes metal patterns or models to specifications for making moulds in the process of jewellery casting. 製造符合規格的金屬模辦以供製模之用。
335	Jewellery Pattern Maker (Wax) 首飾鑄造蠟辦工	Makes wax patterns or models to specifications for making moulds in the process of jewellery casting. 製造符合規格的蠟模辦以供製模之用。
336	Mould Maker/Caster 製模鑄造工	Makes all kinds of moulds and to cast precious metal ornaments. 製造各種鑄模及鑄造貴重金屬首飾。
337	Jewellery Plater 首飾電鍍工	Carries out gold plating, silver plating, rhodium plating, metal colouring and sand blasting. 進行金鍍、銀鍍、銻鍍、金屬著色及噴沙等工作。
338	Jewellery Engraver/ Milligrainer 珠寶雕刻工	Engraves designs or lettering onto the surfaces of jewellery by hand and power tools. Makes milligrains along the edges of bezels, or around stone settings. 利用手動或電動工具，在珠寶首飾的表面刻上設計圖案或字體；在鑲口及首飾鑲件上轆上珠邊。
339	Gemstone Cutter/Polisher 寶石割切／打磨工	Cuts, shapes, carves and polishes gemstones by hand tools or by machine in accordance with specifications. 按規格利用手動工具或機器割切、雕刻及打磨寶石。
340	Diamond Cutter/Polisher 鑽石割切／打磨工	Cuts, shapes, carves and polishes diamonds by hand tools or by machine in accordance with specifications. 按規格利用手動工具或機器割切、雕刻及打磨鑽石。
341	Rapid Prototyping (RP) Craftsman 快速原型製造技工	Uses rapid prototyping (RP) equipment for the prototype output of precious metal ornaments and parts from CAD file. 使用快速原型製造設備製造貴重金屬首飾及配件原型。
OPERATIVE LEVEL 操作工級		
431	Pearl Dyer 珍珠染色工	Dyes pearls in various colours. 將珍珠染上各種顏色。

Job Code 職稱編號	Job Title 職稱	Job Description 工作說明
OPERATIVE LEVEL (Continued) 操作工級 (續)		
432	Beads and Pearls Stringing Workers 穿珠工	Strings gemstones/precious metals beads and natural/cultured pearls on wire or thread for jewellery products such as necklaces, bracelets, hair ornaments, etc. 用金屬線或其他絲線，把寶石／貴重金屬珠及天然珍珠／養珠串成項鍊、手鐲、髮飾等首飾製品。
433	Wax Pattern Moulder/Maker 蠟樣工	Makes wax pattern by injecting molten wax into the cavity of the rubber mould and mounts the pattern onto the sprue. 將熔蠟注入橡膠模內製造蠟樣，並將蠟樣焊在水口棍上(即種樹)。
434	Jewellery Polisher 首飾打磨工	Polishes all kinds of K-gold, find-gold and platinum jewellery by hand or polishing machine. 利用手動工具或研磨機器拋光各種珠寶首飾。
435	Stone Selector/Sorter 配石工	Selects gemstones including jade and diamond, and to classify them into groups according to their size, weight and colour. 挑選寶石，包括玉石及鑽石，並按其形狀大小、重量及顏色分類，以配合各種首飾。
436	Colouring Worker 著色工	Colours metal parts of jewellery and related articles for electro-plating. 在珠寶物品的金屬部分著色，以便進行分色電鍍。
437	Gold Refiner 煉金工	Recovers precious metals such as gold, platinum, rhodium and palladium from saw/file dust, scrap polishing wheels, chemical waste disposal, etc., using furnace, retort, and laboratory equipment. 用熔煉、蒸餾方法及實驗室設備，回收鋸／銼屑、拋光輪碎片、化學廢料等所含的貴重金屬，如金、白金、銻、鈮等。
438	Electroforming Operator 電鑄操作工	Ranges and immerses liquid silver painted jewellery/ornamental article models into electrolyte and carries out fine-gold/K-gold electroforming. 將塗上銀溶液的珠寶／飾物模辦排列，浸在電解液內進行足金／西金電鑄。