

VOCATIONAL TRAINING COUNCIL

New Technology Training Scheme

Training Report

Name of Trainee : Mr. Chow Yat Sang

Name of Company : Pengelly Co Ltd

Training Organization/Institution : Hong Kong Productivity Council

Course Title / Technology in which training is received : Oversea Training in Advanced Technologies in Haute Horologer of manufacturing, Processing, and Chronometer Quality Control for Watch in Switzerland

Training Period : 22-28 May 2011

Training Report :

22 May 2011 (Sun):

Evening From Hong Kong to Zurich, Switzerland

23 May 2011 (Mon):

Arrive Zurich

Overview of Haute Horology Technology in Switzerland (HEIG-VD)

1. Experience sharing with academics and the development and future development of the technology, technological partner about the history.
2. Overview of advanced technologies for Haute Horology

Manufacturing Process: Mechanical Movement Components (HEIG-VD)

1. Techniques and skills for manufacturing processes
2. Selection of materials and processes for different components
3. Overview of advanced manufacturing processes in Switzerland
4. Sample analysis and case study for component development
5. Advanced inspection methods

Advanced Technologies in Haute Horology: Manufacturing, Processing and Quality Control (HEIG-VD)

1. Advanced Technologies in Component Manufacturing (e.g. wheels, staffs main plates, etc.)
2. Advanced Technologies in Processing (e.g. sub-assembly and assembly process, surface processing, etc.)
3. Advanced Quality Control by Scanning Probe Microscopy (SPM) with practical MNT-LANS demonstrative laboratory training
4. The compliance process for Norm NIHS (Norme International Horlogere Suisse) and chronometer certificate.
5. Final Assembly and Advanced Methods of Quality Control
6. Quality Control procedures of Chronometer & Geneva Seal

24 May 2011 (Tue):

Comprehension of Advanced Manufacturing Technology in Haute Horology.

1. Manufacturing of watch cases and dials, bracelet, gear-trains, bottom plates, tourbillion bridges, bearings
2. Craftsmen of striking mechanism gongs
3. Movement design

Movement Design and hand made watch by famous artisan watchmaker,

1. Design innovation of movement
2. Experience sharing in movement prototyping (hand made) techniques and skills

25 May 2010 (Wed):

Professional Watch making Technology by browsing the demonstration from technology developers around the world in renowned fair of Professional Watch making - Jewellery Environment Show (EPHJ)

1. Advanced manufacturing, assembly and inspection processes
2. New and advanced materials and equipment
3. Overview the worldwide state-of-art technology for Horology

Laser Micromachining and Laser Surface Engineering

(Via seminars organized by Professional Watch making-Jewellery Environment Show (EPHJ) & Professional Micro technology Environment Show (EPMT))

1. Power, flexible and cost-effective picoseconds lasers for industrial micromachining applications
2. Real-world applications of intense light matter interaction beyond the scope of classical micromachining
3. Precision fiber-laser beam sources for marking, engraving and micromachining
4. Precision cutting and grooving with the Laser Micro Jet

26 May 2011 (Thu):

Comprehension of Advanced Manufacturing Technology in Haute Horology.

1. Advanced technology in watch inspection, measurement and testing.
2. Experience sharing about brand building and technology development in process
3. Overview of advanced assembly and manufacturing processes for watch.

Micro and Nanotechnology

1. Overview of Micro Electro Mechanical Systems (MEMS) and Nanotechnology
2. Micro- and nanoscale components for watch application
3. Sample and case study
4. Quality Control of micro-scale components
5. Process development and equipment for MEMS

27 May 2011 (Fri):

- From Zurich to Hong Kong

28 May 2011 (Sat):

-Arrive Hong Kong

Date : 17 June 2011

Signature of Trainee : 

Attestation

Mr. CHOW Yat Sang 周日生先生

has attended the training programme dedicated to the delegation and training mission of the Hong Kong Productivity Council, HKPC, on Monday, 23 May 2011, 1:30pm-8:00pm at the HEIG-VD, University of Applied Sciences of Western Switzerland. Topics of the training programme were:

Overview of Haute Horological Technology in Switzerland

- Overview of Advanced Technologies for 'Haute Horlogerie': components, operation principles, manufacturing and quality control, examples on conventional hairsprings, escapement and vibration absorber.

Advanced Technologies in 'Haute Horlogerie': manufacturing, processing and quality control

- Advanced Micro-and Nanotechnology in 'Haute Horlogerie': frictionless surfaces, novel silicon components in watch technology, examples on silicon hairsprings and oscillator systems, design, micro- manufacturing process, advantages.
- The compliance process for Norm NIHS (Norme Internationale Horlogère Suisse) and Chronometer Certificate
- Final Movement/Watch Assembly and Advanced Methods of Quality Control: sub-assembly and assembly process, surface processing.
- Advanced Quality Control by Scanning Probe Microscopy (SPM) with practical MNT-LANS demonstrative laboratory training.
- Mechanical Aspects of Complicate Watches: auto-winding mechanism, mainspring, examples of design.


Main lecturer: Noah Chevaux, Watch Technology, consultant in 'Haute Horlogerie', more than 13 years professional experience in 'Haute Horlogerie'.

Place of Training: HEIG-VD, Avenue des Sports 20, CH-1401 Yverdon-les-Bains.

Programme: Prof. Dr. Silvia Schintke, Laboratory of Applied NanoSciences (MNT-LANS), Institut de Micro et Nano Techniques, HEIG-VD Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud, University of Applied Sciences of Western Switzerland.



Noah Chevaux
Watch Technology



Prof. Dr. S. Schintke
HEIG-VD

Headquarters Division 2 總辦事處二科

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Our Reference 本局檔號 (21) in TTU/HKPC/13/2011(NT)O Your Reference 來函檔號

Mr Alex Chow
Director
Pengelly Company Limited
Flat A, 18/F., On Dak Ind. Building
2-6 Wah Sing Street
Kwai Chung



23 May 2011

Dear Mr Chow,

Application for Training Grant
under the New Technology Training Scheme (NTTS)

Thank you for your application for NTTS training grant. I am pleased to inform you that our Sub-Committee has approved the following training grant for your trainee Mr Chow Yat-sang to attend an overseas training course entitled "Overseas Training in Advanced Technologies in Haute Horologer of Manufacturing, Processing and Chronometer Quality Control for Watch in Switzerland" in the period 22 – 28 May 2011 subject to the conditions laid down in the undertaking form you have signed.

The approved training grant is 50% of the actual course fee up to HK\$10,350.00.

The training grant is payable upon the satisfactory completion of training of your trainee and payment of course fee as confirmed by the course provider and the submission of training report for the trainee in the enclosed format by your company. Please note that the approved training grant may be withdrawn if your company fails to submit the training report within four months after completion of training.

It is stressed that we accept no liability for the trainee, who is solely employed by your company, other than the training grant stated above.

Yours sincerely,

(Freddy Leung)
for Chairman

Sub-Committee on Training in New Technologies

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