

## INDUSTRIAL ATTACHMENT REPORT

PERAK ENTREPRENEUR & SKILLS DEVELOPMENT CENTRE (PESDC)  
GENERAL MACHINIST AND CNC DEPARTMENT, PESDC TRAINING  
COMPLEX, JALAN JOHAN 2/2, KAWASAN PERINDUSTRIAN PENGKALAN 2,  
31550 PUSING, PERAK DARUL RIDZUAN.

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AHMAD FIRDAUS BIN ZAWAWIL ANWAR

REPORT SUBMITTED AS PARTIAL FULFILMENT  
FOR THE LECTURER INDUSTRIAL ATTACHMENT COURSE

MECHANICAL ENGINEERING DEPARTMENT  
SEBERANG PERAI POLYTECHNIC  
PENANG

2011

## ACKNOWLEDGEMENT

*In the name of Allah, the Most Gracious, the Most Merciful.*

Alhamdulillah, thanks to ALLAH S.W.T, I have been able to complete my Industrial Attachment Course for three months without having any difficulties or accident. Here, I would like to express my deep and sincere gratitude to Perak Entrepreneur and Skills Development Centre (PESDC) because gave me the opportunity to join them and learn new technologies especially to Dr. Chow Yong Neng (Executive Director of PESDC), Mr. Mohd Fadzil Bin Ahmad Sapli (Head Of Department in General Machinist And CNC Department) and Mr. Noor Azuan Bin Abdullah (General Machinist And CNC Technical Trainer)

Besides that, personally I would like to express my gratitude to persons share with me their experiences knowledge in this field such as Mr. Mohd Fadhilah Zawawi, Mr. Muhamad Ridzuan Mat Bahari, Technical Trainer in General Machinist And CNC Department. Your wide knowledge and your logical way of thinking have been of great value for me.

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My special gratitude lastly to those who are involved directly or indirectly during this industrial attachment.

Thanks.

AHMAD FIRDAUS BIN ZAWAWIL ANWAR (October 2011)

## **ABSTRACT**

Perak Entrepreneur and Skills Development Centre (PESDC) was established to offer a complete portfolio of both products and services for General Machinist and CNC Tooling, Plastic Technology, Refrigeration and Air-Conditioning, Automotive Technology, Printing Technology, Industrial Automation and Welding Technology. General Machinist and CNC are one of the departments in PESDC which specializes in design fabrication and manufacturing of precision tooling for the production, example the part of plastic and metal related components such as mold and die. I have gained valuable experiences during three months industrial attachment here. I have been exposed to FANUC Controller Systems, FANUC CNC Simulator, CNC EDM Die Sink, CNC Milling, CNC Turning, CNC EDM Wire Cut and Coordinate Measurement Machine (CMM). In this company, they are very familiar with FANUC controller and only few of them using YASNOC and Heidenhain for CNC controller. Besides that, I have also gain some experiences in detail 3D drawing using Mastercam and SolidWorks software and also based on their job. Although not hundred percent experts in that field, I can learn by myself based on their notes given. As a conclusion this company totally very good for those who want to get new knowledge.

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## **CHAPTER 1**

### **INTRODUCTION OF COMPANY**

#### **1.0 Introduction**

In this chapter, the explanation is about company profile, business focus and services, the management team of this company, organization chart, and specific about Perak Entrepreneur and Skills Development Centre (PESDC) department.

#### **1.1 Introduction of Company**

Perak Entrepreneur and Skills Development Centre (PESDC) were established in March 1993 via a joint effort of the then Ministry of Entrepreneur and Cooperative

Development, Perak State Government and manufacturing industries in the state of Perak, Malaysia.

Their vision is to establish PESDC as the reliable skills training centre where the manufacturing industry can look toward meeting its needs whilst at the same time serving as the springboard for entrepreneurial development especially in joint-ventures between bumiputera and non-bumiputera in the industry.

PESDC mission is to provide training and dissemination of information that will assist the manufacturing industry in keeping abreast with changes in technologies, in enhancing productivity, and quality of production as well as encouraging entrepreneurial development in the industry.

Towards the above PESDC have the following objectives:

- i. Meet the training needs of manufacturing industry in equipping their employees with skills and knowledge needed to carry out their assigned jobs effectively.
- ii. Upgrade existing technical skills and knowledge of the manufacturing industry and to keep abreast with technological advancements.
- iii. Improve the quality of work at all levels of an organization through the provision of skills and management training.
- iv. Work closely with the Perak State Government and Federal Government on the implementation of Human Resources Development Fund (HRDF).
- v. Co-ordinate and utilize resources that are available in the manufacturing industry as well as other training and development centres.

- vi. Encourage entrepreneurial ventures within the industry by training and coaching interested stakeholders in all aspects of operating such ventures.
- vii. Promote bumiputera and non-bumiputera joint ventures among entrepreneurs by providing them with the channels for networking.
- viii. Provide a one-stop centre for corporate advisory and diagnostic services for manufacturing companies who are seeking to improve their operations.
- ix. Provide a vehicle for constant exchange of experiences and ideas in the improvement of work ethics.

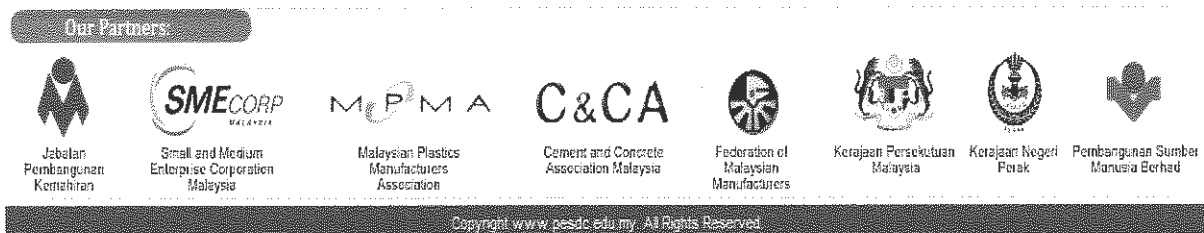


Figure 1.1.1: Perak Entrepreneur & Skills Development Centre (PESDC) Business Partners

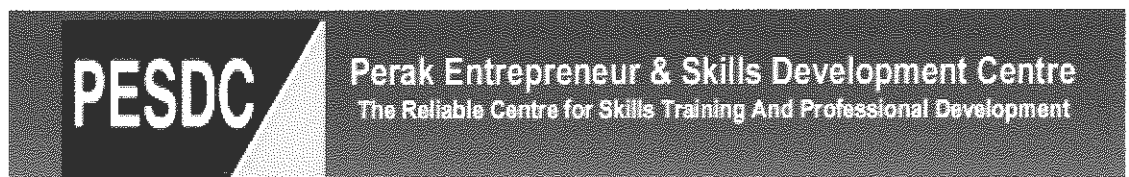


Figure 1.1.2: Perak Entrepreneur & Skills Development Centre (PESDC) Logo and Moto



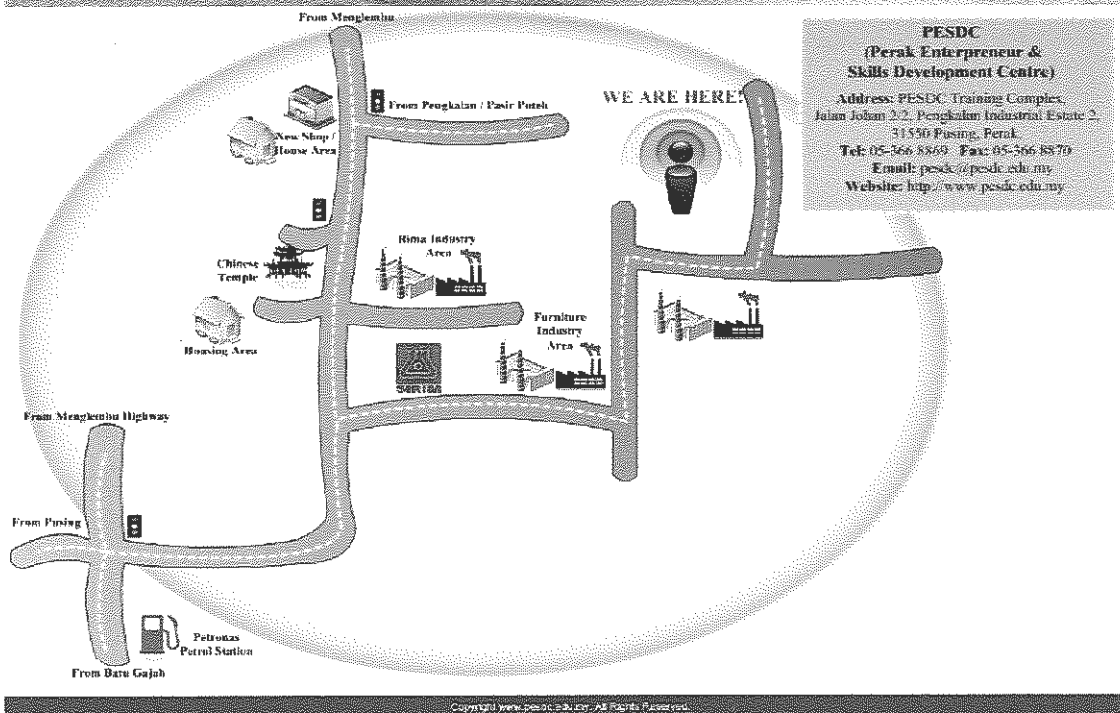
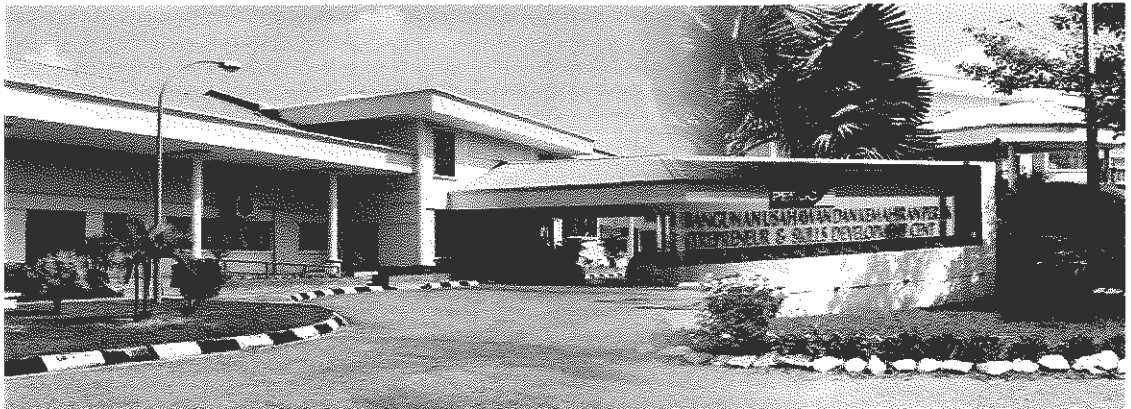


Figure 1.1.3: Location of PESDC

## 1.2 Company Profile Detail

**Company Name** : Perak Entrepreneur & Skills Development Centre (PESDC)

**Company Registration No** : K14016

**Registered Office** : Perak Entrepreneur & Skills Development Centre (PESDC)

PESDC Training Complex,

Jalan Johan 2/2,

Pengkalan Industrial Estate,

31550 Pusing, Perak.

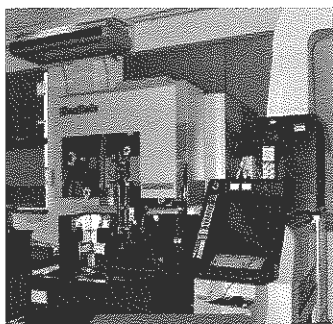
Tel. : 05-3668869

Fax : 05-3668870

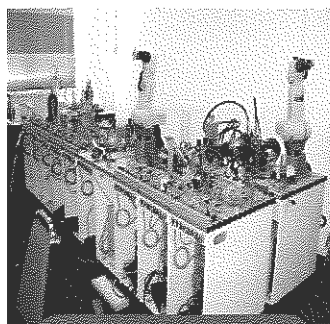
Email : [pesdc@pesdc.edu.my](mailto:pesdc@pesdc.edu.my)

Website : [www.pesdc.edu.my](http://www.pesdc.edu.my)





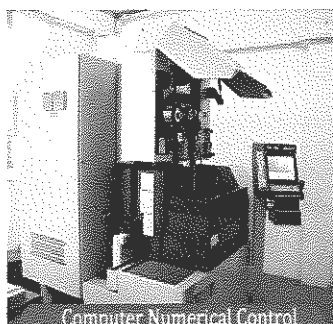
CNC Wire Cut



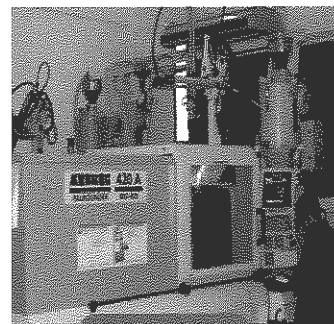
Industrial Automation System



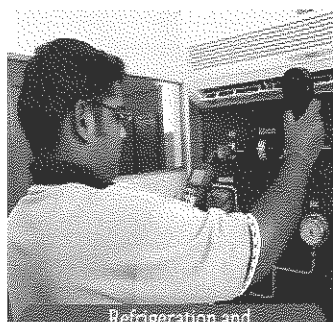
Automotive

Computer Numerical Control  
Machining Centre (CNC)

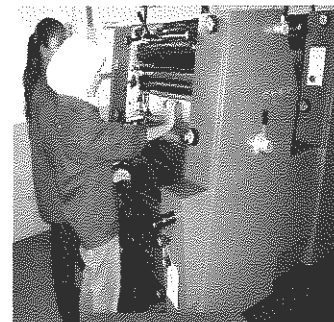
Electronic



Plastic

Refrigeration and  
Air-Conditioning (RAC)

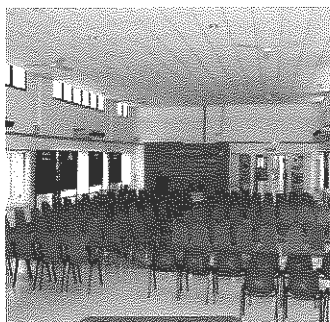
Welding



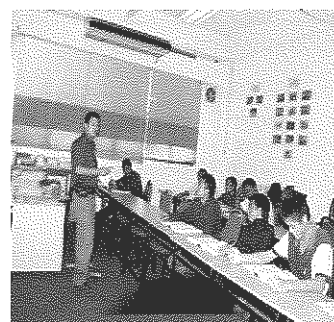
Printing



PESDC Hostel



Hall



Classroom

Figure 1.2.1: PESDC Course and Facilities



### 1.3 PESDC Staff Organizations and Directory

NAME	DEPARTMENT	POSITION
Datuk Gan Tack Kong	PESDC's Management Council	Chairman
Datuk Lim Si Boon	PESDC's Management Council	Vice Chairman
Mr Kesavan Subramaniam	PESDC's Management Council	Hon. Secretary
Mr Tan Seow Heng	PESDC's Management Council	Hon. Treasurer
Dr. Chow Yong Neng	Managment	Executive Director
Ng Kah Choong (062)	Management (Corporate Services & Estate Management)	Manager
Mariah Jaafar (059)	Management (Human Capital & Administration)	Manager
Jane Choo Siew Lian	Management (Finance)	Manager
Thillainathan a/l Subramaniam (001)	Marketing	Head Of Department
Wan Mohd Faizal Wan Chik (017)	Maintenance / Plastic Technology	Head Of Department
Mohd Nor Ardieni Mohd Arshad (012)	IT, Student Affairs & Course Coordination	Head Of Department
On Ibrahim (032)	Refrigeration & Air-conditioning	Head Of Department
Azman Baharom (016)	Welding Technology	Head Of Department
Mohd Fadhil Ahmad Sapli (019)	General Machinist and CNC	Head Of Department
Ahmad Shahrir Alias (011)	Industrial Automation (Electronic and Mechatronic)	Head Of Department
Hapiz Ahmad Sani (013)	Automotive Technology	Head Of Department
Hafizah Nazir (040)	Printing Technology	Head Of Department
Noor Fazilah Saidin (004)	Administration	Admin & Purchasing Clerk
Normasriah Abd Manap (046)	Finance	Account Executive
Jamili Bt Zulkifle	Administration	Receptionist/General Clerk
Che Azmi Che Anua (022)	Plastic Technology Department	Technical Trainer
Khairulnisak Kasim (054)	Plastic Technology Department	Technical Trainer
Noor Mohd Hazuri Baharom (028)	Refrigeration and Air - Conditioning	Technical Trainer
Mohd Saad Mohd Salleh (056)	Refrigeration and Air - Conditioning	Technical Trainer
Mohd Hazizul Mohd Hanafiah (044)	Welding Technology	Technical Trainer
Mohd Azizul Hakim (061)	Welding Technology	Technical Trainer
Mohd Fadhilah Zawawi (020)	General Machinist and CNC	Technical Trainer
Noor Azuan Abdullah (021)	General Machinist and CNC	Technical Trainer

Muhamad Ridzuan Mat Bahari (057)	General Machinist and CNC	Technical Trainer
Hazura Adam (015)	Industrial Automation (Electronic and Mechatronic)	Technical Trainer
Nor Azliza Zambri (010)	Industrial Automation (Electronic and Mechatronic)	Technical Trainer
Farah Dina Hazlan (033)	Industrial Automation (Electronic and Mechatronic)	Technical Trainer
Kathiravan a/l Sarangabani (053)	Industrial Automation (Electronic and Mechatronic)	Technical Trainer
Noor Hasyimah Ramli (058)	Industrial Automation (Electronic and Mechatronic)	Technical Trainer
Thiruselvan a/l Ayyadorai (026)	Automotive Technology	Technical Trainer
Che' Noraznan Che Aziz (029)	Automotive Technology	Technical Trainer
Amiruddin Baharun (034)	Automotive Technology	Technical Trainer
Azlan Che Wil @ Che Ismail (055)	Automotive Technology	Technical Trainer
Hasli Mahmud Hashim (060)	Automotive Technology	Technical Trainer
Zamzuri Haji Ahmad (063)	Automotive Technology	Technical Trainer
Khairil Anwar Khazali (041)	Printing Technology	Technical Trainer
Charlotte Agnes Lopez	Marketing / Human Resource	Admin Officer (Executive)
Vecter a/l Ranggasyamy (007)	Maintenance	Maintenance Assistance / Dispatch
Arzami Samad (UP001)	Maintenance	Gardener
Ramachandran a/l Muniandy (UP003)	Maintenance	Gardener
Yunus Mohd Zawawi (G003)	Human Resources	Security
Hamzah Ibrahim (G005)	Human Resources	Security
Zainun Mohd Shaharuddin (G007)	Human Resources	Security

Figure 1.3.1: PESDC Staff Organizations and Directory

## **CHAPTER 2**

### **SUMMARY OF THE ACTIVITIES**

#### **2.0 Introduction**

In this chapter, the explanation is about all activities involved during industrial attachment since joint PESDC on 4<sup>th</sup> July 2011 till 3<sup>rd</sup> October 2011. The activities will be base on week by week.

#### **2.1 Summary of the Activities**

As we know that in Perak Entrepreneur & Skills Development Centre (PESDC). I attached in General Machinist and CNC Department. During industrial attachment I was enjoyed to gain much knowledge and more information beside tremendous experience in my life.

Week	Activity
<p><b>Week 1</b></p> <p>(04/07/11 – 08/07/11)</p>	<ul style="list-style-type: none"> <li>• Reported to Perak Entrepreneur &amp; Skills Development Centre (PESDC).</li> <li>• Understanding Company Profile.</li> <li>• Received the job and training schedule from Head of Department.</li> <li>• Introduction of Machining and Equipment in PESDC.</li> <li>• Installation Solidwork and Mastercam software.</li> <li>• CAD design applications using Solidwork software.</li> </ul>
<p><b>Week 2</b></p> <p>(9/07/11 – 15/07/11)</p>	<ul style="list-style-type: none"> <li>• Join the PP-PPT Induction Course conducted by Jabatan Pembangunan Kemahiran (JPK) for PESDC staff and trainer.</li> <li>• Concentrate on design for many parts for Research and Development.</li> <li>• Design Jig and Fixture and Mould for customer.</li> <li>• Consider using CAD software such as SOLIDWORKS, MASTERCAM, and INVENTOR AutoDesk 2009.</li> <li>• Involve in machining process using CNC Milling and Wire Cut.</li> </ul>



Week	Activity
<b>Week 3</b>  (18/07/11 – 22/07/11)	<ul style="list-style-type: none"> <li>• Concentrate on new design for many parts for Research and Development</li> <li>• Design Jig and Fixture and Mould for customer.</li> <li>• Consider using CAD software such as SOLIDWORKS, MASTERCAM, and INVENTOR AutoDesk 2009.</li> <li>• Involve in machining process using CNC Milling and Wire Cut.</li> </ul>
<b>Week 4</b>  (25/07/11 – 29/07/11)	<ul style="list-style-type: none"> <li>• Design Jig and Fixture for customer. The drawing process includes assembly drawing.</li> <li>• Consider using CAD software such as SOLIDWORKS, MASTERCAM, and INVENTOR AutoDesk 2009.</li> <li>• CNC programming and applications.</li> </ul>
<b>Week 5</b>  (01/08/11 – 05/08/11)	<ul style="list-style-type: none"> <li>• Design Jig and Fixture for customer. The drawing process includes assembly drawing.</li> <li>• Consider using CAD software such as SOLIDWORKS, MASTERCAM, and INVENTOR AutoDesk 2009.</li> <li>• Involve in machining process such as using CNC Wire Cut, CNC Grinding, CNC Milling and CNC Turning. Besides that include conventional machine such as milling machine, drilling machine and lathe machine.</li> </ul>