



SHARP
S&O ELECTRONICS (MALAYSIA) SDN. BHD.
21503-W

EXPERIENCE SHARING

by

S&O Electronics (Malaysia) Sdn. Bhd.

PRESENTATION SCOPE:-

- Company Profile
 - Ergonomics
 - Chemical
 - Noise
- Recommendation

Company Profile



Location of S&O



Population: 32 million (Majority are Malays, Chinese and Indian). Weather: 28~32°C (Throughout the year)

General Introduction

Company Name	S&O Electronics (Malaysia) Sdn. Bhd. <i>(Formerly known as Sharp-Roxy Corporation (M) Sdn. Bhd.)</i>
Location	Lot 202, Bakar Arang Industrial Estate, 08000 Sungai Petani, Kedah, West Malaysia.
Date of Incorporation	DECEMBER 31, 1974 <i>(The first overseas manufacturing base of SHARP)</i>
Date of Production Commencement	JANUARY 1, 1976
Paid Up Capital	RM24,000,000 (About U\$5,800,000)
Total Investment	About RM513 Mil. (U\$125Mil.): Year 1976 ~ Sep'2016

Manpower Statistic

EMPLOYEE (AS AT END SEP'16)

	MALE	FEMALE	TOTAL (%)	ENG'G
PRODUCTION M/P	95	623	718 (56.0)	MALE : 76
NON-PRODUCTION M/P	394	170	564 (44.0)	FEMALE : 26
TOTAL (%)	489 (38.1)	793 (61.9)	1,282 (100.0)	TOTAL : 102

(Above figure excludes 11 members from Sharp Corporation, Japan, 3 members from Onkyo, Japan & temporary staff)

(Total manpower is inclusive of all Engineering staff.)

EMPLOYEES' STATISTICS BY RACE

	MALAY	CHINESE	INDIA	OTHERS
NO. OF EMPLOYEE (MIXTURE)	695 (54.2%)	185 (14.4%)	392 (30.6%)	10 (0.8%)

AVERAGE AGE

43 YEARS

AVERAGE YEAR OF SERVICE : 20 YEARS

Product Category

Finished Goods	<ul style="list-style-type: none"> · CD/ Micro-Compo/ Hi-Fi Compo/ Slim Micro Compo · AV Receiver / Slim AVR · Sound Bar · AQUOS Theater · CD/ SD Card Compo System · Bluetooth Related Products
Key Components	<ul style="list-style-type: none"> · CD Changer/ CD Mechanism Unit · PWB Unit (BD) · PCBA – Car Audio, Automotive Lighting, Medical Device, Motor Driver PCB, SMPS

Local R&D Category

Product Range	<ul style="list-style-type: none"> · Sound Bar System · CD Tuner Amplifier · Network Amplifier · CD Mini Systems · Compact Hi-Fi System · Portable Bluetooth Boom box · CD Player 	<ul style="list-style-type: none"> · Micro Component System · Hi-Fi Component System · I-phone & I-pod For Music System · Bluetooth Stereo Speakers · Portable CD Stereo System · CD/ SD/ USB Receiver · Amplifier
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Overall Factory Layout



1st & 2nd Factory

1st Factory : AV Receivers (Built in 1975).

2nd Factory : CD Micro Compo/ Slim Micro Compo, Bluetooth Related Product, Sound Bar, Hi-Fi Compo, EMS Product (PCBA) and BD PWB Related Production (Built in 1981).

















3rd Factory

(Built in 1991)

(It takes 3 minutes from S&O to old 3rd Factory.)

Currently there is no operation.

Key Audio Product Line-Up

	Year 2014	Year 2015
Living Audio - Sound Bar		 
Living Audio - HTiB		 
Hi-Fi/Slim Micro - Compo		 
Mini-Compo		 
ODM Equipment		

Contributing factors

- 1. Previous incident
- 2. Aging workers
- 3. Workers well being(welfare)
- 4. Cost reduction



Carrying



Lifting



Striking



Pushing



Pulling



Throwing



Holding

ERGONOMICS MANUAL HANDLING

- Lifting/ lowering – such as heavy sets/ items
- Pushing/ pulling – more on trolleys.



Lifting



Putting down



Pushing



Pulling



Carrying or moving

Jigs for Lifting Sets on Conveyor



Before



After

Fix jig at end of conveyor – to enable set send to packing area without lifting
DIY (Pneumatic & censer control - In house fabrication)

Packing at Audio Packing Area



Before



After

Turning lifter jig – Allowing 360 rotation while packing. DIY (in house fabrication) save manpower from 2 to 1 only.

Packing at Audio Packing Area



Before



After

Use of back belts while lifting heavy objects

Stacking of Heavy Object at Store



Before



After

Use of 4 pallets height for stacking of solder roll after considering NIOSH EQUATION Table.

Lifting Heavy Object at Store



Before



After

Transferring of heavy items from storage area onto trolley

Transporting of Heavy Object to Production



Before



After

Heavy items are transported by means of 'Scissors Leaf Trolley' easily adjusted to the required height for production usage

Trolleys and Handling Ways



Before



After

Transporting of items using DIY metal pipe joint trolley. Cost of trolley RM 120 compared to purchase ranges from RM 300 – Rm 450 per unit.

D.I.Y. Trolleys and Handling Ways



For sets



RM 180
per unit



For tubs



RM 120
per unit



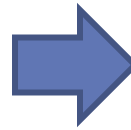
● Pipe + Joint material as per process requirement

SHARP

D.I.Y. Trolleys and Handling Ways



For caps



RM 150
per unit



PCB
magazine



RM 245
per unit



Pipe + Joint – Cap trolley/ PCB magazine trolley

Gliding Power Transformer on back lite board on adjustable trolleys



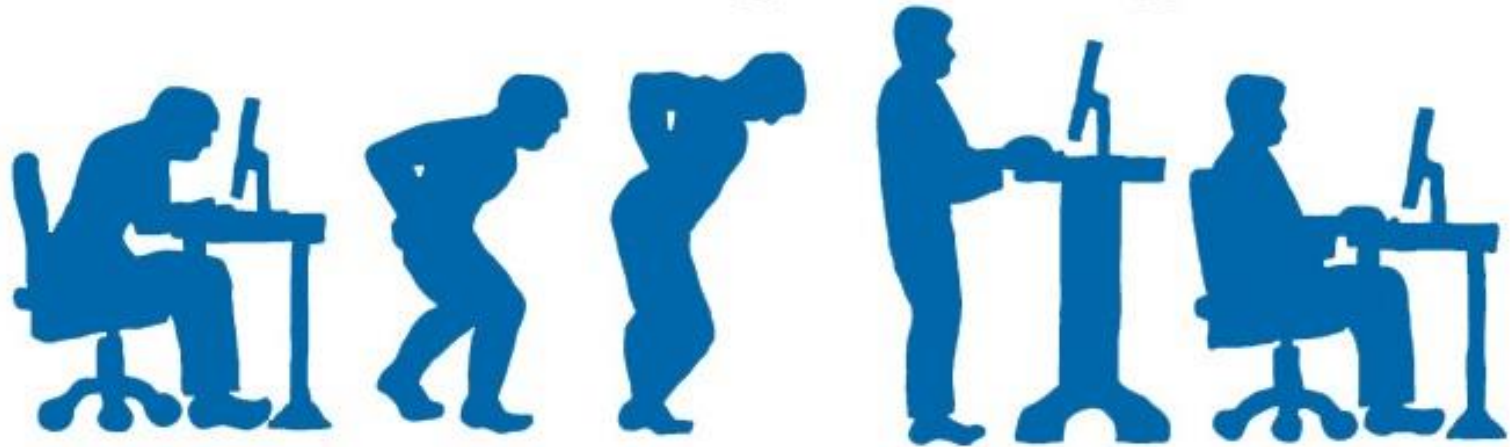
Before



After

- The trolley board are lifted to the same height of the conveyor.
- Power transformer are placed on back lite board for easy gliding previously using plywood on scissor lift trolley.
- Weight of power transformer is ranged from 2 to 5kgs.

ERGONOMICS IN THE **OFFICE**

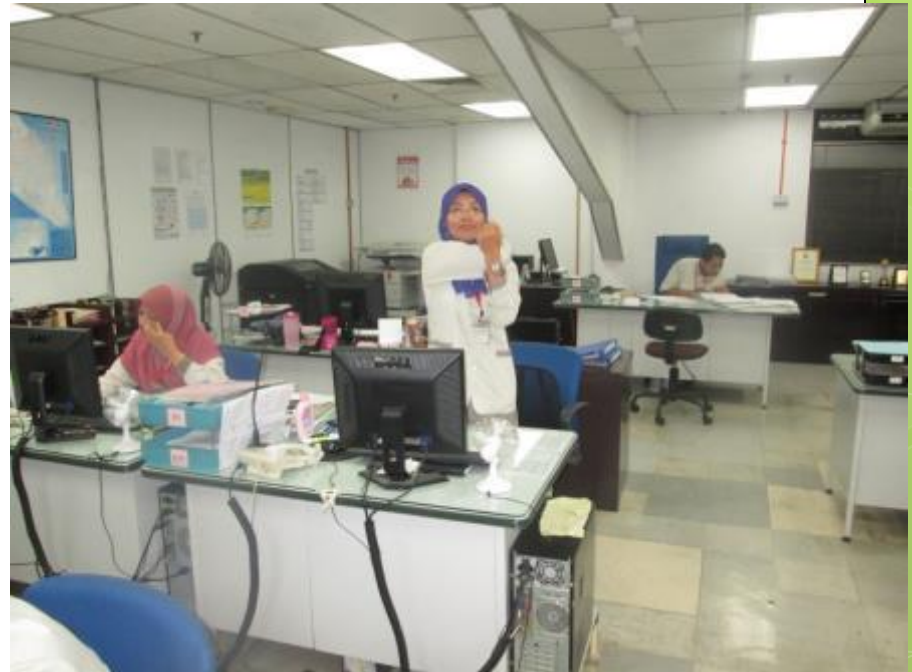


Office Stretching

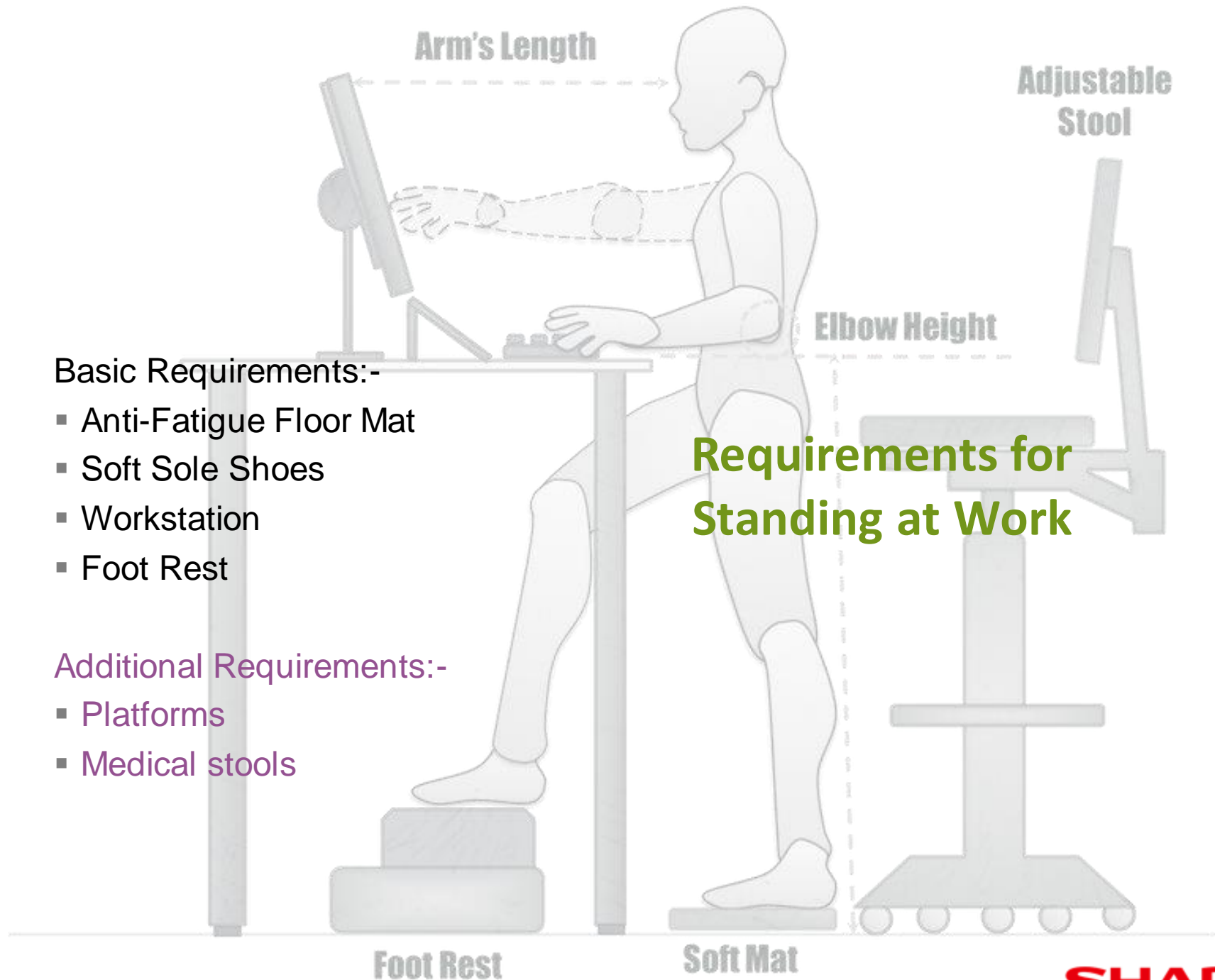


Sitting too long will cause static loading etc.

Office Stretching



Staff encourage to perform stretching every 30 minutes at own pace



Basic Requirements:-

- Anti-Fatigue Floor Mat
- Soft Sole Shoes
- Workstation
- Foot Rest

Additional Requirements:-

- Platforms
- Medical stools

Requirements for Standing at Work

S&O ELECTRONICS (MALAYSIA) SDN BHD

POLICY STATEMENT ON STANDING AT WORK

With reference to the DOSH Guidelines on Standing At Work (version 2002), S&O Electronics (Malaysia) Sdn. Bhd. recognizes that the Company has substantial responsibility in eliminating, minimizing and preventing risks associated with Standing At Work. The Company is committed to take all reasonable actions to identify, implement necessary controls and steps to ensure safety, health and welfare of all employees who work at standing workstations.

In meeting these responsibilities the Company recognizes its obligation to prevent hazards and risks at standing workstation and will undertake below measures:-

- 1) To ensure Department Managers are accountable for standing workstations by eliminating or minimizing physical stress by providing the followings:
 - A cushion surface to stand on (anti-fatigue floor mat)
 - Appropriate shoes with better soles.
 - Adjustable working surface or platform to accommodate differences in employees' height
 - Small foot bench for foot rest.
- 2) To eliminate hazards or implement effective controls to minimize risk that may be caused by poor work station design or poor ergonomically designed work process or procedures.
- 3) To ensure and arrange for job rotation or task variation where applicable and feasible to enable employees to perform different tasks that allows the legs to move and reduce static loading.
- 4) To take necessary care on employees with **Non-Occupational Risk Factors** working at standing workstation by providing the following aids or accessories, for those eligible upon verification by medical personnel preferably occupational health doctor:
 - Providing chair for pregnant ladies.
 - Provision of chair for staff with obesity and unable to stand in static posture for long hours, staff with muscular skeletal problem, physical disability or injuries due to accident, diseases such as joint rheumatism and arthritis etc. that does not permit long standing job.
- 5) To embark on continued improvement for Standing At Work to achieve optimum productivity and quality while maintaining the safety and health of employees as our priority at all time.



MR. YOSHIYASU TANIGO
MANAGING DIRECTOR

DATE: 17 Nov. 2015

REV 1

Anti-Fatigue Mat



- ✓ Function - to reduce fatigue caused by standing for long periods on a hard surface (e.g., cement *floors*).
- ✓ Material of anti-fatigue mat – ‘Coco’ (sabut kelapa).
- ✓ Cost per unit RM 50. Life span 3 years.

Soft Sole Shoe



- Soft sole to reduce the pressure to legs.



- Good ventilation.

Foot Rest



- ✓ Function - to rest the feet and reduce fatigue caused by standing for long periods.

Workstation Level



- ✓ Workstations are set up at elbow level of the workers.



Platforms



- ✓ Platforms are used for those shorter workers so that they can work comfortably.

Medical Chairs



- ✓ Medical chairs are issued for workers who are suffering from physical injury, musculoskeletal disorder, physical disability, obesity, pregnant and those who are excused from performing standing work by medical practitioner.

Training on Manual Lifting

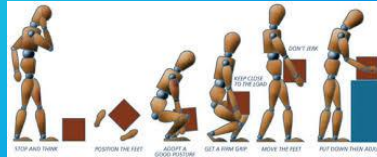
MANUAL LIFTING

PRESENTER

AZHAR BIN ABAS

S&O ELECTRONICS(M) SDN BHD

SHE SECTION



SHARP

Ergonomics - Promotion

Ergonomics : Manual Lifting

DO'S



1. Assess the size & weight of object
2. Move closer to the object
3. Assume stable stand
4. Bend Knees , grip object
5. Initiate the lift using thigh & buttock muscle
6. Lift with control speed & maintain back straight
7. Come to upright position & pivot using your feet .Do not twist

DON'Ts



1. Don't Jump/Jerk
2. Don't Bend Your Back
3. Don't Twist
4. Don't Reach

Warning !

1. Maximum manual lifting load is 25 kg
2. Seek assistance or use lifting tools if the load is too heavy to carry or physically unfit

Prepared by : HR-CR ~ 9 Feb 2015



Morning Exercise



SHARP



CHEMICAL

Chemicals Storage



Before – No label on the chemical refrigerator



After – Label is made available on the chemical refrigerator

Chemicals

PPE Issuance Record

PPE ISSUANCE RECORD

Department: *Lab Chem*
Location: *Lab*

No.	Name	PPE Issued	Date Issued	Remarks
1	<i>John Doe</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
2	<i>Jane Smith</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
3	<i>Mike Johnson</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
4	<i>Sarah Lee</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
5	<i>David Kim</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
6	<i>Emily White</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
7	<i>Chris Brown</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
8	<i>Alex Green</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
9	<i>Olivia Black</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
10	<i>Benjamin Gray</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
11	<i>Mia Red</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
12	<i>Ethan Blue</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
13	<i>Ava Yellow</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
14	<i>Noah Purple</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
15	<i>Isabella Pink</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
16	<i>Liam Orange</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
17	<i>Sophia Silver</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>
18	<i>Lucas Gold</i>	<i>Safety Glasses</i>	<i>10/10/18</i>	<i>Safety Glasses</i>
19	<i>Hannah Bronze</i>	<i>Lab Coat</i>	<i>10/10/18</i>	<i>Lab Coat</i>
20	<i>James Copper</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>

Before

PPE ISSUANCE RECORD

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Location: *Lab*

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20	<i>James Copper</i>	<i>Gloves</i>	<i>10/10/18</i>	<i>Gloves</i>

After

Chemical Label



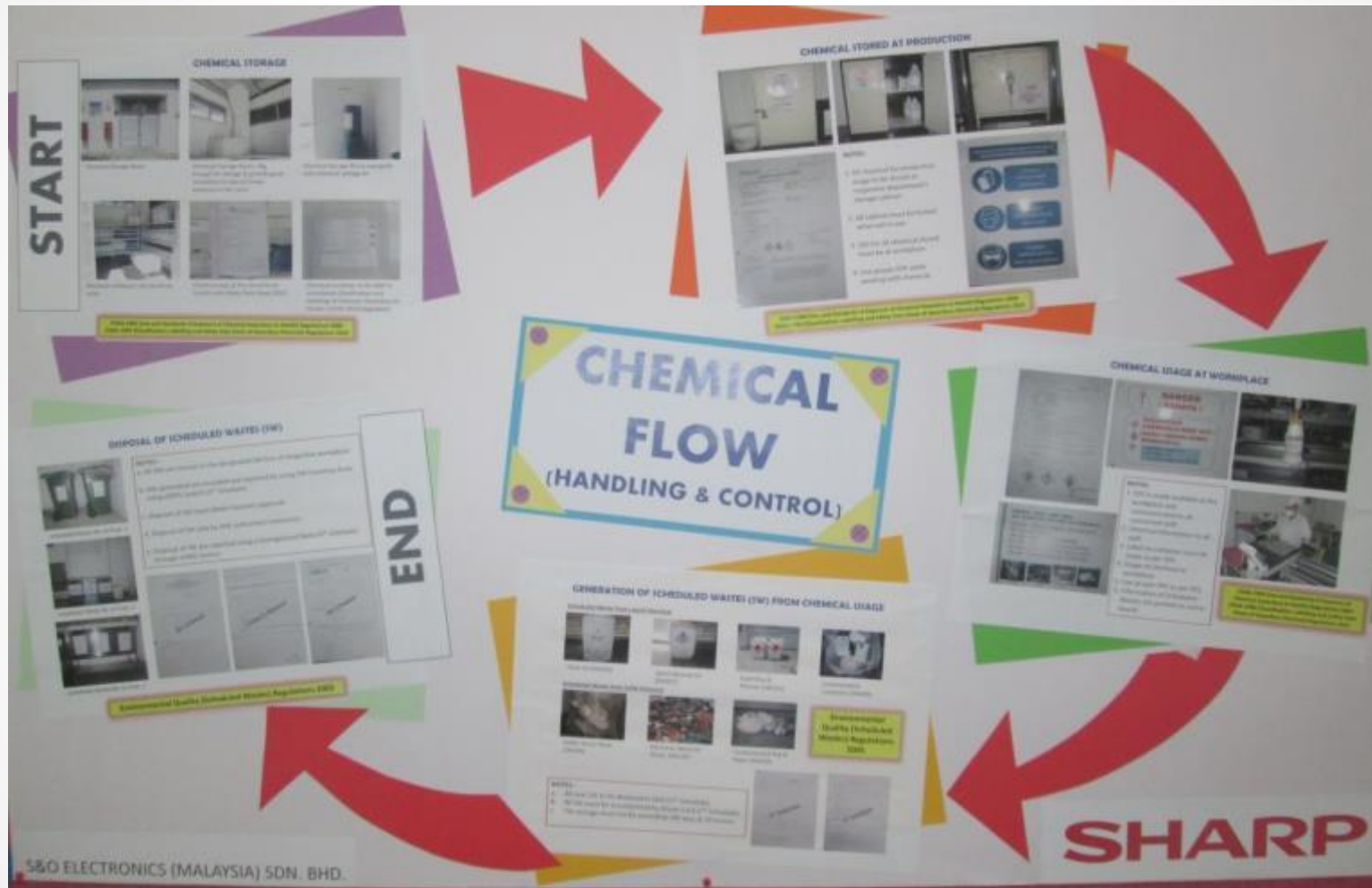
Before



After

Change of colour code

Chemical - Promotion



Chemical Training

SHARP

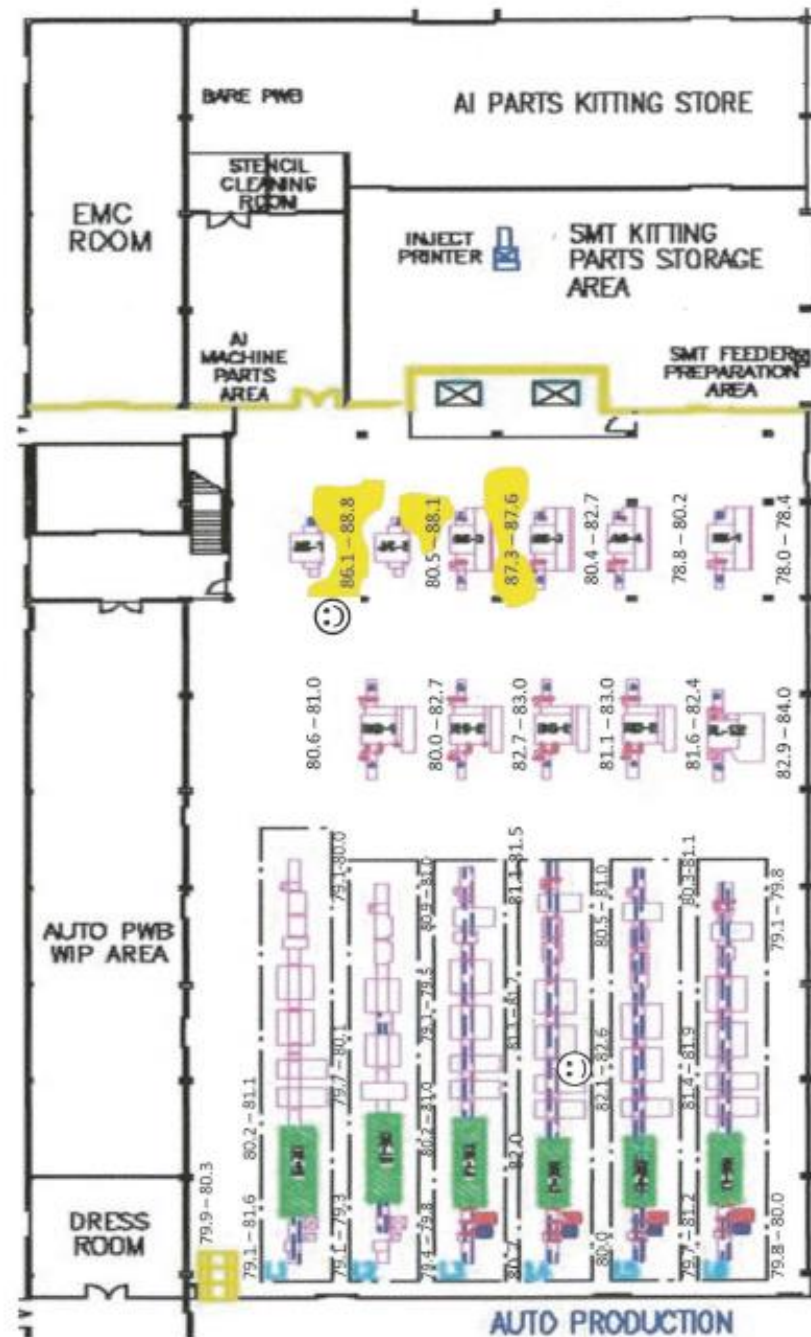
CHEMICAL SAFETY

BY
AZHAR ABAS



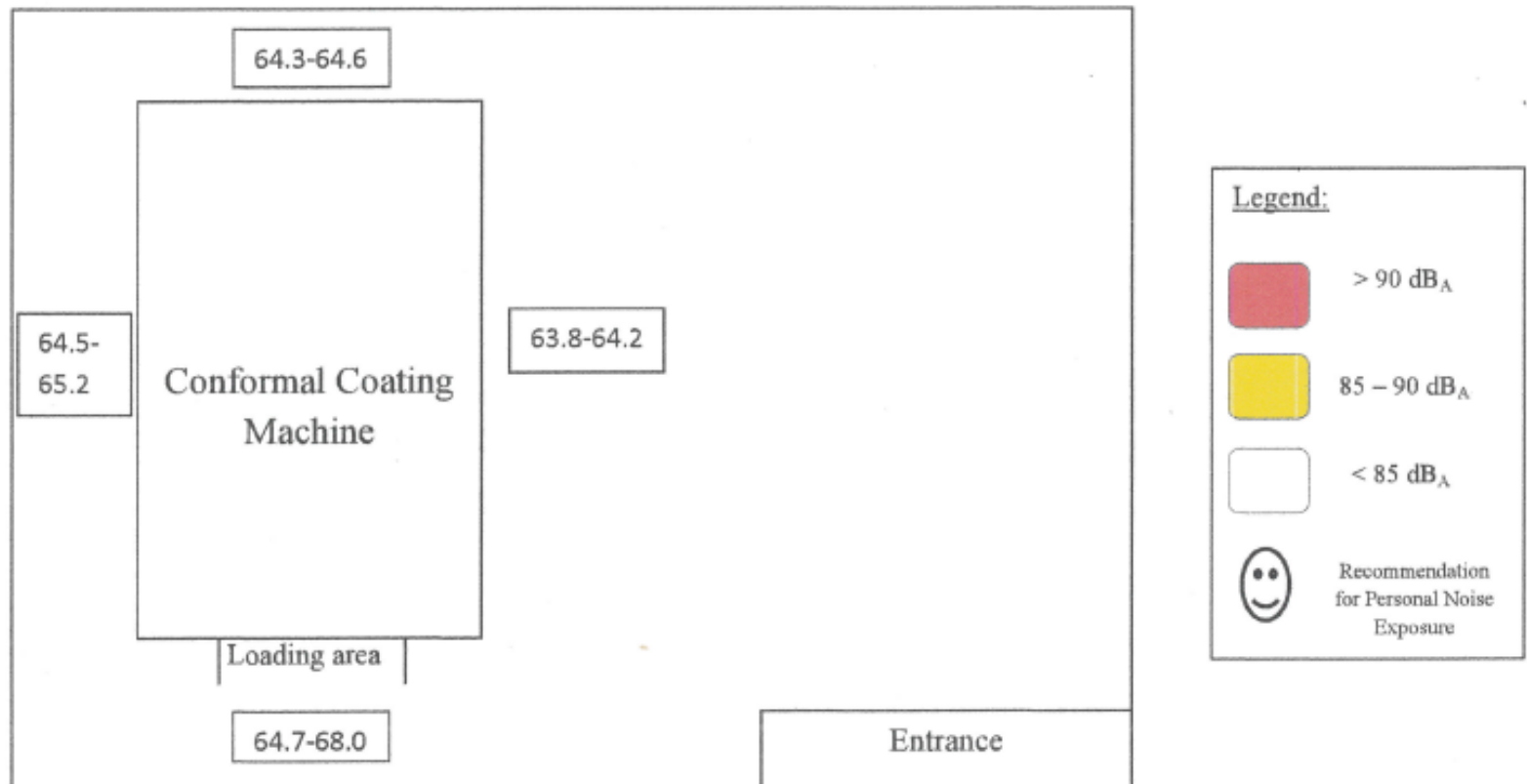


Noise Mapping



Noise Mapping

Figure 1: Noise Mapping at Conformal Coating Room



Noise Monitoring

Monitoring device



Installation of new wire cutting machine



Monitoring on personal and area noise

TRAINING

&

PROMOTION



SOHELP Briefing



S&O Electronics (Malaysia) Sdn Bhd



SHARP

Health Promotion Program



Health Talk by Panel Hospital



S&O'S ACHIEVEMENT IN SoHELP

- Obtained good cooperation/ collaboration between management and non-management staff.
- Got workers involved/ give authority and ownership.
- Intensify ergonomics training such as standing at work and manual lifting, chemical handling to all workers.
- Intensify walk through inspection at the workplace by Safety, Health and Environment Committee and Departmental Head.

RECOMMENDATION

1. SOHELP to be extended to all industries.
2. DOSH emphasis on health related issues similar to safety.

THANK YOU!

**SALAM MUAFKAT
KEDAH**