



OSH – ELECTRONIC MANUFACTURING

In Indonesia – Edwin Christiawan

INDONESIA – LABOR PERSPECTIVE

How to promoted awareness for chemical contamination :

Since OHS not as priority issue in labor movement

Regulation

since 1970 - need to amended

Education

Continuously for all workers

Inspection

Periodic and strictly

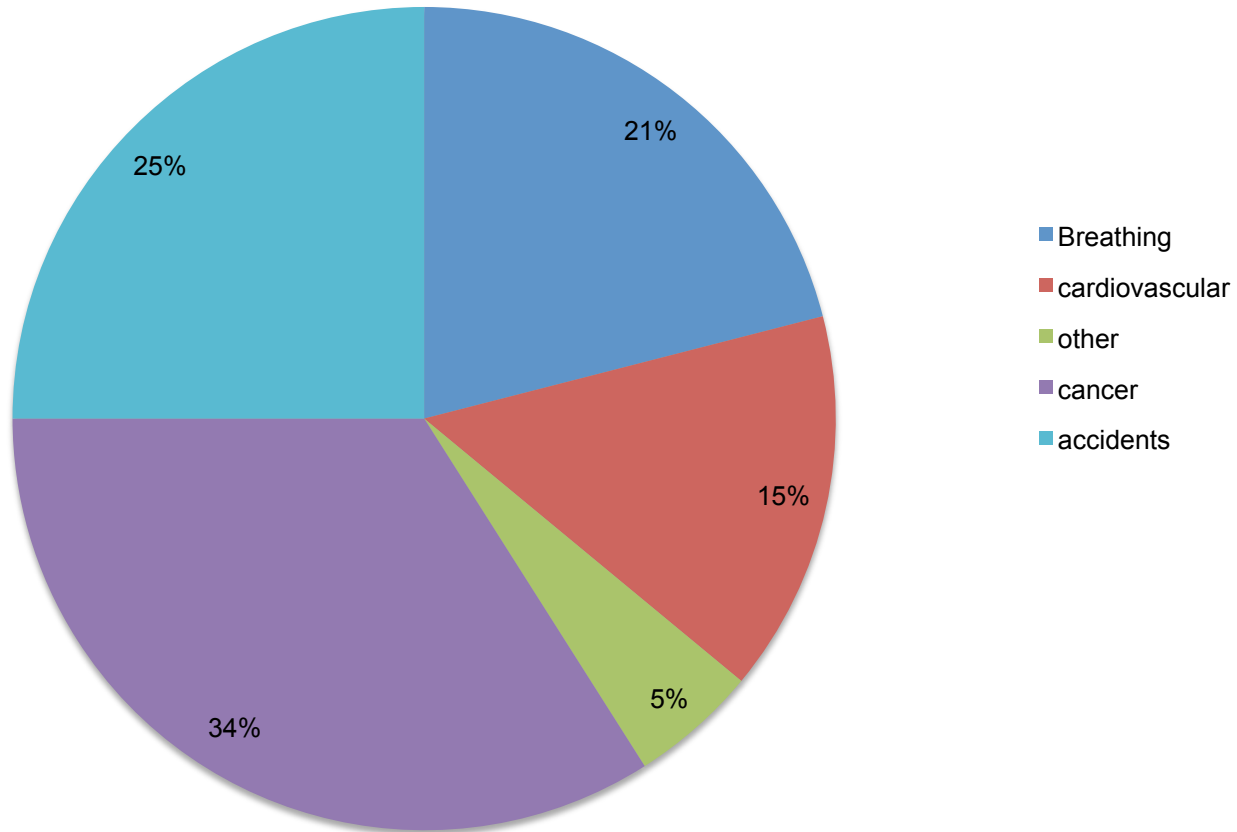
Enforcement

Strict punishment



INDONESIA OHS CONDITION

Occupational Diseases
ILO report from Indonesia



Working condition of Indonesian workers (in Batam)

1. Start 1990 Batam set up Biggest as Electronic manufacturing manufacture beside Bekasi
- 1990 – 1998 many people working with permanent status and easy to get new jobs
2. Serial line as type of production manufacturing
3. A lot of evaporation of chemical usage in production line



As a new industrial , we never know and care about safety in the new foreign company

INDONESIA OHS CONDITION – Identifying Industrial diseases

Medical Examination For Workers

Base on Regulation

1. Employment med check up

2. Annual medical check up

Special

1. >40 years
2. Working in chemical handling, noise, dusty, etc

General

1. Applying for all workers

RESULT OF ANNUAL EXAMINATION

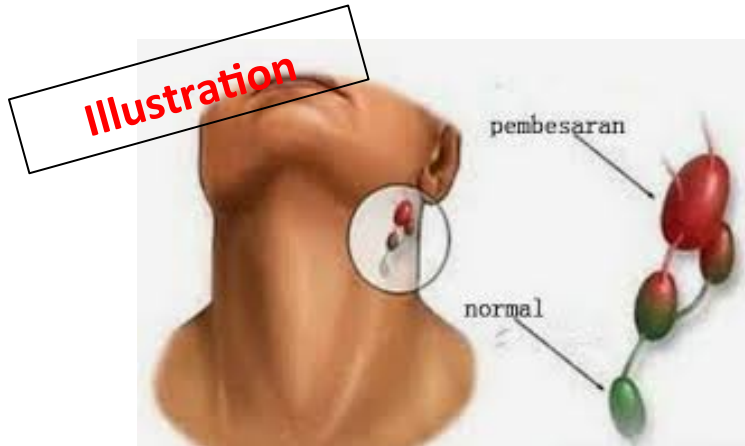
Category	Effect to the workers	aspect
biology	bactery, fungi, virus	cleanness
physical	temperature, noise, radiation	Working method
physiology	Ergonomy	Line design
psycholigy	stress	working pressure
chemistry	Chemical	Chemical handling



Cancer and others suspected Diseases

lymph cancer, thyroid hormone swelling, sterility, miscarriage, strange disease

lung infections, meningitis, spinal disorders



Some references said that :

Lymph cancer strong correlation with
exposure of chemical

Samples of Chemical Substances

1. Pre dis charge Area :

a) Solvent

b) Ink

2. Mis part Area :

a) Stamping Foil.

b) Tinner.

c) Acceton

d) Paint

e) Extander

3. Lithium Round / Coin Area

a) Three Bond / Contact Adhesive

b) Prema Bond/ Hardener

c) Flux

d) Soldering material

e) Macromell

f) Silicon

g) Supersight.

Sample summary data of victims

Names

Gender

Date Join of
WorkHealth
Complaint

chemicals

APD

NO	NAMA	JENIS KELAMIN	UMUR	JOIN DATE	LINE	KELUHAN PENYAKIT	BAHAN KIMIA YANG DIGUNAKAN	ALAT PELINDUNG DIRI YANG DIGUNAKAN
1	Sayoga	Laki-laki	49 th	4/6/1993	1993-1997 production 1997-2003 Lithium line 2003-2013 Engineering	Sesak nafas, Dahak tidak pernah berhent, Kepala sering pusing, Kaki pegal (cepat capek kalau berdiri) di bagian persendian	Laser, Batil lithium	Masker (terbuat dari kain)
2	Natko Upases	Laki-laki	28 th	1/2/2006	Toolroom (CNC)	Sesak nafas	Coolant, Oil	Masker (terbuat dari kain)
3	Jumitri	Perempuan	40 th	6/6/1994	kasuari	sesak nafas,pusing	ethanol,solphane,solder,threebond	masker (terbuat dari kain),hand glove
4	Rukmini	Perempuan	38 th	1/7/2000	cendrawasih	radang tenggorokan,pusing	fermabhon,threebond	masker,fingercots
5	Risnawati	Perempuan	39 th	1/7/1997	merpati	radang tenggorokan,pusing	fermabhon,flux	masker,fingercots
6	Amy Rahayu	Perempuan	35 th	1/6/2006	kutiang	sakit kepala,sesak nafas	threebond,flux	masker,fingercots
7	Hoti Rohadame R.	Perempuan	34 th	1/6/1998	garuda	dada sering sakit,pusing	threebond,flux	masker,fingercots
8	Sudana Hami	Perempuan	38 th	1/3/2003	kutiang	tangan suka kebas,kelenjar getah bening,sakit perut kiri	threebond,flux	masker,fingercots
9	Supemi	Perempuan	46 th	1/6/1999	kutiang	hipertensi,diabetes,reumatik	threebond,flux	masker,fingercots
10	Tiodora	Perempuan	38 th	1/2/1999	garuda	vertigo	threebond,flux	masker,fingercots
11	Endang Sanmana	Perempuan	34 th	20/12/2006	kutiang	mata minus,dada sering sesak,sakit kepala	solder,flux	masker

Ages

Working
area


Conclusion :

1. wasn't realized chemical contamination in Past
2. Long working > 15 years
3. Difficult to trace where contamination came from

How to get Independently Diagnose?


Clinical diagnose (A)

1. Anamnesis
2. Physical
3. Laboratory




determine the exposure (B)

1. Physical
2. Ergonomic
3. Biology
4. Psychology
5. Chemistry




Correlation (A) – (B)

Amount of exposure



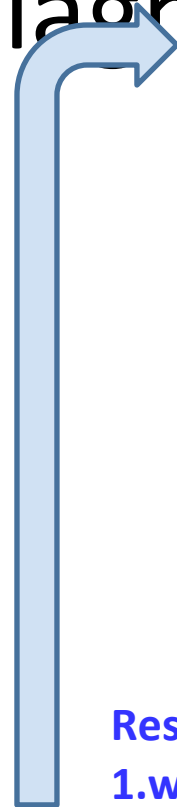
Individual factors



Other Factors



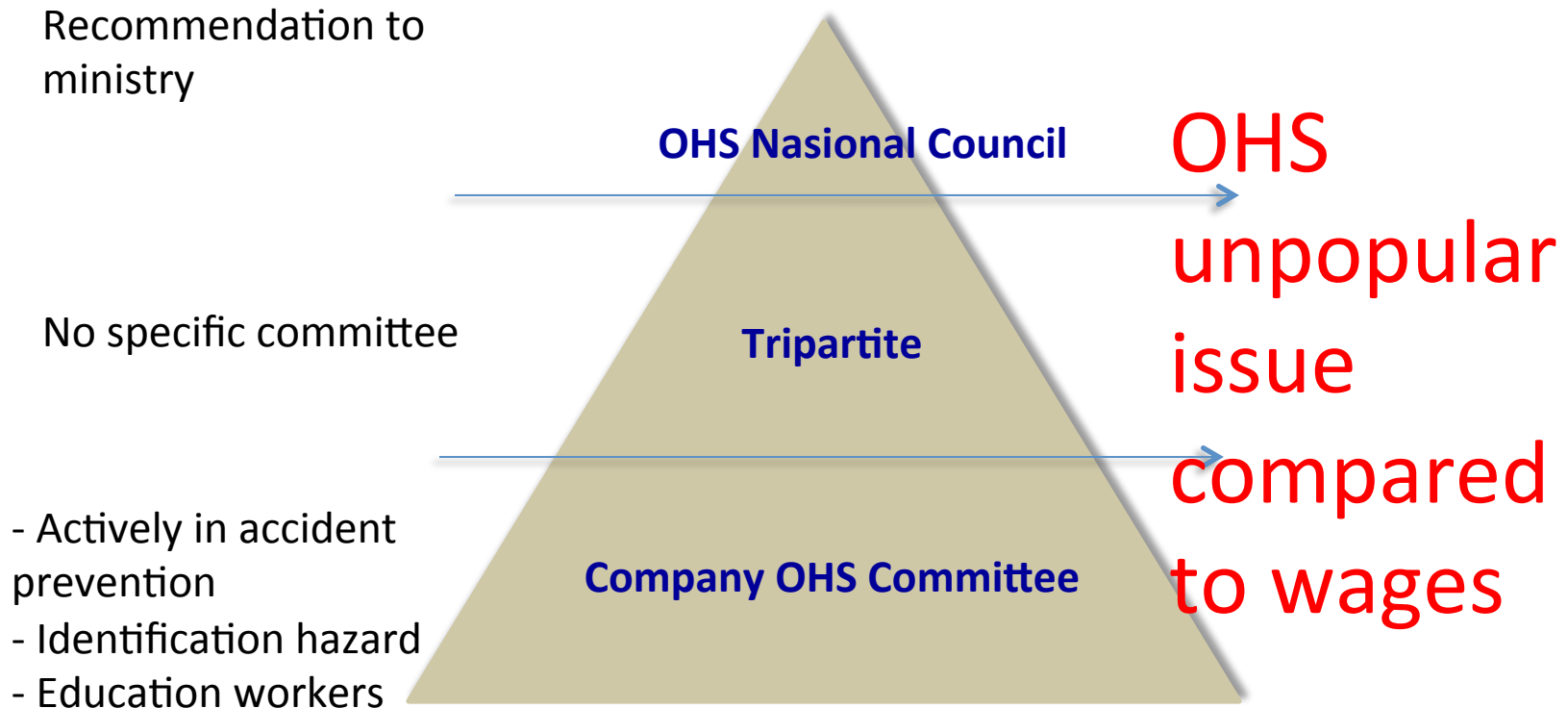
Diagnose



Result :

1. when workers indicated Industrial diseases , employer just giving compensation then **case closed**
2. **No OHS issue in Industrial court**

Level of Union Engagement



Accelerate promotion program of OHS



Illustration

Occp Diseases **regulation** and
compensation

propaganda of **OHS issue**
nationally



Training of **independence**
diagnose – OHS doctor from
union