

2nd International Control Banding Workshop

Validation and Effectiveness of Control Banding

Return on Investment in Central American Garment Factories via the Tool Kit “Self Evaluation of the Cost-Benefit on the Investment in OSH in the Textile Factories: A Step by Step Methodology”



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Regional Technical Director, CERSSO

Cincinnati, Ohio, March 1-2, 2004



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Goal:



Reduce

**The number of accidents
and diseases related to
the work in the region.**

PROJECT COMPONENTS

- **Apparel Industry**
 - **CSAPs by country**
 - **Labor Ministries**
 - **Promoters**



DECISION MAKERS AWARENESS OF OSH

ACTIVE WORKER PARTICIPATION



Coordination and
Consensus



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TOOL KIT



“Self Evaluation of the Cost-Benefit On the investment in Occupational Safety And Health in the Textile Factories: A Step by Step Methodology”

Rafael Amador Rodezno

Nicaragua, Centro América. Junio del 2002

More than 650 people, 110 enterprises of the sector, from 8 countries have used the Tool Kit.

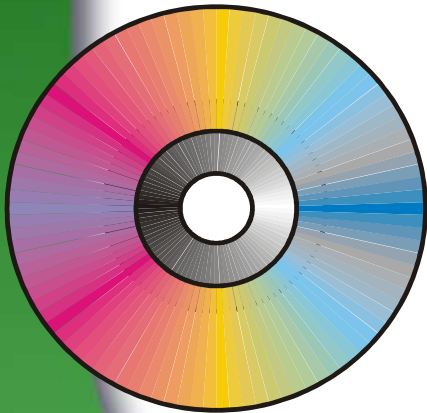
**Systematically, they have calculated a positive relation of the investment (3 to 33 times).
No inverse relation has been seen.**

**Employers have been convinced when learning how much money they have been losing because they have not invested in
OSH**





**“SELF EVALUATION OF THE COST-BENEFIT
ON THE INVESTMENT IN OSH IN THE TEXTILE FACTORIES:
A STEP BY STEP METHODOLOGY”
THE TOOL KIT SOFTWARE**



Dr. Rafael Amador Rodezno
Ing. Raúl Avelar

OPERATION MANUAL

Junio 2003

Successful case from El Salvador

“Confecciones La Palma”.

OSH Investments



- Increased budget to OSH Department
- Investments in studies concerning working conditions (noise, thermic stress, etc.)
- Investment in environmental measurement equipment (Luxometer y Sonometer).
- Investment for improvement of lighting system.
- Training and use of PPE.
- Prevention signs defined by objective studies.

OSH Investment return

- Sick days reduced by 48% (426 vrs. 822)
- Accidents reduced by 40% (36 vrs. 63)
- Absenteeism reduced by 25% (149 days vrs. 200)
- External Medical Consultation reduced by 30% (93 vrs. 134)
- Internal Medical Consultation reduced by 20% (2163 vrs. 2716)
 - Increase of productivity by 12%

Savings where interventions happen (through July 2003)

año	Inversiones en SSO	Ahorro	Observaciones
2001	\$ 1,005.00	Sin datos	
2002	\$ 6,360.00	\$ 27,242.00	
2003	\$ 6,360.00	\$ 35,620.00	Proyección 2003



Successfull case from Guatemala “ SAM FASHION”.

OSH investments

- Cutting area, protective deviece instaled on needles that sticks the fabric.
- Safety devices where installed in 100% of sewing machines.
- Chairs in the sewing line were ergonomicably addapted.
- Emergency Signs allocatted in the whole factory.
- In steam machines, ergonomic carpets where given.
- Training and use of PPE, after studies performed.
- Training on the use of chemicals.



We applied the TK in order to acknowledge the real savings due to the investment on OSH. VESTEX and CERSSO have been of great support for us to achieve the OSH levels of our workers..... We recommend our sisters enterprises to use this valuable basic evaluation instrument, which oriented our path in order to reduce the risks of our enterprise.

Eng. Luis Coronado, Human Resources Management. TESTIMONY.

□ RETORNO ECONÓMICO DE LA INVERSIÓN EN PREVENCIÓN EN LAS ÁREAS DE APLICACIÓN:

PERIODO	INVERSIÓN A	AHORRO NETO B	RETORNO A-B
2001	\$ 321.00		Sin datos
Octubre 2002	\$ 676.10	\$ 6,630.25	\$ 5,954.15 = 8.80 veces
2003	\$ 1,845.70	\$14,284.33	\$ 12,438.63 = 6.73 veces

TOOL KIT

Letter to top management... \$\$! Explanation of the tool kit.

Step One - Defining the magnitude of the problem, start by using operations familiar with the maquila

- which operations have risks
- each operations # of risks
- which workers face which risks
- effects of those risks to workers

FACTORES DE RIESGOS	PARAMETROS	OPERACIONES										total %
		1	2	3	4	5	6	7	8	9	10	
Vibraciones	2 - 20 Hz	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10
Shock Eléctrico	Voltaje Eléctrico	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Iluminacion/Reflejos	500 - 700 Lux	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Iluminacion/Deslumbramiento	500 - 700 Lux	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Iluminacion/Baja Luz	500 - 700 Lux	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Iluminacion/Laser	T. L. V. de la A. C. G. I. H.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Incendio	Proced. de Seguridad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Exposicion / Temperatura	Indice T. G. B. H.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Exposicion / Humedad	Indice T. G. B. H.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Exposicion / Ventilación	Indice T. G. B. H.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Exposicion / Ruido	85 dB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Exposicion / Pelusa	TLV, OSHA 0.5 - 0.75 mg/m3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Exposicion / Químicos	TLV (ACGIH)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Heridas Cortadas	Procedimientos de Trabajo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Quemaduras	Procedimientos de Trabajo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20
Atrapamientos	Procedimientos de Trabajo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
Caidas	Procedimientos de Trabajo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Manejo Manual de Carga	Carga Dinámica	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Movimientos Repetitivos	Carga Dinámica	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30
Postura Forzada	Cargas Estáticas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20
Trabajo Pie	Cargas Estáticas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	90
Trabajo Sentado	Cargas Estáticas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Jornadas Prolongadas	Jornada Laboral	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	100
Contenido de Trabajo	Normas de producción	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	60
Modo de Gestión	Normas de producción	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30
25 Riesgos y Exigencias	TOTAL	32	12	12	12	8	8	24	20	16	20	16



TOOL KIT

Step Two – RISK APPRAISAL

- look at the conditions which can impact probability (a-j) and calculate probability of the accident/injury occurring.
- combine probability with Severity (defined in annex)

LET START WHERE ITS WORST!

Leads the employer to begin with important and severe risks.

TOOL KIT

STEP THREE: Preventative Measures
(defined in the Index.) If they aren't the expert, the information is there! (see p.3)

STEP FOUR: Graphing out those measures to see their impact.

TOOL KIT

STEP FIVE:

- How much will it cost the company to PREVENT/ELIMINATE a risk and/or hazards?
- How much will it cost the company if it does NOT prevent or eliminate the risk. g
- Variables to consider regarding losses.
- Indirect and Direct Costs

TOOL KIT

STEP SIX: COST BENEFIT ANALYSIS

CALCULATE A RATIO DIVIDING THE
COST OF THE EFFECTS BY THE COST
OF THE PREVENTION:

$\text{COST OF THE EFFECTS} / \text{COST OF THE PREVENTION}$

Thank you!



Abt Associates Inc.