Silicosis —
Old Disease, New Threat

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EU-OSHA ENP Project - Silica workshop in Bilbao
A short History:

- From ancient times - use of stone as a building material
- Exposure to silica dust in marble shops, abrasive blasting, foundry work
- 1987 – Introducing a new Israeli-made artificial stone, for use especially in kitchens and bathrooms countertops
- 1989→today – the use of artificial quartz surfaces has expanded dramatically
Number of cases of silicosis reported to Safety and Health Administration

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3</td>
</tr>
<tr>
<td>2007</td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>15</td>
</tr>
<tr>
<td>2010</td>
<td>22</td>
</tr>
<tr>
<td>2011</td>
<td>27</td>
</tr>
<tr>
<td>2012</td>
<td>22</td>
</tr>
<tr>
<td>2013</td>
<td>44</td>
</tr>
<tr>
<td>2014</td>
<td>63</td>
</tr>
<tr>
<td>2015</td>
<td>?</td>
</tr>
</tbody>
</table>

In 2009 we noted an increase in the number of reported cases of silicosis, most from marble workshops handling artificial quartz stone.
About 40 lawsuits against employers and the State

In one of the first lawsuits (2010), an owner of a marble shop who got sick sued the producer of artificial quartz surfaces and the state. The district court found the owner, the producer and the state responsible, and divided responsibility as follows:

40% the owner
33% the producer of artificial quartz surfaces
27% the state
(Total fines: 1.4 milion euros)

The state has appealed to the high court of justice.
Ceasarstone:
2 production plants of artificial marble surfaces
420 employees

Other Manufacturers of artificial marble surfaces – local and import

affected

About 3,000 workers
In about 400 marble shops, mostly small enterprises
The causes for outbreak of silicosis

- Widespread use of artificial marble – a very high concentration of crystalline silica
- Aggressive methods of processing
- Intensive occupational exposures
- Awareness! - Underestimating of risks originating in processing of artificial marble
- Inappropriate engineering or work practice controls for reducing silica dust exposures at workplaces
- Inadequate respiratory protection and poor hygiene practices
- Before 2010 the inspections were not targeted at small workshops processing artificial marble. Focusing inspection activity on marble workshops and enforcement of regulation’s requirements led to referring of workers to occupational medical examination and diagnosing of silicosis.
- Latency period
Responsible for the regulation of occupational safety and health related issues in Israel and, in addition regulation of:

Safety of all elevators, escalators and vertical platform lifts

Safety in all sports facilities

Use of explosives

Partner in the process of Licensing of businesses

Licensing of fuel storage, including LPG
Main Modes of Operation:

- **Inspection Visits** – In accordance to orders of priority, complaints and appeals

- **Investigations** – Especially of fatal and severe injury accidents and of occupational diseases

- **Business Licensing Activity** - Rapid response is required as per legal requirements

- **Various activity through qualified / certified bodies** - A branched complementary system that is regulated and supervised by us

- **Assistance** – For small enterprises and other sectors
The Normative Base:

Approx. 50 regulations under the Ordinance;

Work Safety Regulations (Occupational Hygiene and Health of Workers With Hazardous Dust), 1984
• Use of improved ventilation and exhaust systems,
• Process enclosure,
• Use of wet techniques,
• Personal protection,
• Education of workers
• Periodical environmental occupational measurements of exposure
• Medical monitoring of workers’ health

Accidents and Occupational Diseases Ordinance (Notification), 1945
Trying to solve the problem

- Enforcement campaigns, tightening demands
- Shutting down marble shops
- The Small-scale Factory Project
- Spreading the information, media campaign
- Learning from a successful experience – The Spanish National Institute of Silicosis
Enforcement campaigns

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of marble shops visited</th>
<th>Number of orders issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>363</td>
<td>119</td>
</tr>
<tr>
<td>2013</td>
<td>498</td>
<td>242</td>
</tr>
</tbody>
</table>

By the end of 2014:

 ✓ 12 marble shops have been closed down by the authorities,
   7 more in the process

 ✓ Charges issued against 9 shops
The Small-scale Factory Project

In 250 small marble shops
Survey of hazards
Environmental occupational monitoring
Informing and training
עותקים במשטח שרש מלךוכחי - כל מה itemBuilder הקדצה על ביצוע דירקטוריון שימושי להבアイיגלי המחללה בשיבת מחקרים לPlatforms נדחת

משטחים והגנות

משטחים וחובלים

 Scientifcɔs המחללה - מנהל התחלואה

ODB 435, 2023

ליברמן: מפקד הכלכלה, מינהל הביטוח

הבראה והתחמות

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במדינת המים של המ gratuites הגיחות:

טלפון: 03-6266455
In Spain
In Israel
# Possible measures to reduce the problem

<table>
<thead>
<tr>
<th>Measure</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banning use of artificial marble</td>
<td>✓ A very dramatic step</td>
</tr>
<tr>
<td></td>
<td>✓ Almost total prevention of risk</td>
</tr>
<tr>
<td></td>
<td>✓ Use of substitutes</td>
</tr>
<tr>
<td>Recruiting Ceasarstone to share responsibility, to create a marble shop prototype, and help to promote improvements in marble shops</td>
<td>✓ Depends on Ceasarstone good will</td>
</tr>
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</table>
### Possible measures to reduce the problem

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<td>Creating a permits’ regime. Sales of artificial marble will be allowed only to shops holding permits</td>
<td>✓ Requires legal basis and operational basis to conduct the permits’ regime</td>
</tr>
<tr>
<td>Government assistance program to marble shops</td>
<td>✓ Requires governmental budget and operational basis</td>
</tr>
</tbody>
</table>
| Closing down problematic shops                                          | ✓ Requires dealing with the legal aspects
                                                                                     ✓ Finding Occupational solutions to workers who are going to lose their jobs |
Permits’ regime – main conditions

- Signing an agreement with the regulator
- Use of technical solutions:
  - Use of CNC machines
  - Pneumatic tools, proper use of water in all processes
  - Ventilation and local exhaust systems
- Structural and physical conditions:
  - Showers
  - Taking care of work clothes
  - Dining area
- Environmental-occupational measurements of exposure
- Medical monitoring of workers’ health
- Personal protective equipment
Thank you for your kind attention