Low-Vibration, Ergonomic Tools For Industry

CONTROLLING EXCESSIVE VIBRATION
IN SHIPBUILDING & SHIP REPAIR TOOLS
DISCUSSION POINTS

- Hand Arm Vibration Syndrome (HAVS)
- Frequent Worker Injuries
- The True Cost of an Injury
- Vibration Isolation System
- Engineered Solutions
- Creative Tool Support Systems
Hand Arm Vibration Syndrome - Symptoms

- Attacks of whitening (blanching)
- Tingling and loss of sensation in the fingers
- Loss of light touch
- Pain and/or cold sensations between finger attacks
- Loss of grip strength
- Bone cysts in fingers and wrists
Frequent Worker Injuries

- Raynaud's Disease
- Vibration White Finger
- Carpal Tunnel Syndrome
- Nerve Compression
# The True Cost of an Injury

## SAFETY PAYS - OSHA Injury Estimator *


<table>
<thead>
<tr>
<th>Tool / Operation</th>
<th>Injury Type</th>
<th>Direct Cost</th>
<th>Indirect Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammer</td>
<td>Amputation</td>
<td>$66,777.00</td>
<td>$73,454.00</td>
<td>$140,231.00</td>
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<tr>
<td>Hammer / Power Tool</td>
<td>C. T. S.</td>
<td>$30,000.00</td>
<td>$33,000.00</td>
<td>$63,000.00</td>
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<tr>
<td>Hammering</td>
<td>Crushing</td>
<td>$56,557.00</td>
<td>$62,212.00</td>
<td>$118,769.00</td>
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<tr>
<td>Hammering</td>
<td>Fracture</td>
<td>$48,492.00</td>
<td>$53,341.00</td>
<td>$101,833.00</td>
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<tr>
<td>Hammer / Power Tool</td>
<td>H. A. V. S.</td>
<td>$40,043.00</td>
<td>$44,047.00</td>
<td>$84,090.00</td>
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<tr>
<td>Hammer</td>
<td>Sprain</td>
<td>$28,866.00</td>
<td>$31,752.00</td>
<td>$60,618.00</td>
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<tr>
<td>Hammer / Power Tool</td>
<td>Strain</td>
<td>$33,528.00</td>
<td>$36,880.00</td>
<td>$70,408.00</td>
</tr>
</tbody>
</table>

*Employer’s Workman’s Comp Insurance determines to what extent Direct Costs are paid. The Employer always pays Indirect Costs.*
Vibration Isolation System
Creative Tool Support Systems

Honsa Ergo Arm (HEA)
Associations:

- GD Electric Boat - Quonset Point
- Naval Air Station North Island - San Diego
- Naval Submarine Base Bangor
- Naval Submarine Base Kings Bay
- Norfolk Naval Shipyard
- Pearl Harbor Naval Shipyard
- Portsmouth Naval Shipyard
- Puget Sound Naval Shipyard
... QUESTIONS?