



*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 \***

Source (Mar. '16): <https://www.osha.gov/dcsp/smallbusiness/safetypays/estimator.html>

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

*\* Employer's Workman's Comp Insurance determines to what extent Direct Costs are paid.  
The Employer always pays Indirect Costs.*

**HONSA®**

# Vibration Isolation System



# Engineered Solutions



# 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?*

