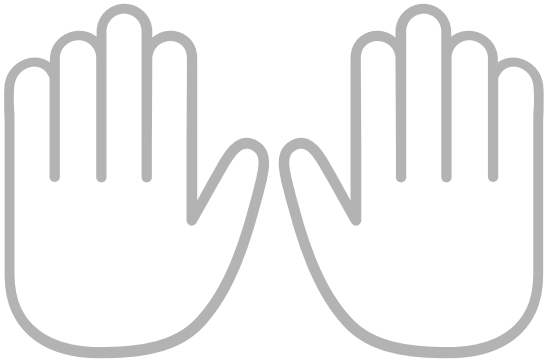
Honeywell | Hand Protection

WHITE PAPER

Tips for Avoiding Hand Injuries in Heavy-Duty Industrial Environments



THE 5TH MOST COMMON
Occupational Injury in 2015: Hands[2]

Introduction

Hand and finger injuries are among the most common incidents workers will endure. They account for 51% of injuries in the workplace.[1] That means there is a lot of room to improve safety programs.

There are many risks in the industrial workspace and especially in heavy-duty working environments. For health and safety managers, new and revised guidelines for hand safety help make personal protective equipment more reliable, but understanding these ever-changing regulations remains a complex challenge.

There's no one-size-fits-all solution to hazards like handling oily substances, impacts from heavy metal parts, low-visibility conditions, and unintended material contact; however, this guide helps outline crucial information and useful strategies to meet each unique challenge.

Table of contents

The hazards workers face

OIL AND GAS WORKERS

Hazardous environments come with the risk of experiencing cut, pinch and impact injuries when handling oily, wet and sharp objects. This puts hands and fingers especially at risk for oil and gas companies.

According to 2014 IADC statistics, hand and finger injuries comprised 43 percent of all recordable incidents on drilling rigs, a slight increase over 2013 (41 percent) and 2012 (40 percent).[3] From finger-pinches to cuts, abrasions or impacts, the cost of even a single hand injury can run into thousands of dollars.

Impact injuries

Hand and finger injuries are among the most common incidents workers will endure. They account for 51% of injuries in the workplace.[1]

The real cost of workplace injuries

1.1 MILLION
U.S. Workplace Hand Injuries in 2016[2]

100 MILLION
Days of Lost Productivity[2]

$382 MILLION
in Injury Costs[2]

With so many different types of hazards to prepare for, a good strategy is to be ready for the most common one. Providing the appropriate hand protection when the job begins will keep workers safer and enhance productivity in the long run.

According to a 2016 study by the Bureau of Labor Statistics, hand injuries remain on the rise, and 70% of U.S. workers who injured their hands were not wearing gloves.[4] In Australia, up to 30% of injuries in the manufacturing sector between 2012 and 2015 were hand related.[5] While in Gulf countries, 71% of workers in Dubai say they have no way to even report occupational injuries.[6] When viewed collectively, these injuries took a hefty toll in the form of lost wages and lost productivity, in some cases ending workers' careers.

The financial implications don't provide a complete picture of the price tag attached to each injury. But coming into contact with materials, equipment and other objects resulted in over 100 million days lost to work-related injuries in the U.S. during 2016. 30 million of those lost days were the result of injuries from previous years.[7] Meanwhile, 55 million additional days are projected to be lost in future years due to 2016 injuries.

Is compliance enough?

With so much at stake, safety managers have begun favoring a robust safety program that goes beyond simple compliance to deliver enhanced protection that keeps skilled workers on the job and productive.

The Occupational Health and Safety Administration in the U.S. issues the following general requirements for hand protection:

OSHA®

"Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes." – OSHA Standard 1910.138(a)

This directive lines up closely with many of the real scenarios workers encounter in the Oil and Gas, Construction, Mining and Railway sectors. It requires that personal protective equipment be provided and for its use to be required, establishing a baseline for worker safety.

ANSI/ISEA 105-2016

In the Americas, The American National Standards Institute (ANSI) has released the ANSI /ISEA 105-2016, which is the latest revision to the voluntary industry standard used to help workers understand classifications that assist employers and product users in the selection of gloves for specific workplace exposures. The major change surrounds classification for cut resistance.

EN 420

The European Union established EN 420 as the international baseline for hand protection. Compliance is typically indicated on the glove packaging. Only when the requirements for EN 420 have been met can gloves progress to testing to meet other, more specific standards. All protective gloves, no matter what their specific protection function, must comply with EN 420. This standard ensures that the glove materials are tested so that they don't put the workers that have to wear them at risk.

As the EN 420 does not cover the protective properties of gloves, it should never be applied in isolation, but only in combination with the relevant specific standards. Understanding the standards for hand safety compliance is simply the first step in equipping workers effectively.

To evaluate mechanical risks for hand protection, the European Union developed the EN 388: 2016 standard. This third-party test measures abrasion, cut, tear and puncture resistance and offers a pass/fail impact test.

The safety glove stamp should feature both ANSI and ISO classifications. Cut test ratings will be clearly marked so safety managers and workers can make the desired choice in selection of the gloves.

Choosing the right safety gloves (It's not just about safety)

Selecting the right protective gloves is all about thoroughly understanding the type of tasks being performed and the unique hazards that could potentially put hands at risk. Consider how protection from sharp objects, hazardous chemicals and slippery surfaces compares with the need for dexterity, tactile sensitivity and comfort for all day wear.

IMPACT PROTECTION

Many gloves are designed to protect from abrasions and slashes caused by sharp objects, but few are able to absorb energy and provide high levels of impact resistance to protect all the delicate parts in the hand. When selecting gloves for heavy-duty environments look to see if they pass EN 388 or ISEA 138 impact tests.

GRIP

When handling hazardous equipment and materials, workers need a glove with grip that gives them control and confidence. The first step is understanding the risks they face and then providing the right grip for the situation and whether the conditions are dry, wet, oily or muddy.

DEXTERITY

Keeping up with the fast-paced manufacturing environment requires dexterity and sensitivity to handle small parts or objects quickly. Thinner gloves offer the advantage of more dexterity but often come with the cost of decreased protection. But now companies are innovating gloves to improve dexterity while still providing ultimate impact protection. They are also using quality stretch materials that help your team work more effectively by reducing hand fatigue.

COMFORT

When 70% of hand injuries in the U.S. occur when workers aren't wearing gloves[4], it becomes extremely important to have comfortable gloves workers will keep on for long durations. Even the smallest irritation makes it more likely they will be removed before the end of the shift. Comfortable gloves fit well, are highly breathable to keep hands cool, and can be washed easily to control bacteria and keep them in great condition.

FIT

Proper sizing isn't just about comfort, it also contributes to productivity. Gloves that are too large will slide around on the hands causing greater exertion to maintain grip, while ones that are too snug can restrict dexterity. It's also important for a glove to have quality closure to provide a comfortable and secure fit.

EXTREME TEMPERATURES

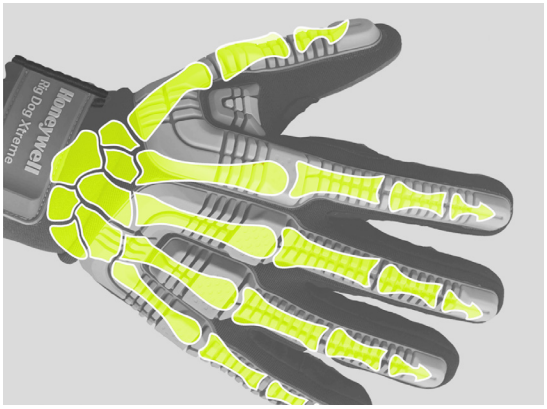
Insulated gloves should be selected to protect from extreme heat or cold. The level of protection needed can be determined, in part, by how long the worker will be exposed to these temperatures and how heavy the heated object is.

DURABILITY

Cost containment is a key indicator for determining the value of a glove over its lifetime. An expensive glove that lasts longer is a better investment than a cheaper glove that is replaced more often. To determine this, many professionals look at the number of wash cycles and abrasion resistance ratings; however, there are other variables to consider when evaluating glove-life.

SELECTING THE RIGHT MANUFACTURER EXPERT

While safety and effectiveness are of the utmost concern when selecting gloves, there are many other factors to consider when choosing the best PPE for your workers. It is important to find a manufacturer who invests in design, technological research, and user experience, so they are able and ready to meet the ever-changing safety regulations and the increasing demands of your business.



In addition to PPE, safety managers can take further action to reduce the number of workplace hand injuries.

- Performing hazard assessments
- Implementing training programs
- Building awareness and education among workers. Rewarding workers who report unsafe work hazards to their safety manager

Honeywell is innovating for safety

Your worker's hands are their most valuable tools, so they need quality protection. Honeywell is using innovative technology and real-world feedback to create enhanced gloves that go beyond compliance standards to deliver comfortable, heavy-duty protection against impact and pinch points while also reducing the severity of cut and abrasion injuries—even in hazardous lines of work. We hope this white paper helped. Look for more information soon.

Learn more at **www.honeywellsafety.com**

Honeywell

ABOUT HONEYWELL

Honeywell Safety and Productivity Solutions (SPS), which incorporates Honeywell Industrial Safety, provides products, software and connected solutions that improve productivity, workplace safety and asset performance for our customers across the globe. We deliver on this promise through industry-leading mobile devices, software, cloud technology and automation solutions, the broadest range of personal protective equipment and gas detection technology, and custom-engineered sensors, switches and controls. We also manufacture and sell a broad portfolio of footwear for work, play and outdoor activities, including Oliver and King's brand footwear. For more news and information on Honeywell Safety and Productivity Solutions, please visit www.honeywell.com/newsroom. For more information on Honeywell's personal protective equipment offering visit www.honeywellsafety.com.

Honeywell (www.honeywell.com) is a Fortune 100 software-industrial company that delivers industry-specific solutions that include aerospace and automotive products and services; control technologies for buildings, homes and industry; and performance materials globally. Our technologies help everything from aircraft cars, homes and buildings, manufacturing plants, supply chains, and workers become more connected to make our world smarter, safer and more sustainable."

References

1 ISHN (2016) "More than half of all injuries involve the hands"
https://www.ishn.com/articles/105011-more-than-half-of-all-injuries-involve-the-hands

2 Bureau of Labor Statistics

3 EHS Today (2016) "Hand and Finger Injury Risks in the Oil and Gas Industry"
https://www.ehstoday.com/hand-risks

4 ISHN (2015) "70% of workers who injure their hands aren't wearing gloves"
https://www.ishn.com/articles/101332-of-workers-who-injure-their-hands-arent-wearing-gloves

5 ProChoice "Hand Injuries: Dangerous Industries and Jobs"
http://blog.prochoice.com.au/safety-gloves/hand-injuries-dangerous-jobs/

6 Safety Media "Key Middle East Safety Statistics"
https://safetymedia.co.uk/me/middle-east-safety-statistics/

7 NSC "National Safety Council Injury Facts"
https://injuryfacts.nsc.org/

For more information:
www.honeywellsafety.com

Asia Pacific Headquarters
Honeywell Safety & Productivity Products
Industrial Safety
Level 25, UOA Corporate Tower,
Lobby B, The Vertical, Bangsar South City
59200 Kuala Lumpur, Malaysia
Phone: +603-2777 3948/ 3950
Email: hsp.asean@Honeywell.com

Singapore: +65 6714 6800
Indonesia: +62 21 2964 0328
Philippines: +632 730 7300
Thailand: +66 2 693 3099
Vietnam: +84 28 5411 2260

ASEAN_HP-Whitepaper_ASEAN_10/2019
© 2019 Honeywell International Inc.

Honeywell