

Anas Shargawi Publishes Groundbreaking Research on Energy Absorbency and Impact Resistance of D30® Materials

*World Renowned Aerospace Engineer
Anas Shargawi Publishes Groundbreaking
Research in the American Journal of
Aerospace Engineering.*

WICHITA, KS, UNITED STATES,
November 15, 2024 /

EINPresswire.com/ -- [Anas Shargawi](#), an esteemed industrial engineer specializing in aerospace systems and ergonomics, has published his latest research in the [American Journal of Aerospace Engineering](#). The study, titled Energy Absorbency and Impact Resistance of D30® Materials Under Dynamic Impact Loadings, explores the potential of D30® materials to mitigate vibrational forces from handheld percussive riveting tools, which can pose significant health risks to operators over time.



Anas Shargawi, Ph.D.

Handheld percussive tools produce vibrational forces transmitted through the hands and arms, contributing to short- and long-term neurological and vascular disorders. Current protective solutions, like anti-vibration gloves, offer some relief, but Shargawi's research examines how D30® materials perform under dynamic impact conditions to advance ergonomic interventions in aerospace manufacturing environments.

The experiment evaluated the resistance to impact by measuring peak load values across varying precompression levels and loading frequencies. The findings revealed that compression magnitude had a significant effect ($p = 0.00$) on peak load values, while loading frequency showed minimal impact at 14 Hz or less. Notably, D30® back protectors (DBP) and D30® Rifle

Harness (DRH) demonstrated superior performance in reducing peak loads compared to D3O® Recoil Pad (DRP) material.

“Through this research, we identified the potential of D3O® materials to better absorb vibrational energy, which could significantly improve the safety and health of workers using percussive tools in aircraft manufacturing,” said Anas Shargawi. “Our findings could lead to more effective ergonomic interventions, reducing the risk of long-term damage to the musculoskeletal and nervous systems.”

About Anas Shargawi

Anas Shargawi is an industrial engineer from Wichita, Kansas, who focuses on aerospace manufacturing and systems engineering. He leads innovative projects at Spirit AeroSystems, enhancing efficiency and quality in aerospace production. Shargawi earned a Ph.D. in Industrial, Systems, and Manufacturing Engineering from Wichita State University, where he specialized in Ergonomics and Human Factors. He also holds a Master’s in Industrial Engineering from King AbdulAziz University and a Bachelor's in Business Administration with an emphasis on Operations Research.

Theresa Bradley
SquareOne Digital, LLC
[email us here](#)

Visit us on social media:

[Facebook](#)

[X](#)

[LinkedIn](#)

[Instagram](#)

[YouTube](#)

[Other](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/760997096>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.