## Proceedings of ASME 2022 41<sup>st</sup> International Conference on Ocean, Offshore & Arctic Engineering

(OMAE2022)

## Volume 10

June 5-10, 2022 Hamburg, Germany

**Conference Sponsor** Ocean, Offshore and Arctic Engineering Division

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Two Park Avenue \* New York, N.Y. 10016

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ISBN: 978-0-7918-8595-6

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OMAE2022-81556. A New Approach for Rock Strength Estimation Through a Semi-Point Load Strength Index and Correlation With Destructive and Nondestructive Tests <i>Abdelsalam Abugharara, Salum Mafazy, and Stephen Butt</i>	. V010T11A092