# Article information:

Study on integrated effect of PDC double cutters - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0920410519303602>

# Article summary:

1. The concept of mechanical specific energy (MSE) is used to quantify how efficient a rock cutting process is.

2. Numerous studies have been conducted to understand the reason behind large MSE, such as Cheatham and Daniels (1979), Peterson (1976), Miedema (1987), Glowka (1989), Detournay and Atkinson (2000), Kaitkay and Lei (2005), Akono and Ulm (2011), Grima et al. (2015) and Huang et al. (2013).

3. Chen et al. (2018) developed a cutting model which considers the effect of solid-fluid coupling.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article provides an overview of various studies that have been conducted on the integrated effect of PDC double cutters, with a focus on the concept of mechanical specific energy (MSE). The article presents a comprehensive review of the literature, providing detailed information about each study mentioned in it. However, there are some potential biases in the article that should be noted.

First, some of the studies mentioned in the article may be outdated or incomplete, which could lead to inaccurate conclusions being drawn from them. For example, Cheatham and Daniels’s study was conducted in 1979, while Peterson’s study was conducted in 1976; both are more than 40 years old and may not reflect current trends or technologies in drilling operations. Additionally, some studies may be missing important points or evidence for their claims; for example, Kaitkay and Lei’s study does not provide any evidence for its conclusion that increasing hydrostatic pressure leads to a transformation from brittle to ductile-brittle mode when cutting rocks with PDC single cutters.

Second, there is also potential for one-sided reporting in this article; while it does mention several different studies on PDC double cutters, it does not present any counterarguments or alternative perspectives on these topics. This could lead readers to draw biased conclusions from the information presented in the article without considering other possible explanations or interpretations of the data presented therein.

Finally, there is also potential for promotional content in this article; while it does provide an overview of various studies related to PDC double cutters, it does not discuss any potential risks associated with using these tools or any other drawbacks that might be associated with them. This could lead readers to believe that using PDC double cutters is always beneficial without considering any potential downsides associated with them.

In conclusion, this article provides an informative overview of various studies related to PDC double cutters but has some potential biases that should be noted when evaluating its trustworthiness and reliability.

# Topics for further research:

* Potential risks of using PDC double cutters
* Advantages and disadvantages of PDC double cutters
* Mechanical specific energy (MSE)
* Latest trends in drilling operations
* Brittle-ductile transformation in rock cutting
* Alternative perspectives on PDC double cutters

# Report location:

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