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Question: Find the change in volume of 1 ft³ of water at 80 degree F w...

Find the change in volume of 1 ft³ of water at 80 °F when subjected to a pressure increase of 300 psi. The bulk modulus of water at this temperature is 325,000 psi. **(10 Points)**

Help please!

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Expert Answer



AI0510 answered this
10,915 answers

Was this answer helpful?

The handwritten solution on lined paper shows the following steps:

$$K = \frac{V dP}{dV}$$

Annotations on the right side of the equation:

- $dP \rightarrow$ change in pressure
- $dV \rightarrow$ change in volume.

$$325,000 = \frac{1 \times 300}{dV}$$
$$dV = 9.231 \times 10^{-4} \text{ ft}^3$$

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