

ChE book reviews

As I Remember, Stephen P. Timoshenko; tr. by Robert Addis.

D. Van Nostrand Company, Inc. Princeton
(1968) pp. xi + 430, 14 ill. \$9.75.

Professor Stephen Prok'yevich Timoshenko, whose widely-used textbooks and other scholarly works are familiar to every engineer, wrote his memoirs in Russian and published them in Paris in 1963 when he was eighty-five years old. These memoirs were translated into English in 1967.

The Bolshevik Revolution forced many Russian scholars to emigrate. Timoshenko was one of the most outstanding of these. He came to the United States in 1922 when he was forty-four years old and through his work in industry and as a professor, first at the University of Michigan and later at Stanford University, became known as "the father of engineering mechanics" in the United States. His memoirs should be of interest not only to engineers and scholars but to many other people as well. He had a successful career as an engineering teacher in Czarist Russia. He was a contemporary of the fictional Dr. Zhivago and people who have read the late Boris Pasternak's book or who saw the excellent film based on it will be interested in Timoshenko's comments on his life in imperial Russia. American engineers may be surprised to learn from this book that engineering education in Russia before World War I was far superior to engineering education in the United States at that time. However, thanks to efforts of many men like Timoshenko this is no longer true.

One of the reasons that these memoirs make such entertaining reading is that they are so fast-moving. The author traveled widely, met many interesting people and was a keen observer of the engineering scene. The story of Timoshenko's escape from the chaos that was Russia during the revolution is particularly absorbing. He did not return to his homeland until 1958 when he went there to inspect engineering schools. He reported the results of this trip in a 1959 book and in a memorable article in the November 1958 *Journal of Engineering Education*.

This remarkable book by a remarkable author is recommended to all readers of *CEE*.

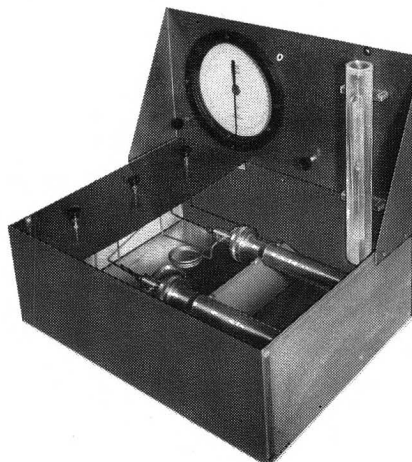
DAVID H. KENNY,
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COMPRESSIBILITY FACTORS OF GASES

This compact unit allows easy determination of the compressibility factors of gases over a pressure range of 0-60 atmospheres. At any one temperature only pressures need be measured to obtain values along an isotherm.

Data for a complete isotherm can be obtained in less than 30 minutes with the experimental results deviating from accepted values by less than five percent. The accuracy of the results in the low-pressure range is limited only by the quality of the vacuum which is available in the laboratory.

This unit is completely outfitted with safety- and check-valves to protect both the pressure and vacuum gauges. A liquid bath provides for temperature control.



SPECIFICATIONS

1. **Compressibility Cells**—Two cells (high-pressure reservoir and expansion cell) each of approximately 15 cubic inches in volume with interconnecting high-pressure tubing and necessary valving. Plugs for adjusting the volume of the expansion cell to $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{3}{4}$ of the cell's volume are provided.
2. **Pressure Measurement**—Precision pressure-gauge with 0-1,000 psi range and 1 psi accuracy is provided for measuring the pressure in the system. Shielded vacuum-gauge with 0-10 mm mercury range indicates the pressure in the evacuated expansion cell.
3. **Temperature Control**—System is encased in a 24x18x8 inch rust-proof bath.

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