

FOREWORD

This Interim Engineering Progress Report covers the work performed under Contract No. AF 33(615)-1390 from 1 June 1966 through 31 August 1966. It is published for technical information only and does not necessarily represent the recommendations, conclusions, or approval of the Air Force.

This contract with Battelle Memorial Institute of Columbus, Ohio, was initiated under Manufacturing Methods Project No. 8-198, "Development of the Manufacturing Capabilities of the Hydrostatic Extrusion Process". It is being administered under the direction of Mr. Gerald A. Gegel of the Metallurgical Processing Branch (MATB), Manufacturing Technology Division, Air Force Materials Laboratory, Wright-Patterson Air Force Base, Ohio.

The program is being conducted at Battelle by the Metalworking Research Division, with Mr. R. J. Fiorentino, Associate Chief, as project engineer. Others who have contributed to the program are the late W. R. Hansen, Research Metallurgist, Mr. B. D. Richardson, Research Metallurgical Engineer, Mr. A. M. Sabroff, Chief, and Mr. F. W. Boulger, Senior Technical Advisor. Mr. R. L. Jentgen, Project Leader in the Experimental Physics Division, is assisting in the fluid and lubrication studies of the program. Dr. J. C. Gerdeen, Research Mechanical Engineer, Mr. E. C. Rodabaugh, Senior Mechanical Engineer, and Mr. T. J. Atterbury, Chief of the Applied Solid Mechanics Division are contributing to the high-pressure-container design study. Mr. R. E. Mesloh, Research Mechanical Engineer of the same division, is assisting in the design of an instrument for measuring fluid pressure at elevated temperatures. Mr. H. L. D. Pugh, Visiting Professor of Metallurgy, Case Institute of Technology, is contributing to the beryllium-wire fabrication study as a consultant. Data from which this report has been prepared are contained in Battelle Laboratory Record Books Nos. 21799, 21990, 23055, 23287, 23585, 23791, and 23836.

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It is with regret that we announce the loss of Mr. W. R. Hansen, who was killed in an auto accident in mid-August. Mr. Hansen was responsible for conducting most of the experimental work carried out so far in this program and contributed greatly to the developments that have taken place. He was dedicated to the task set in the project and inspired enthusiasm among his colleagues. It is inevitable that a temporary delay in the work has occurred. Mr. Hansen will be missed by all those who had the opportunity to know and work with him.