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METALS, CERAMICS, AND MATERIALS

TID-3563

EXTRUSION OF URANIUM,
URANIUM ALLOYS, AND
URANIUM COMPACTS

A Literature Search

Compiled by
Theodore F. Davis

June 1961

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EXTRUSION OF URANIUM, URANIUM ALLOYS, AND URANIUM COMPACTS

Introduction

This literature search consisting of 240 references to unclassified reports and published literature has been taken from Nuclear Science Abstracts (NSA), the official abstract journal of the United States Atomic Energy Commission. The period covered is January 1951 through May 31, 1961. The references are arranged according to the Table of Contents. Abstracts for the references can be found by use of the NSA abstract numbers provided. A modified subject index is included.

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THE MANUFACTURE OF EBR-I, MARK III FUEL AND BLANKET RODS. Robert A. Noland, N. J. Carson, C. C. Stone, F. D. McCusig, and R. E. Macherey. 15p. (A/CONF.15/P/791) Am. Inst. Met. Petrol. Engrs., Inst. Metals Div., Spec. Rept. Ser. 5, No. 7, 77-84(1958) NSA 12:15046.

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Los Alamos Scientific Lab., N. Mex.

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FABRICATION OF ZIRCONIUM-CLAD URANIUM FUEL ELEMENTS. P. Loewenstein. Jan. 16, 1951. Decl. Feb. 4, 1960. 6p. (MIT-PL-12) \$0.50(OTS) NSA 14:10772.

79

END SEAL DEFECTS IN COEXTRUDED REACTOR FUEL ELEMENTS (thesis). Keith G. Lakey and James B. Risser. July 1957. 150p. (NP-7767) NSA 13:19240.

National Lead Co. of Ohio, Cincinnati.

80

SUMMARY TECHNICAL REPORT FOR THE PERIOD JULY 1, 1960 TO SEPTEMBER 30, 1960. Oct. 28, 1960. 83p. (NLCO-820) \$2.00 (OTS) NSA 15:2685.

81

SUMMARY TECHNICAL REPORT FOR THE PERIOD OCTOBER 1, 1954 TO DECEMBER 31, 1954. J. W. Simmons, ed. Jan. 15, 1955. Decl. Mar. 31, 1960. 205p. (TID-10111) \$2.75 (OTS) NSA 14:20239.

Nuclear Metals, Inc., Cambridge, Mass.

82

THORIUM - URANIUM FUEL ELEMENTS FOR SRE. B. R. Hayward and P. Corzine. 13p. (A/CONF.15/P/785) \$0.50 (OTS) NSA 12:15043.

83

TECHNICAL PROGRESS REPORT FOR THE PERIOD FEBRUARY THROUGH APRIL 1948. A. R. Kaufman. May 24, 1948. Decl. Feb. 27, 1957. 132p. (MIT-1004) \$21.30(ph), \$6.90(mf) OTS. NSA 11:8515.

Nuclear Metals, Inc., Cambridge, Mass. (Cont'd.)

84
TECHNICAL PROGRESS REPORT FOR THE PERIOD OCTOBER 1950 THROUGH MARCH 1951.
A. R. Kaufman. July 27, 1951. Decl. Feb. 26, 1957. 52p. (MIT-1065)
\$7.80(ph), \$3.30(mf) OTS. NSA 11:8516.

85
TECHNICAL PROGRESS REPORT FOR THE PERIOD OCTOBER 1951 THROUGH
MARCH 1952. June 12, 1952. Decl. Feb. 28, 1957. 105p. (MIT-1086)
\$16.80(ph), \$5.70(mf) OTS. NSA 11:8517.

86
TECHNICAL PROGRESS REPORT FOR THE PERIOD APRIL 1952 THROUGH SEPTEMBER
1952. Dec. 10, 1952. Decl. Feb. 26, 1957. 98p. (MIT-1102) \$15.30(ph),
\$5.40(mf) OTS. NSA 11:8518.

87
TECHNICAL PROGRESS REPORT FOR THE PERIOD JULY 1954 THROUGH SEPTEMBER 1954.
Jan. 19, 1955. Decl. Mar. 4, 1957. 132p. (NMI-1126) \$0.75(OTS) NSA
11:7683.

88
TECHNICAL PROGRESS REPORT FOR THE PERIOD APRIL - SEPTEMBER 1955. Feb. 8,
1956. Decl. Feb. 28, 1957. 202p. (NMI-1139) \$31.80(ph), \$9.30(mf)
OTS. NSA 11:12490.

89
THE URANIUM - SILICON EPSILON PHASE. S. Isserow. Apr. 20, 1956.
Decl. Feb. 27, 1957. 65p. (NMI-1145) \$0.50 (OTS) NSA 11:7684.

90
QUARTERLY PROGRESS REPORT TO THE AEC RESEARCH DIVISION FOR THE PERIOD
OCTOBER 1, 1957 THROUGH DECEMBER 31, 1957. S. Isserow, W. B. Nowak,
E. J. Rapperport, W. Wegner, and A. Boltax. Jan. 10, 1958. 9p.
(NMI-1198) \$0.50 (OTS) NSA 12:7256.

91
SHAPE CHANGES OF INTERNAL SURFACES IN EXTRUSION. W. B. Nowak and E. J.
Rapperport. Mar. 21, 1958. 19p. (NMI-1200) \$0.75 (OTS) NSA 13:3826.

92
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. PROGRESS
REPORT FOR JUNE 1955. June 28, 1955. Decl. Feb. 27, 1957. 12p. (NMI-2035)
\$1.80(ph), \$1.80(mf) OTS. NSA 11:11711.

93
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress
Report for July 1955. July 29, 1955. Decl. Feb. 27, 1957. 10p. (NMI-2036)
\$0.25 (OTS) NSA 11:8524.

Nuclear Metals, Inc., Cambridge, Mass. (Cont'd.)

94

THE FABRICATION OF CLAD MASSIVE UO_2 FUEL ELEMENTS BY COEXTRUSION. Quarterly Report No. 1. F. S. Gardner, J. G. Hunt, and W. D. Munro. Sept. 15, 1959. 32p. (NMI-2502) \$6.30(ph), \$3.00(mf) OTS. NSA 13:31189.

95

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period May 30 through June 23, 1957. A. M. White and J. Greenspan. Aug. 1, 1957. 10p. (NMI-4350) \$1.80(ph), \$1.80(mf) OTS. NSA 13:1367.

96

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period August 21, 1957 through September 20, 1957. A. M. White, P. D. Corzine, L. R. Aronin, J. L. Klein, and S. Isserow. Sept. 25, 1957. 20p. (NMI-4354) \$3.30(ph), \$2.40(mf) OTS. NSA 13:1370.

97

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period September 21, 1957 through October 16, 1957. A. M. White, P. D. Corzine, S. Isserow, and D. F. Kaufman. Oct. 25, 1957. 21p. (NMI-4355) \$4.80(ph), \$2.70(mf) OTS. NSA 13:1371.

98

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period October 17, 1957 through November 17, 1957. J. L. Klein, A. M. White, S. Isserow, P. D. Corzine, R. G. Jenkins, and D. F. Kaufman. Dec. 3, 1957. 33p. (NMI-4356) \$6.30(ph), \$3.00(mf) OTS. NSA 13:207.

99

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period November 18, 1957 through January 25, 1958. J. L. Klein, A. M. White, S. Isserow, P. D. Corzine, R. G. Jenkins, W. B. Nowak, and D. F. Kaufman. Jan. 31, 1958. 45p. (NMI-4357) \$7.80(ph), \$3.30(mf) OTS. NSA 13:1372.

100

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period February 21, 1958 through March 18, 1958. J. L. Klein, A. M. White, R. G. Jenkins, D. F. Kaufman, W. B. Nowak, S. Isserow, A. R. Gilman and S. R. Maloof. Mar. 25, 1958. 22p. (NMI-4359) \$4.80(ph), \$2.70(mf) OTS. NSA 13:475.

101

EVALUATION OF THREE ZIRCALOY-CLAD U - 2% Zr FUEL TUBES. J. L. Klein. Apr. 19, 1958. 68p. (NMI-4360) \$10.80(ph), \$3.90(mf) OTS. NSA 13:1373.

Nuclear Metals, Inc., Cambridge, Mass. (Cont'd.)

102

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period March 19, 1958 through April 11, 1958. A. R. Gilman, S. Isserow, R. G. Jenkins, D. F. Kaufman, J. L. Klein, S. R. Malcof, W. B. Nowak, and A. M. White. Apr. 8, 1958. 44p. (NMI-4361) \$9.30(ph), \$3.60(mf) OTS. NSA 13:1374.

103

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period April 12, 1958 through May 6, 1958. A. R. Gilman, P. D. Corzine, S. Isserow, R. G. Jenkins, D. F. Kaufman, A. Lumbert, W. B. Nowak, and A. M. White. May 26, 1958. 24p. (NMI-4362) \$4.80(ph), \$2.70(mf) OTS. NSA 13:1375.

104

EVALUATION OF ZIRCALOY-CLAD U - 2 w/o Zr ALLOY TUBE NO. 19, EXTRUSION NO. 16819. J. L. Klein. July 24, 1958. 43p. (NMI-4365) \$7.80(ph), \$3.30(mf) OTS. NSA 13:1378.

105

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period June 7, 1958 through July 6, 1958. W. B. Nowak, D. F. Kaufman, R. G. Jenkins, A. M. White, A. R. Lumbert, S. Isserow, and A. R. Gilman. Aug. 8, 1958. 17p. (NMI-4366) \$3.30(ph), \$2.40(mf) OTS. NSA 13:1379.

106

EVALUATION OF ZIRCALOY-CLAD U - 2 w/o Zr ALLOY TUBE NO. 28, EXTRUSION NO. 18388. D. F. Kaufman and R. G. Jenkins. Apr. 13, 1959. 39p. (NMI-4377) \$6.30(ph), \$3.00(mf) OTS. NSA 13:21190.

107

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period April 1, 1959 through April 30, 1959. S. Isserow, D. F. Kaufman, W. J. Richmond, W. L. Larson, A. M. Huntress, and J. P. Pemsler. Aug. 14, 1959. 21p. (NMI-4393) \$4.80(ph), \$2.70(mf) OTS. NSA 20170.

108

INVESTIGATION OF COEXTRUSION AS A METHOD OF PRODUCING TANTALUM - CLAD U - 10 w/o Mo PIN TYPE FUEL ELEMENTS. J. J. Pickett and L. R. Aronin. Jan. 23, 1958. 10p. (NMI-4404) \$1.80(ph), \$1.80(mf) OTS. NSA 12:13938.

109

PROGRESS REPORT TO HANFORD ATOMIC PRODUCTS OPERATION FOR DECEMBER 15, 1956 THROUGH MARCH 15, 1957. H. F. Sawyer. Apr. 30, 1957. Decl. June 8, 1959. 14p. (NMI-4700) \$3.30(ph), \$2.40(mf) OTS. NSA 13:18107.

110
PROGRESS REPORT TO HANFORD ATOMIC PRODUCTS OPERATION, GENERAL ELECTRIC COMPANY FOR MARCH 15, 1957 THROUGH JUNE 15, 1957. H. F. Sawyer. Aug. 23, 1957. 24p. (NMI-4701) \$4.80(ph), \$2.70(mf) OTS. NSA 12:4831.

111
ZIRCALOY-CLAD URANIUM FUEL ELEMENTS. Fabrication Report to Hanford Atomic Products Operation. H. F. Sawyer. Mar. 7, 1958. 15p. (NMI-4703) \$3.30(ph), \$2.40(mf) OTS. NSA 13:22410.

112
DEVELOPMENT AND PROPERTIES OF COEXTRUDED ZIRCALOY-CLAD URANIUM FUEL ELEMENTS WITH INTEGRAL END SEALS. Terminal Report to the Hanford Atomic Products Operation. H. F. Sawyer. Nov. 6, 1958. 83p. (NMI-4710) \$2.25(OTS) NSA 13:19238.

113
ALUMINUM-CLAD, URANIUM - ALUMINUM CORE TUBES FOR NRU REACTOR. I. B. Roll. Mar. 17, 1958. 15p. (NMI-4910) NSA 13:208.

114
EXTRUSION OF URANIUM AT LOW TEMPERATURES. S. V. Arnold and R. M. Treco. p.277-90 of NUCLEAR SCIENCE AND TECHNOLOGY. (EXTRACTS FROM JOURNAL OF METALLURGY AND CERAMICS. ISSUE NOS. 1 TO 6, JULY 1948 - JANUARY 1951). 20p. (TID-2501(Del.)) \$73.10(ph), \$11.10(mf) OTS. NSA 12:17293.

115
ZIRCONIUM CLADDING OF URANIUM AND URANIUM ALLOYS BY COEXTRUSION. A. R. Kaufmann, J. L. Klein, P. Loewenstein, and H. F. Sawyer. p.157-81 of FUEL ELEMENTS CONFERENCE, PARIS, NOVEMBER 18-23, 1957. 25p. (TID-7546 p.157-81; NMI-TJ-8)) \$7.00(OTS) NSA 12:9427.

116
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. PROGRESS REPORT FOR APRIL 1955. May 4, 1955. Decl. Mar. 4, 1957. 12p. (TID-10099) \$0.25(OTS) NSA 11:11715.

Nuclear Metals, Inc., Concord, Mass.

117
GLASS LUBRICATED EXTRUSION PROCESS. E. S. Guidicboni. (NMI-1216(p.78-99)) \$2.75(OTS) NSA 15:588.

118
BERYLLIUM-CLAD URANIUM ELEMENTS, FABRICATION DEVELOPMENT BY MULTI-TEMPERATURE EXTRUSION, AND DIMENSIONAL STABILITY ON THERMAL CYCLING. J. Greenspan. Mar. 18, 1960. 41p. (NMI-1219) \$1.00(OTS) NSA 14:16977.

- 119
ALLOY DISPERSION FUEL ELEMENTS. J. Paul Pemsler. Nov. 17, 1959.
27p. (NMI-1223) \$1.00(OTS) NSA 14:5533.
- 120
MULTI-TEMPERATURE EXTRUSIONS. E. S. Guidoboni, I. B. Roll, and P. Loewenstein. Mar. 14, 1960. 49p. (NMI-1229) \$1.25(OTS) NSA 14:15954.
- 121
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for November 1958. Jan. 13, 1959. Decl. May 18, 1960. 20p. (NMI-2072) \$3.30(ph), \$2.40(mf) OTS. NSA 14:15896.
- 122
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for January 1959. Mar. 9, 1959. Decl. May 18, 1960. 30p. (NMI-2074) \$4.80(ph), \$2.70(mf) OTS. NSA 14:16949.
- 123
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for February 1959. Mar. 30, 1959. Decl. Sept. 1, 1960. 38p. (NMI-2075) \$6.30(ph), \$3.00(mf) OTS. NSA 15:6332.
- 124
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for March 1959. May 13, 1959. Decl. May 18, 1960. 52p. (NMI-2076) \$7.80(ph), \$3.30(mf) OTS. NSA 14:15898.
- 125
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for May 1959. July 13, 1959. Decl. Sept. 1, 1960. 41p. (NMI-2078) \$6.30(ph), \$3.00(mf) OTS. NSA 15:6334.
- 126
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for October 1959. Dec. 10, 1959. 29p. (NMI-2080) \$1.00(OTS) NSA 14:8668.
- 127
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for December 1959. May 6, 1960. 28p. (NMI-2082) \$4.80(ph), \$2.70(mf) OTS. NSA 14:15014.
- 128
FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for January 1960. May 6, 1960. 25p. (NMI-2083) \$4.80(ph), \$2.70(mf) OTS. NSA 14:15899.

129

FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for April 1960. June 15, 1960. 33p. (NMI-2086) \$6.30(ph), \$3.00(mf) OTS. NSA 14:20524.

130

FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for August 1960. Sept. 30, 1960. 27p. (NMI-2088) \$4.80(ph), \$2.70(mf) OTS. NSA 15:1755.

131

FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for September 1960. Oct. 21, 1960. 28p. (NMI-2089) \$4.80(ph), \$2.70(mf) OTS. NSA 15:1756.

132

FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for October 1960. Nov. 21, 1960. 32p. (NMI-2090) \$6.30(ph), \$3.00(mf) OTS. NSA 15:11453.

133

FUNDAMENTAL AND APPLIED RESEARCH AND DEVELOPMENT IN METALLURGY. Progress Report for December 1960. Feb. 7, 1961. 34p. (NMI-2092) \$6.30(ph), \$3.00(mf) OTS. NSA 15:11454.

134

FABRICATION OF CLAD MASSIVE UO_2 FUEL ELEMENTS BY HOT EXTRUSION. Monthly Letter Report for September. Oct. 9, 1959. 6p. (NMI-2504) \$1.80(ph), \$1.80(mf) OTS. NSA 14:11948.

135

THE FABRICATION OF CLAD MASSIVE UO_2 FUEL ELEMENTS BY CO-EXTRUSION. Second Quarterly Progress Report. F. S. Gardner and J. G. Hunt. Jan. 14, 1960. 34p. (NMI-2505) \$1.00(OTS) NSA 14:11949.

136

THE FABRICATION OF CLAD MASSIVE UO_2 FUEL ELEMENTS BY CO-EXTRUSION. Third Quarterly Report. J. G. Hunt and P. Loewenstein. Apr. 20, 1960. 26p. (NMI-2508) \$4.80(ph), \$2.70(mf) OTS. NSA 14:15955.

137

THE FABRICATION OF CLAD MASSIVE UO_2 FUEL ELEMENTS BY CO-EXTRUSION. Quarterly Progress Report No. 4 for February, March and April 1960. J. G. Hunt and P. Loewenstein. June 6, 1960. 24p. (NMI-2510) \$3.30(ph), \$2.40(mf) OTS. NSA 14:18141.

138

EVALUATION OF ZIRCALOY-CLAD U - 2 w/o Zr ALLOY TUBE NO. 32, EXTRUSION NO. 18392. D. F. Kaufman and R. G. Jenkins. Apr. 13, 1959. 37p. (NMI-4378) \$6.30(ph), \$3.00(mf) OTS. NSA 13:21191.

139

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period November 1, 1958 through November 30, 1958. F. S. Gardner, D. F. Kaufman, A. R. Kaufman, S. Isserow, P. Loewenstein, A. M. Huntress, W. L. Larson, W. J. Richmond, and R. G. Jenkins. Feb. 12, 1959. 20p. (NMI-4383) \$4.80(ph), \$2.70(mf) OTS. NSA 14:1137.

140

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period December 1, 1958 through December 30, 1958. F. S. Gardner, D. F. Kaufman, W. J. Richmond, R. G. Jenkins, W. L. Larson, P. Loewenstein, A. M. Huntress, A. R. Kaufmann, J. P. Pemsler, and S. Isserow. Feb. 17, 1959. 24p. (NMI-4384) \$4.80(ph), \$2.70(mf) OTS. NSA 14:1138.

141

EVALUATION OF ZIRCALOY-CLAD U - 2 w/o Zr ALLOY TUBE NO. 36, EXTRUSION NO. 19660. D. F. Kaufman and W. J. Richmond. June 2, 1959. 15p. (NMI-4389) \$3.30(ph), \$2.40(mf) OTS. NSA 14:2701.

142

TWISTED RIBBON FUEL ELEMENT. Status Report to E. I. du Pont de Nemours and Company. A. R. Kaufman. June 10, 1959. 9p. (NMI-4390) \$1.80(ph), \$1.80(mf) OTS. NSA 13:21193.

143

POWER REACTOR PROGRAM: PROGRESS REPORT TO E. I. DU PONT DE NEMOURS AND COMPANY FOR THE PERIOD MAY 1, 1959 THROUGH MAY 31, 1959. S. Isserow, D. F. Kaufmann, A. M. Huntress, W. L. Larson, and W. J. Richmond. Aug. 31, 1959. 26p. (NMI-4394) \$4.80(ph), \$2.70(mf) OTS. NSA 13:21195.

144

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period July 1, 1959 through July 31, 1959. S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, and A. M. Huntress. Oct. 21, 1959. 23p. (NMI-4396) \$4.80(ph), \$2.70(mf) OTS. NSA 14:2702.

145

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period August 1, 1959 through August 31, 1959. S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, H. Green, A. M. Huntress, and W. B. Tuffin. Nov. 16, 1959. 17p. (NMI-4397) \$3.30(ph), \$2.40(mf) OTS. NSA 14:23214.

146

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period September 1, 1959 through September 30, 1959. S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, G. A. Henrikson, H. M. Green, P. D. Corzine, A. M. Huntress, and W. B. Tuffin. Nov. 30, 1959. 40p. (NMI-4398) \$6.30(ph), \$3.00(mf) OTS. NSA 14:23215.

147

COEXTRUSION OF ZIRCALOY-CLAD U - 2 w/o Zr ROD FOR THE EBR-I MARK
III CORE LOADING. H. F. Sawyer. Apr. 30, 1958. 53p. (NMI-4801)
\$1.25(OTS) NSA 15:3047.

148

URANIUM ROD COEXTRUDED WITH ZIRCONIUM ALLOY CLAD. H. F. Sawyer. Mar.
19, 1959. 5p. (NMI-4918) \$1.80(ph), \$1.80(mf) OTS. NSA 13:22411.

149

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period October 1959 through October 31, 1959.
S. Isserow, D. F. Kaufman, W. L. Larson, R. G. Jenkins, W. J. Richmond,
H. M. Green, and W. B. Tuffin. Mar. 18, 1960. 27p. (NMI-7221)
\$4.80(ph), \$2.70(mf) OTS. NSA 14:23216.

150

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period November 1, 1959 through November 30, 1959.
S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, H. M. Green,
W. B. Tuffin, and R. G. Jenkins. June 23, 1960. 39p. (NMI-7222)
\$6.30(ph), \$3.00(mf) OTS. NSA 14:23217.

151

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period December 1, 1959 through December 31, 1959.
S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, A. M. Huntress,
H. M. Green, W. B. Tuffin, and R. G. Jenkins. June 24, 1960. 44p.
(NMI-7223) \$7.80(ph), \$3.30(mf) OTS. NSA 14:23218.

152

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period January 1, 1960 through January 31, 1960.
S. Isserow, D. F. Kaufman, W. L. Larson, W. J. Richmond, H. M. Green,
W. B. Tuffin, and R. G. Jenkins. June 27, 1960. 37p. (NMI-7224)
\$6.30(ph), \$3.00(mf) OTS. NSA 14:23219.

153

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period March 1, 1960 through March 31, 1960.
S. Isserow, D. F. Kaufman, W. J. Richmond, H. M. Green, and R. G.
Jenkins. July 6, 1960. 34p. (NMI-7226) \$6.30(ph), \$3.00(mf) OTS.
NSA 14:23220.

154

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours
and Company for the Period April 1, 1960 through April 30, 1960.
S. Isserow, A. M. White, H. F. Sawyer, A. D. Donaldson, W. J. Richmond,
H. M. Green, and R. G. Jenkins. July 11, 1960. 36p. (NMI-7227)
\$6.30(ph), \$3.00(mf) OTS. NSA 14:23267.

155

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period May 1, 1960 through May 31, 1960. S. Isserow, A. M. White, H. F. Sawyer, A. D. Donaldson, W. J. Richmond, H. M. Green, and W. B. Tuffin. July 12, 1960. 31p. (NMI-7228) \$4.80(ph), \$2.70(mf) OTS. NSA 14:23221.

156

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period June 1, 1960 through June 30, 1960. S. Isserow, A. M. White, H. F. Sawyer, A. D. Donaldson, W. L. Larson, W. J. Richmond, P. R. Smoot, H. M. Green, and W. B. Tuffin. Aug. 2, 1960. (NMI-7229) \$6.30(ph), \$3.00(mf) OTS. NSA 14:23222.

157

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the Period July 1, 1960 through July 31, 1960. S. Isserow, A. M. White, H. F. Sawyer, A. D. Donaldson, W. L. Larson, W. J. Richmond, P. R. Smoot, H. M. Green, and W. B. Tuffin. Sept. 7, 1960. 32p. (NMI-7230) \$4.80(ph), \$2.70(mf) OTS. NSA 15:1809.

158

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the period August 1, 1960 through August 31, 1960. S. Isserow, A. M. White, H. F. Sawyer, W. L. Larson, D. S. Kneppel, W. J. Richmond, P. R. Smoot, H. M. Green, and W. B. Tuffin. Oct. 4, 1960. 35p. (NMI-7231) \$6.30(ph), \$3.00(mf) OTS. NSA 15:10531.

159

POWER REACTOR PROGRAM. Progress Report to E. I. du Pont de Nemours and Company for the period September 1, 1960 through September 30, 1960. S. Isserow, A. M. White, H. F. Sawyer, W. L. Larson, D. S. Kneppel, W. J. Richmond, H. M. Green, P. R. Smoot, and W. B. Tuffin. Oct. 28, 1960. 28p. (NMI-7232) \$4.80(ph), \$2.70(mf) OTS. NSA 15:12582.

160

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