

UNCLASSIFIED

AD _ 400 585 _

DEFENSE DOCUMENTATION CENTER

FOR

SCIENTIFIC AND TECHNICAL INFORMATION

CAMERON STATION, ALEXANDRIA, VIRGINIA



UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

①400585

2

Y/001/62/000/011/001/002
D267/D307

STEP

AUTHOR:

⑧ Muster, Jože, Engineer

TITLE:

⑥ Experimental production of pure synthetic minerals in a solar furnace and their characteristic features

PERIODICAL:

⑮ Tehnika, no. 11, 1962, 2091-2096 *Yugoslavia*

TEXT:

The experimental solar furnace, erected by the (Slovenian) Metallurgical Institute of Ljubljana at Piran in 1960, is described in detail. Local conditions permit temperatures of about 2500°C to be attained during 150 sunny days every year, and up to 2800 - 2900°C on some days in May - July. The heliostat has an automatic motion controlled by photo-transistors and a hydraulic driving mechanism. Usual porcelain crucibles can be used since the mixture is fused only in the center of the top layer. The minerals were obtained from two or three of the following oxides: CaO, MgO, Al₂O₃, SiO₂. About 0.5% of carbon black was added to the oxide mixture in order to facilitate the fusion. The following minerals were synthesized: dolomite, corundum, spinel, anorthite, cordierite,

Card 1/2

ASIA FILE COPY

Experimental production ...

Y/001/62/000/011/001/002
D267/D307

wollastonite, grossularite, helenite, akermanite, forsterite, monticellite, shannonite, merwinite, mullite, clinoenstatite and diopside. The quality of ten of these 16 minerals was excellent. The identification was carried out by the Debye-Scherrer method and by means of X-ray diffractograms (Philips diffractometer PW 1051). There are 10 figures and 1 table.

ASSOCIATION:

Metalurški institut u Ljubljani (Metallurgical Institute of Ljubljana)

SUBMITTED:

March 26, 1962

Card 2/2