"RETURN TO VAULT"

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27.2 titanium dioxide

TITANIUM DIOXIDE

LITERATURE AND PATENT STUDY

E.S.Gatewood

April, 1928.

N33663

Experimental Station
E. I. du Pont de Nemours & Co.
April 9, 1930

MEMORANDUM FOR DR. JOHN KEATS

FROM ELIZABETH GATEWOOD

LITERATURE AND PATENTS ON THE PREPARATION OF TITANIUM DIOXIDE AND ITS USE AS A PIGMENT

This search for the literature and patents on titanium dioxide includes as well a search for the preparation of other titanium compounds from raw materials such as ilmenite and other titanium ores, for the manufacture and use of any other titanium compounds as pigments, and for all uses of titanium dioxide. The preparation of titanium and its compounds from other previously prepared titanium compounds has been excluded when the substances were not to be used as pigments. Titanium alloys, catalysts, reagents, etc. have also been excluded.

The references were found by a search through Chemical Abstracts, 1907 - March 10, 1930, inclusive; Chemisches Zentralblatt, 1897 - 1928, inclusive; the Experimental Station Patent Bulletin, January 1929 - March 3, 1930; the Experimental Station Journal Bulletin, December 28, 1928 - March 13, 1930; the Titanium Dioxide and Pigments Patent Folders; the Titanium Dioxide Files; a United States Patent Search bearing on the manufacture of titanium oxide for use as a pigment made by the Patent Department, dated February 8, 1930; the British Abridgments

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of Specifications, Class I, 1855 - 1925; the I.C.I. British Patent Search dealing with the treatment of titanium ores to produce titanium compounds and pigments, 1884 - 1929; the I.C.I. German Patent Search on titanium compounds and pigments, to 1924; Brauer and D. Ans' Fortschritte in der Anorganisch Chemischen Industrie, 1877 - 1927; Jahresbericht der Chemischen Technologie, 1895 - 1928; Patent Search on the Preparation of Metal Titanates by E. Gatewood; Thornton's monograph "Titanium", 1927; Thornton's card index to titanium literature at Johns Hopkins University; U. S. Bureau of Mines file on titanium minerals, processes, etc.; and the following encyclopedias, handbooks and comprehensive textbooks on inorganic chemistry:

Abegg and Auerbach, Handbuch der Anorganischen Chemie, Vol. 3, 1909;

Friend, Textbook of Inorganic Chemistry, Vol. 5, 1925;

Gmelin - Kraut, Handbuch der Anorganischen Chemie, Vol. 3, 1913;

Mellor, Treatise on Inorganic and Theoretical Chemistry, Vol. 7, 1927;

Roscoe and Schorlemmer, Treatise on Chemistry, Vol. 2, 1923;

Thorpe, Dictionary of Applied Chemistry, Vol. 7 1927;

Ullman, Enzyklopadie der technischen Chemie, Vol. 11, 1922;

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Watt, Dictionary of Applied Chemistry,
Vol. 4, 1902;

as well as numerous other textbooks on the rarer elements and on minerals and ores, which are listed with the journal references.

Many of the original journal articles have been read and their references or bibliographies checked.

Patent folders containing all the United States, British, French and German patents available have been started and also a patent folder for some of the patents of the other countries. Photostats or translations of the more important journal articles have been made.

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