

FILM STUDY GROUP  
SUBJECT INDEX AND REPORT

T. O. M. REEL NO. 79

Prepared by

PHILLIPS PETROLEUM COMPANY

PHILLIPS PETROLEUM CO.  
RESEARCH DEPT.  
BARTLESVILLE, OKLA.

Report 587-46

INDEX

Technical Oil Mission Microfilm Reel No. 79

Articles translated will carry "TR" before their frame number(s), and those abstracted will have their frame number(s) preceded by the letter "A". Articles listed by title only will carry no letter preceding the frame number(s).

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Absorption, gas, plant,</u> plot plan and elevation for proposed,	79	2192
<u>Absorption, oil,</u> memoranda on,	79	2200-5
<u>Alkanes,</u> Raman spectra of,	79	A2444-6
<u>Aluminum chloride,</u> corrosion experiments on iron plate with aqueous solution of, inspection data on oils from decomposition with, memorandum on	79	2256-7 2273 2253-5
<u>Aluminum chloride sludge,</u> availability and characteristics of, from mineral oil synthesis pumps for, utilization of,	79	2269-7 2274-5 2252 2258-9 2260-2 2263-7
utilization of, from the manufacture of synthetic lube oil.		2251
<u>Aniline point,</u> of hydrocarbons, of petroleum fractions	79	TR2531 2295-329
<u>Aromatics,</u> Raman spectra of,	79	A2448
<u>Ash constituent,</u> of synthetic oils, formation and composition	79	2699-704
<u>Boiling point,</u> of hydrocarbons, determination of,	79	TR2510-19
<u>Chromatography,</u> of mineral oils	79	2696-8 TR2854-5 TR2870-1 TR2885-8 TR2901-3 TR2938-44 TR2983-4

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Colophony</u>		
-Lubex emulsion	79	A2397-406
<u>Corrosion,</u>		
experiments on iron plate with aqueous solutions of aluminum chloride	79	2256-7
<u>Cracking,</u>		
analysis and characterization of raw materials for lube oil manufacture.	79	2463-8 2472-8 2111-80
of waxes, removal of undesired components from raw materials for, (Lube oil manufacture)		2490-2
<u>Cracking chamber,</u>		
experimental runs of,	79	2181-90
<u>Cracking unit,</u>		
design calculations for,	79	2231-45
<u>Cycloalkanes,</u>		
preparation of Raman spectra of.	79	TR2510 A2447
<u>Diseases, plant,</u>		
short review of the work on combatting,	79	2349-66
<u>Distillates, cracked,</u>		
investigation of structure of olefins in, by the peracetic acid method treatment with selective solvents	79	2367-73 2579-82
<u>Docosane, 2,2-dimethyl-,</u>		
preparation of	79	TR2509
<u>Emulsification,</u>		
with materials other than colophony	79	A2407
<u>Emulsions,</u>		
Lubex-colophony,	79	A2397-406
<u>Gasoline,</u>		
analysis of, using Raman spectra	79	A2450-6
<u>Greases,</u>		
containing calcium soap, continuous manufacture of.	79	2493-503
<u>Heat of fusion,</u>		
of hydrocarbons, determination of,	79	TR2532-7
<u>Heat of transition,</u>		
of hydrocarbons, determination of,	79	TR2532-7
<u>Heat of vaporization,</u>		
of hydrocarbons, determination of,	79	TR2510-19
<u>n-Hentricosane,</u>		
preparation of,	79	TR2507
<u>n-Hentriacontane,</u>		
preparation of,	79	TR2508
<u>Heptadecane, 1-cyclohexyl-2-hexahydrobenzyl-,</u>		
preparation of,	79	TR2510
<u>n-Hexatriacontane,</u>		
preparation of,	79	TR2508

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Hydrocarbons,</u>		
analysis of, by Raman spectroscopy,	79	A2451-58
aniline point of,		TR2581
binary systems of, behavior of,		TR2570-8
boiling point of, determination of,		TR2510-19
branched chain, preparation of,		TR2509-10
containing more than twenty carbon atoms,		
physical-chemical behavior of,		TR2504-78
heat of fusion of, determination of,		TR2532-7
heat of transition of, determination of,		TR2532-7
heat of vaporization, calculation of,		TR2510-19
heavy, viscosity as a function of temperature,		
determination of,		TR2694-5
heavy, viscosity-temperature graph for,		TR2693
liquid, refractive index of, determination of,		TR2520-6
liquid, specific gravity of, determination of,		TR2520-6
melting point of, determination of,		TR2510-19
mixtures of		TR2566-78
mixtures of, viscosity of, determination of,		TR2567-9
properties of		2510-65
pure, synthesis of (for lube oils)		TR2811-12
		TR2819-23
		TR2852-5
		TR2856-8
		TR2864-7
		TR2877-9
		TR2894-5
		TR2913-15
		TR2922-3
		TR2951-4
		TR2966-7
solid, properties of		TR2537-55
solubility of, determination of		TR2558-65
specific heat of, determination of,		TR2532-7
straight chain, preparation of,		TR2507-9
viscosity of, at different temperatures, determination of,		TR2527-30
<u>Hydrogen peroxide,</u>		
isolation of, from propane peroxides (in Dutch)	79	TR2595-640
<u>Iodine number,</u>		
of synthetic lube oils	79	2223-4
<u>Lube oils,</u>		
analysis of, by Raman spectra	79	A2457-8
apparatus for the determination of viscosity of,		
at different temperatures		TR2813-15
		TR2824-5
		TR2832-5
		TR2839-46
		TR2861-3
		TR2868-9
		TR2880-4
		TR2899-900
		TR2905-12

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Lube oils,</u>		
apparatus for the determination of viscosity or, at different temperatures	79	TR2924-55 TR2955-62 TR2975-80
aviation, from cracked gases, proposal for plant for recovery of, aviation, proposal for the construction of additional plant facilities for the manufacture of, constitution of corrosion resistance, measurement of,		2213-16  2206-12 A2606-984 TR2816-18 TR2826-51 TR2834-8 TR2847-51 TR2859-60 TR2872-6 TR2904 TR2916-17 TR2921 TR2947-50 TR2963-5 TR2972-4 TR2981-2 TR2816-18 TR2826-51 TR2834-8 TR2847-51 TR2859-60 TR2872-6 TR2904 TR2916-17 TR2921 TR2947-50 TR2963-5 TR2972-4 TR2981-2 TR2816-18 TR2826-51 TR2834-8 TR2847-51 TR2859-60 TR2872-6 TR2904 TR2916-17 TR2921 TR2947-50 TR2963-5 TR2972-4 TR2981-2
oxidation resistance of, measurement of,		
spreading over metal surfaces of, measuring of,		

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Lube oils,</u>		
synthesis of, influence of polymerization conditions on	79	2641-92
synthesis of pure hydrocarbons for,		TR2811-12
		TR2819-23
		TR2852-3
		TR2856-8
		TR2864-7
		TR2877-9
		TR2894-5
		TR2913-15
		TR2922-3
		TR2951-4
		TR2966-7
<u>Lube oils synthetic,</u>		
by products from,	79	2268
calculations on vaporizing furnaces for		2225-30
inspection data of plant products of,		2221-4
investigations and analytical methods concerned with		A2889-95
		A2896-8
		A2918-20
		A2934-7
		A2945-6
		A2968-71
		2225-4
iodine number of,		
made by J. G. Farbenindustrie and by Rhemania,		2281-4
comparison of,		2082-110
manufacture at Poelitz,		
manufacture from various cracked waxes, laboratory tests on,		2285-8
manufacture of,		2279-80
memorandum on conference regarding operational details		2218-20
problems in the manufacture of,		2459-92
utilization of aluminum chloride sludge from the manufacture of,		2251
<u>Lubex,</u>		
chemical constitution of	79	A2408-9
-colophony emulsions		A2397-406
sizing of paper with		A2391-6
		A2723-805
<u>Melting point,</u>		
of hydrocarbons, determination of,	79	TR2510-19
<u>Mineral oils,</u>		
chromatography of	79	2696-8
		TR2854-5
		TR2870-1
		TR2885-8
		TR2901-3
		TR2938-44
		TR2983-4
<u>Nonadecane, 10-nonyl-,</u>		
preparation of	79	TR2509

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>N. V. de Bataafsche Petroleum Maatschappij.</u> Amsterdam laboratory of, research reports from	79	2294
<u>n-Octacosane,</u> preparation of	79	TR2508
<u>Octadecane, 1-cyclohexyl-,</u> preparation of,	79	TR2510
<u>Octadecane, 7,12-dimethyl-9,10-dihexyl-,</u> preparation of,	79	TR2509
<u>Oils, synthetic,</u> ash constituent of, formation and composition of, influence of cracking conditions on,	79	2699-704 2583-94
<u>Olefins,</u> in cracked distillates, investigation of structure of, by the peracetic acid method. oxidation with,	79	TR2367-73 2374-7
<u>Oppau,</u> plant experiments at	79	2289-90 2291-5
<u>Oxidation,</u> with cracked distillates with pure olefins	79	2378-90 2374-7
<u>Paper,</u> sizing of  sizing of, with Lubex	79	A27174, A2718-20 A2391-6 A2723-805
<u>Paraffin emulsion,</u> for the Berghuizer paper factory, preparation of	79	2344-8
<u>Paraffins,</u> residue from preliminary purification of,	79	2276-8
<u>Paraffin wax,</u> treating of, flow sheet for	79	2246
<u>Pentacosane, 13-methyl-,</u> preparation of	79	TR2509
<u>n-Pentatriacontane,</u> preparation of,	79	TR2508
<u>Petroleum fractions,</u> aniline point of relation between the U.O.P. characterization factor and other properties of	79 79	2295-329 TR2330-43
<u>Poelitz plant,</u> flow sheet of entire, plot plan of	79	2250 2191
<u>Polymerization,</u> analysis and characterization of raw materials for lube oil manufacture. conditions, synthesis of influence on lube oils influence of cracking conditions in relation to, in lube oil manufacture of paraffins, residue from, removal of undesired components from raw materials for, (Lube oil manufacture) unit for, flow sheet for	79	2469-71 2641-92 2583-94 A2479-89 2276-8  2490-2 2247-9

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>Polymerization, gas,</u> Lurgi proposal for, memorandum on, proposal for,	79	2196-8 2199 2198-5
<u>Propane peroxide,</u> pilot plant for the manufacture of	79	TR2424-30
<u>Raman spectra,</u> analysis of gasoline, analysis of lube oils comparison of the spectra of the various hydrocarbon groups in the analysis of hydrocarbon mixtures, of alkanes of aromatics of cycloalkanes, of other groups	79	A2450-6 A2457-8  A2449 A2451-58 A2444-6 A2448 A2447 A2449
<u>Refractive index,</u> of hydrocarbons in the liquid state, determination of,	79	TR2520-6
<u>Sizing of paper</u>  methods of investigating, specimens with Lubex (SO <sub>2</sub> extract of lube oil)	79	A27174, A2718-20 A2410-20 A2421-3 A2391-6 A2723-805
<u>Sludge, aluminum chloride,</u> availability and characteristics of, from mineral oil synthesis pumps for, utilization of,  utilization of, from the manufacture of synthetic lube oil.	79	2269-72 2274-5 2252 2258-9 2260-2 2263-7  2251
<u>Solubility,</u> of hydrocarbons, determination of,	79	TR2556-85
<u>Specific gravity,</u> of hydrocarbons in the liquid state, determination of	79	TR2520-6
<u>Specific heat,</u> of hydrocarbons, determination of	79	TR2532-7
<u>Temperature</u> -viscosity, for several heavy hydrocarbons, graph of,	79	TR2693
<u>n-Tetracontane,</u> preparation of,	79	TR2509
<u>n-Tetracosane,</u> preparation of,	79	TR2507
<u>n-Tetratriacontane,</u> preparation of,	79	TR2508
<u>n-Triacontane,</u> preparation of,	79	TR2508

<u>Subject</u>	<u>Reel</u>	<u>Frames</u>
<u>n-Tricosane,</u> preparation of,	79	TR2507
<u>Tricosane, 2-methyl-,</u> preparation of	79	TR2509
<u>n-Tritetracontane,</u> preparation of,	79	TR2509
<u>Tritetracontane, 22-methyl-,</u> preparation of,	79	TR2510
<u>U.O.P. characterization factor,</u> of petroleum fractions	79	TR2330-43
<u>Viscosity,</u> of hydrocarbons at different temperatures, determination of of hydrocarbon mixtures, determination of, of lube oils, at temperatures to 350° C, apparatus for the determination of,	79	TR2527-30 TR2567-9  TR2813-15 TR2824-5 TR2832-5 TR2839-46 TR2861-3 TR2868-9 TR2880-4 TR2899-900 TR2905-12 TR2924-33 TR2955-62 TR2975-80
 of several heavy hydrocarbons up to about 350° C, determination of, temperature, for several heavy hydrocarbons, graph of,		TR2694-5
<u>Voltolysis</u>	79	TR2693 A2705-17
<u>Waxes,</u> cracking of, slack, inspection data on	79	2111-80 2217

PHILLIPS PETROLEUM COMPANY

RESEARCH DEPARTMENT

BARTLESVILLE, OKLAHOMA

REPORT ON

UNITED STATES TECHNICAL OIL

MISSION MICROFILM REEL 79

Compiled and Edited

by

Technical Information Section

UNITED STATES TECHNICAL OIL

MISSION MICROFILM REEL 79

Compiled and Edited

47

by

Technical Information Section

---

S U M M A R Y

This report on United States Technical Oil Mission Microfilm Reel No. 79 is a part of the American Petroleum Institute - Technical Oil Mission program devoted to the indexing, abstracting, and translation of the German literature collected by the Technical Oil Mission. Its distribution outside Phillips Petroleum Company includes all companies participating in the program and the Library of Congress. From the Library of Congress, photostat or microfilm duplication is available to anyone making a request.

The more important items in this reel are concerned with the methods employed in the determination of physical constants of hydrocarbons, the synthesis of high molecular weight hydrocarbons, and engineering problems relative to the testing and manufacture of synthetic lube oils.

---

Albert E. Miller, Chairman  
API-TOM Study Group

NOV 27 1946

This copy of this report has been released for private information only, and with the understanding that any other use of the subject matter, in whole or in part, by reference or otherwise, shall be only with the knowledge of Phillips Petroleum Company and with the approval of that company first obtained; and with the further understanding that this report is prepared and submitted for informative purposes only and that any suggestions and recommendations contained herein shall not be understood or construed as, in any sense, guarantees or warranties of any method, product or device.

EDITOR'S NOTE

All microfilm frames abstracted or translated are in numerical sequence except for those presenting periodic reports on the "Constitution of Lube Oils".

This material is grouped under five main headings.

Synthesis of pure hydrocarbons  
for lube oils -----beginning with Frame 2811

Apparatus for the determination  
of viscosity at temperatures  
up to about 300°C-----beginning with Frame 2813

Method for measuring the oxida-  
tion resistance, corrosion  
resistance, and spreading  
over metal surfaces (for lube  
oils)-----beginning with Frame 2816

Chromatography of mineral oils-----beginning with Frame 2854

Investigations and analytical  
methods concerned with synthe-  
tic lube oils-----beginning with Frame 2889