TOM REEL 248

LIST OF TRANSLATIONS PREPARED

Document Number	Cios Reference Number	Title
F.D. 2866/46 It. 1 ✓	1893/A.1.	Use of the Ring Process in the BMW 132 N.
" " " It. 2 ✓	1893/A.2.	Wear experiments on injection nozzles and compression piston with fuel R-300 and gas oil
" " " It. 5 ✓	1893/A.5.	Testing the lubricating capacity of oils in three different apparatus.
" " " It. 7 ✓	1893/A.9.	Influence of temperature when operating aero-engines by the Ring Process
" " " It. 8 ✓	1893/A.10	Revised Test Method for the Investigation of Aviation Fuels (Oppau Method)
" " " It. 9 ✓	1893/A.11	Investigation into the stability of aero-engine lubricants at low temperatures
" " " It. 11 ✓	1893/A.13	Testing the polyglycol ethers of multivalent alcohols as Lubricants
" " " It. 12 ✓	1893/A.14	Minimum and optimum fuel quantity for the Ring Process on the Jumo Cylinder 211A.
" " " It. 17 ✓	1893/A.21	Comparative Tests with Aero-Engine Lubricants Mixtures A.-F.
" " " It. 18 ✓	1893/A.22	Testing of the lubricating quality of R 200 and R 300
" " " It. 19 ✓	1893/A.23	Note on testing the knock behaviour of fuels in a small test engine.
" " " It. 27 ✓	1893/A.32	Investigation of Lubricants in the I.G. -Kälteschrank.
" " " It. 31 ✓	1893/A.35	Tests with the Ring Process at Different Compression Ratios
" " " It. 32 ✓	1893/A.36	Technical tests on lubricating oils.
" " " It. 35 ✓	1893/A.38	The Ring Process
" " " It. 36 ✓	1893/A.39	Peak Pressures in the Ring Process

Document Number,	Cios Reference Number	Title
F.D. 2866/46 It.37 ✓	1893/A.40.	On an electrical instrument for the accustical or optical determination of the incidence of knock
F.D. 2866/46 It. 38. ✓	1893/A. 41	The Use of the I.C. Test-Engine for Lubricant Testing
F.D. 2866/46 It.29. ✓	1893/A.43.	Experiences with Ring Sticking Tests on Lubricants
F.D. 2866/46 It.44. ✓	1893/A.50.	Apparatus for measuring the lubricating properties with limiting friction
F.D. 2866/46 It.45. ✓	1893/A.51.	The behaviour of starting fuels in Diesel Engines when injected into the induction pipe
F.D. 2866/46 It.49. ✓	1893/A.56.	Testing lubricants by measuring wear.
F.D. 2866/46 It.62 ✓	1893/A.70.	Lubricant Testing in Small-scale Apparatus.
F.D. 2866/46 It.66 ✓	1893/A.74	Use of Precombustion chamber in the Ring Process.
F.D. 2866/46 It.67. ✓	1893/A.75.	An Apparatus used to Determine Metallic Abrasion during Lubrication.
F.D. 2866/46 It. 73. ✓	1893/A.82.	Testing of Lubricants by Measurement of Wear.
F.D. 2866/46 It. 82. ✓	1893/A.91	The Falex Oil Testing Apparatus a comparison with the "Four Ball" and Almen-Wieland machine.
F.D. 2866/46 It. 84 ✓	1893/A.93	Nitro-paraffins as fuels.
F.D. 2866/46 It. 86 ✓	1893/A.95	Testing of Eleven Aviation Oils
F.D. 2866/46 It. 88 ✓	1893/A.97	Investigation of the Pumpability of Oils.
F.D. 2866/46 It. 90 ✓	1893/A.99	Wear and Friction Tests
F.D. 2866/46 It. 92 ✓	1893/A. 104	Octane Number Determination by the Oppan Method
F.D. 2867/46 It. 12 ✓	1893/B.24	Influence of sulphur compounds on the anti-knock value and the residue formation of leaded fuel
F.D. 2867/46 It. 27 ✓	1893/B44	Small super-charged engines developed on the principle of the DVL super-charge process in the BMW 132 N-single cylinder

Document Number	Cics Reference Number	Title
F.D. 2857/46 It. 53 ✓	1893/B.70.	Effect of the Cetane Number of Diesel Fuels on the Starting Behaviour
" " " It. 71 ✓	1893/B.88	Investigations on the anti-corrosion substance H^{6} 1/136 Na
" " " It. 72 ✓	1893/B.89	Oppanol as an additive for winter motor oils
" " " It. 77 ✓	1893/B.95	Test of an anti-corrosion substance for fuel tanks.
" " " It. 83 ✓	1893/B.102	Super-Charge Testing of Aviation Fuels under full size Engine Conditions
" " " It. 95 ✓	1893/B.119	Short Report No. 412 on Gasoline-Water-Emulsions.
F.D. 2868/46 It. 82 ✓	1893/C.85	The influence of Decreasing Setting Point on Diesel Oils.
F.D. 2869/46 It. 6 ✓	1893/D.2 pt.	On the Adsorption of Dissolved Dipolar Molecules on Solid Metals
" " " It. 15 ✓	1893/E.5.	Tests on a four-ball oil test machine.
" " " It. 16 ✓	1893/E.6.	Measurement of Coefficient of Friction by Means of the PTR Instrument
" " " It. 29 ✓	1893/F.12	The Estimation of Lubricating Ability by Means of Engine Tests
" " " It. 31 ✓	1893/F.14	Detection and Determination of Products of Ageing of Lead Tetra-Ethyl in Fuels
" " " It. 36 ✓	1893 /F.18	The Influence of Working Conditions on Piston Temperature.

Document Number	Cios Reference Number	Title
F.D. 2869/It. 73 46	1893/H.11.	The Examination of Two Oils with Synthetic Fatty Additives for Suitability for use in Aero-Engines
" " " 74	1893/H.21.	The Testing of Lubricants in the BMW 132 Single Cylinder Engine
F.D. 2870/It. 8 46	1893/I.18	Experiments with two samples of Diesel fuel, Nos. 181 and 182 from Dr. Montfort, High Pressure Research, Ludwigshafen.
" " " 85	1893/I.90	Investigation of suitability of IGENIL as a bearing material
" " " 96	1893/I.103	Experiments with Aero-Engine Oils in the BMW Engine
F.D. 2871/46 It. 23	1893/I.136	Minutes of the Meeting of the Special Committee on the Standardisation of Engine Tests on Diesel Fuels of the DVM 14 and 15 April 1942.
" " " It. 43	1893/N.15 pt	Thermo-electric Method for comparative tests of lubricants in a state of boundary lubrication
" " " It. 62	1893/N.15 pt	New facts on Lubrication
" " " It 63	1893/N.15 pt	Sliding Tests on metals in boundary Lubricants
" " " It. 69	1893/Q.9.	I.G. Patent Specifications 10.7.43 Lubrication of internal combustion Engines
" " " It. 71	1893/Q.11	Contribution on non-hydro-dynamic lubrication
" " " It. 90	1893/Q.35	Test with R-fuels

Document Number	Cios Reference Number	Title
F.D. 2872/It. 3 46 ✓	1893/U.5 pt.	Single Cylinder tests with internal cooling
" " It. 5 ✓	1893/U.5 pt.	Basic problems in the use of O_2 Carriers
" " It. 6 ✓	1893/U.5 pt.	Experimental results with GM1 in aero-engines
" " It. 7 ✓	1893/U.5 pt.	The Ring Process
" " It. 8 ✓	1893/U.5 pt.	The Ring Process in the BMW 323
" " It. 9 ✓	1893/U.5. pt.	Problems of the Ring Process
" " It. 10 ✓	1893/U.5. pt.	Operating engines on safety fuels
" " It. 11 ✓	1893/U.5 pt.	Tests with safty fuels
" " It. 12 ✓	1893/U.5. pt.	Behaviour of safety fuels in firing tests
" " It. 14 ✓	1893/U.7.	Work carried out at Oppau on I.G. Research Engine
" " It. 17 ✓	1893/U.10	Correlation of fuel research and supply problems
" " It. 20 ✓	1893/U.13	The gasoline diesel engine
" " It. 40 ✓	1893/X.9	Aviation Work at Oppau
" " It. 48 ✓	1893/Z.5	Report on Conference on Lube. Oil testing in the BMW 132 N. Single cylinder motor
" " It. 49 ✓	3996/S.A.1.	Effect of peroxide in engines and its determination
" " It. 50 ✓	3996/S.A.2.	Effect of aldehyde in engines and its quantitative determination
" " It. 52 ✓	3996/S.A.4.	FKFS Process for determining bromine in fuels
" " It. 66 ✓	3996/S.C.4.	Investigations into the development of the spontaneous ignition operation of mixture compression engines
" " It. 73 ✓	3996/S.C.13	Additives to improve oil
" " It. 75 ✓	3996/S.D.2	Instrument for the measurement of Ignition delay (Pattern 1943)

Document Number	Cics Reference Number	Title
F.D.2872/46 It.88. ✓	3996/ S.F.3	New Method of evaluating power of oils and greases
" " " It.89. ✓	3996/ S.F.4	Method for determining technical value of lubricants
" " " It.94. ✓	3996/ S.F.9.	Ignition accelerators for diesel fuels
" " " It.99. ✓	3996/ S.G.2.	Tests on a Carburettor Engine with Self-ignition.
F.D. 2873/46 It. 7 ✓	3996/SH4. Vol.11. pps. 141-148 ✓	Investigation of Lab. Methods for the Determination of the lead content of fuels (pt. only)
" " " "	" pps. 149-155 ✓	Determination of "I-T" and its ageing products in aero-engine fuels.
" " " "	" pps. 156-161 ✓	Testing lubricating oils by friction and wear tests on engines.
" " " "	pps. 162-169 ✓	Supervision of piston temperature during endurance testing
" " " "	pps. 170-178 ✓	Laboratory Method for Testing the Ageing of Lubricating Oils
" " " "	pps. 179-187 ✓	The Quantitative Determination of the Composition of Liquids (Mixtures of several components), based on their Selective Absorption in the Infra-red Spectral Region
" " " It. 8 ✓	3996/S.H.5. pps. 2-10 ✓	Recent experiments on self-ignition of fuels under adiabatic compression.
" " " "	pps.11-18 ✓	The application to engine conditions of laboratory experiments on self-ignition of fuels.
" " " "	pps. 18-27 ✓	Discussion.
" " " "	pps. 28-55 ✓	Pre-reactions in gasoline engines without ignition.

Document Number	CIOS Reference Number	Title
F.D. 2873/46 It. 81	3996/S.H.5. pps.56 - 71	Investigations on the reaction kinetics of the Oxidation of n-and i-paraffins.
F.D. " " "	pps. 72- 77	Discussion
" " " "	pps. 77 - 89	New Tests for the determination of individual factors effecting engine knocking
" " " "	pps. 89- 91	Discussion
" " " "	pps. 91 - 109	Adiabatic change of state in dissociating gases and the method of sound dispersion for the study of very rapid, homogeneous gas reactions
" " " "	pps. 109 - 112	Discussion
" " " "	pps. 112 - 127	The physico-chemical problem of the engine ignition of gas mixtures. Self-ignition and knocking
" " " "	pps. 127 - 141	Measurement of the ignition velocity of flowing gas-air mixtures
" " " "	pps. 141 - 151	Discussion
F.D. 2873/46 It. 13	3996/S.J.4.	FKFS Report Letters Nos. 953/1, 2 and 3 22.5.41. - EXPERIMENTS WITH GM1
" " It. 18	3996/ S.J.9	The Preparation of Phosphorus compounds and their use in Lubricants
" " It. 24	3996/S.K.6.	Research work on the production of valuable lubricants from crude oil from home sources, carried out on behalf of the Ministry of Transport
" " It. 62	3996/1	Technical Specification for Fuel F2.
" " It. 63	3996/1a	Specification for Aviation Fuels B4 and C3.

Document Number	CIOS REFERENCE NUMBER	Title
F.D. 2873/46 It. 64 ✓	3996/2	Provisional specification for jet fuel J2 and running in fuel Einlauf J2
F.D. 2873/46 It. 65 ✓	3996/2a	Specification for Aero Diesel Fuel K1
F.D. 2873/46 It. 66 ✓	3996/3	Specification for viation fuel A3
" " " 67 ✓	3996/4	Freezing Properties of A.3 and B.4
" " " 68 ✓	3996/5	Carburettor Fuels
" " " 69 ✓	3996-6	Specification for carburettor and diesel fuels for delivery to the services (Summer 1944)
" " " 70 ✓	3996-7	Tech. delivery specifications for Aviation Fuels A3 and B4 and their constituents
" " " 73 ✓	3996-10	Tech. Instruction 7/44
" " " 74 ✓	3996-11	" " 6/44
" " " 75 ✓	3996-12	Tech. Specifications for Aviation Oils S3, its components, and V2
" " " 76	3996-13	Tech. Delivery Specifications for starting fuels for use in Otto Engines
" " " 77 ✓	3996-14	Tech. Delivery Specifications for Aero-Engine Fuels for Active Service Use
" " " 78 ✓	3996-15	Provisional Tech. Delivery Specifications for Army Gear and Engine Oil
F.D. 2874/46 It. 6 ✓	3996/41	Copy of 4dr Specification German Navy Lubricating Oils
F.D. " " " 10 ✓	3996/30/301 No.45	Process for the Manufacture of a Burner Fuel from Acid Tar.

END OF T.O.M. 2748

BEGIN T.O.M. 2749

Document Number	Cios Reference Number	Title
F.D. 2874/46 It. 34 ✓	3996/59 pps. 5-27 Pt 11 ✓	DVL Lubricant Conferance About the Ageing of Oil and its Change in Use.
"	pps.29-40 ✓	The Chemistry of the Ageing of Hydrocarbon Oils
"	pps.183-190 ✓	Tests on piston-ring sticking in the NSU Engine
"	pps.191-203 ✓	The Testing of Aero Engine Oils in the DKW Engine
"	pps.237-242 ✓	Application of the Test Results to practical conditions
"	pps.243-267 ✓	Discussion after the lectures by Philippovich Morghen, Gieszmann
F.D. 2874/46 It. 35 ✓	3996/70 pps.15-21 ✓	The fundamental principles of the process of lube.
"	pps.23-41 ✓	On the Orientation of Molecules in Liquids and their Mechanical PPties.
"	pps 43-57 ✓	On the Orientation of Molecules at Boundary Surfaces, especially on metallic boundary surfaces
"	pps 63-75 ✓	The Nature of Wear
"	pps 91-105 ✓	Heating Friction and Abrasion under Conditions of Boundary Lubrication and their relation to Oiliness by Reg. - Rat.
"	pps 107 - 111 ✓	Boundary friction of chemically defined substances by Dr. Eicke Reich Physical-Chemical Institute.
"	pps 149-158 ✓	Static Friction and Oiliness.
	pps 185-190 ✓	The Oil Test Apparatus of the Z.F.

Document Number	Cios Reference Number	Title
F.D. 2874/46 It. 35	3996/30.01-70 pps. 191-203 ✓	Test Methods and the Influence of Lubricating oils in false Brinelling of Ball and Roller Bearings
" " " " "	pps. 245-270 ✓	Investigation of Lubricants in the I.G. Cold Box.
" " " " "	pps. 271-286 ✓	The Behaviour of Lubricating Oils at Low Temperatures.
" " " " "	pps. 287-297 ✓	Test on the Low Temperature Behaviour of Lubricating Greases
" " " " "	pps. 299-311 ✓	Viscosity of Lubricating Oils and the Starting-up of Engines at Low Temperatures.
" " " " "	pps. 313-333 ✓	A Short Summary of Dissussions
" " " " "	pps. 334-352 ✓	Session on 12.12.41. Lectures: Buske, Bartel, Halder, Soden
F.D. 2875/46 It. 18 ✓	3996/147	Improvement of the ageing stability of synthetic Brightstock and aviation oils by co-polymerisation of distillates cracked in the vapour phase, with aromatics or aromatic-rich fractions.
F.D. 2876/46 It 33 ✓	UM 757	A process for producing fluids with physical characteristics independent of temperature over a wide range.
50 ✓	UM 518	
F.D. 2876/46 It. 53 ✓	F.B. 300	Oil tests co-operative programme commissioned by the DVL.
" " " It. 66 ✓	F.B. 804	Tests on a synthetic oil of the Ruhrchemie A.G. in the liquid cooled (Reissgekühlt) single-cylinder test engine
" " " It. 60 ✓	F.B. 912	Determination of the Thermal stability of various Aviation Oils.
" " " It. 62 ✓	F.B. 952	Physico-chemical investigations into the combustion process in the engine.
" " " It. 64 ✓	F.B. 1074	The Properties of Safety fuels
" " " It. 65 ✓	F.B. 1077	The Chemistry of Deposit formation in hydrocarbon oils.
" " " It. 67 ✓	F.B. 1106	The Low temperature behaviour of lubricating oils.
It 69 See next page		
" " " It. 71 ✓	F.B. 1244	The DVL blow-by method for testing lubricants.

On the constitution of lubricating oils and on change through oxidation

Documents Number	Cios Reference Number	Title
F.D. 2876/46 It. 73 ✓	F.B. 1292	An exact and rapid method for the determination of lead in fuels
" " " It. 75 ✓	F.B. 1331	On the behaviour of Greases Diesel fuels, Instrument oils and Brake fluids at low temperatures
" " " It. 79 ✓	F.B. 1476	Determination of the lead tetraethyl content of fuels by means of X-ray adsorption
" " " It. 82 ✓	F.B. 1610 pps. 20-29	Influence of varied valve overlaps on various fuels in the DB 601 engine.
" " " It. 83 ✓	F.B. 1657	The Influence of the valve overlap on the knock-limit of various fuels in the DB 601 Engine.
" " " It. 86 ✓	F.B. 1722	The Influence of various oils on the knock limit curve of aromatic fuels
" " " It. 88 ✓	F.B. 1859	Extension of the FKMS rapid method for determining the lead tetraethyl content of fuels.
" " " It. 89 ✓	F.B. 1869	Different Knock behaviour of fuels of different chemical structure in the Engines BMW 132 N and DB 601E
" " " It. 90 ✓	F.B. 1905	The Rating of Fuels on their tendency to vapour-lock.
" " " It. 69 ✓	F.B. 1150	Measuring Knocking by the DVL Pressure Acceleration Method.
" " " It. 50 ✓	U.M. 518	On the constitution and properties of lubricating oils and on the change through oxidation.
" " " It. 33 ✓	U.M. 757	A process for producing fluids with physical characteristics which are independent of temperature over a wide range.

Document Number	Cios Reference Number	Title
F.D. 2876/46 It. 97 ✓	NID 24-PG 25402	DVL Report on the conference on knock characteristics and storage of fuels (pp65-75) 16,17 June 1941.
" " " " "	"	pps. 83 - 84
" " " " "	"	pps. 85 - 96
" " " " "	"	pps. 111 - 112
" " " " "	"	from page 118 to end
F.D. 2877/46 It. 3 ✓	NID /PG/25409	Improvement of low temperature starting capacity.
" " " It. 9 ✓	2744-30/5.01 Doc. 4 pt.	Laboratory test method for the ageing of lubricants
" " " It. 12 ✓	2744-30/5.05 Doc. 12.	Specification for fuel gas.
" " " It. 14 ✓	2744-30/5.05 Doc. 23	Analytical methods. Comparative investigations at the B.V.
" " " It. 23 ✓	3441-30/5.01-76	Tar oil, and the use of tar oil and crude oil in gas turbines for the Luftwaffe
" " " It. 30 ✓	3445-30/5.01 -58	The Construction of an Apparatus for determinigg the critical temperature for vapour-lock of gasoline (abreisstempeeratur), in aero-engines.
It 31 ✓	3445/58	Grading of fuels with respect to vapor locks.
" " " It. 55 ✓	Miscellaneous	Process for production of polymerisation products of tetrahydrofurane.
" " " It. 53 ✓	"	Extract from "Report on more recent work of the "Institute" compiled by Dr. phil. A.v. Philippovich.

Documents translated not included in The Document List.

Cios Reference Number	Title
F.D. 4975/45 - Folder III ✓	On the Conference of the Ministry of Economic Expansion of the 8th and 9th July 1941
Folder XII ✓	Demand and supply of isobutyl oils 1944
" " - Folder XIII ✓	Building certificates for the expansion of the ester oil plants
" " - Folder XXII ✓	The plenipotentiary for special problems of chemical production
" " - Foldor XIV ✓	(Diagram) Extension of Ester Oil III to 21,400 tons per annum
" " - Folder XXVIII ✓	Synthetic Plant Auschwitz
" " - Folder XXXI ✓	Research and Development problems under investigation
" " - Folder XXXII ✓	The replacement of "Kogasin" by other basic materials for Sulfo-chlorination - report for the "Ware" experts' conference 28.3.44.
F.D. 5616/45 ✓	Synopsis of cold-resistant lubricants
G.D.C. Unit No. 10 Serial 10,105 ✓ German Academy of Aeronautical Research, 1939 Vol. 9 pps 133-168	The physic-chemical basis of combustion in engines.
G.D.C. 10/10,228 ✓	Atomic-physical changes in the sliding of metal surfaces
G.D. C. 10/10, 314 ✓	Physico- Molecular Processes in Lubrication
3979/105 ✓	Examination of Austrian Petroleum
3979/109 ✓	Laboratory Experiments for Obtaining Adipic Acid and Alkyl Adipic Acids.
Miscellaneous M.T.Z. Feb. 1943 pps. 41-46 ✓	Engine and Physcial Investigations into the Nature of Knock.
Miscellaneous ✓	German Organisation of Fuel Research and Development.
" ✓	C.I.O.S. Report No. 9 (Unclassified.).
" ✓	Description and working instructions for the Ruhrchemie vapour lock apparatus.

Cios Reference Number	Title
Miscellaneous ✓	F.I.A.T. 873- The Self-ignition reaction of hydrocarbons with brief induction times.
	~~United Strategic Air Forces in Europe- Office of Asst. Chief of Staff A-2. AVIATION LUBRICANT RESEARCH IN GERMANY DURING THE WAR.~~
Micro-film 135. At.11 ✓	On the Principle of Lubricating Oil - Mixed Polymeristaion.
" At.111 ✓	Mixed Polymerisation of SS Oil with Mineral Oil
" At. VI ✓	Description of the Lubricating Oil Plant Rheinpreussen
" At. VIII ✓	The Scientific principles of the synthesis of lubricants
" At. X ✓	Ester Oils
" At. XI ✓	Esters as Lubricants.

FULL TRANSLATIONS NOT DUPLICATED FOR DISTRIBUTION.

Document No.	CIOS Ref.No.	Title
FD 2866/46, Item 6	1893/A8	The determination of knock intensity.
" " Item 20	1893/A24	The electrical indication and recording of detonation waves.
FD 2867/46, Item 88	1893/B107	Ignition test on the BMW single tube combustion chamber.
FD 2868/46, Item 10	1893/D6	The photoelectric measurement of the pollution of lubricating oil.
		The exhaust thrust of aero-engines.
FD 2869/46, Item 30	1893/F13	Investigation of lab. methods for determination of lead content of fuels. ZWB.FB 1382.
" " " , Item 37	1893/F19	Diagrams for the determination of heat content, temperature after adiabatic expansion, and adiabatic heat drop, between 0° and 3000°C.
FD 2874/46, Item 35	3996/70 pp.185/191	The oil test machine of the Z.F.

LIST OF FULL TRANSLATIONS

Correction Slip.

P. 5 and 6	FD 2872/46, Items 49 to 99 inclusive, under CIOS reference number. Delete 3996, insert 3966.
P. 7	FD 2873/46, Item 18. Delete FD 2873/46, Item 18. insert FD 2877/46, Item 57.
P. 9	FD 2874/46, Item 35. Change "lube" to "lubrication".
P.10	FD 2876/46, Item 66. Change "Reissgekuhlt" to "Heiss-gekuhlt".

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Corrigenda.

P.69 FD 2873/46 Item 18. Delete 3966/SJ9.

P.97 FD 2877/46 Item 57. Add 3966/SJ9.

MINISTRY OF FUEL AND POWER

TECHNICAL MISSION TO G E R M A N Y

PERFORMANCE AND UTILIZATION GROUP.

LIST OF D O C U M E N T S

Dated 1st August 1947.