

~~C O N F I D E N T I A L~~

GERMAN PETROLEUM INDUSTRY
HAMBURG DISTRICT

REPORT No. 6

RHENANIA-OSSAG MINERALOLWERKE, HAMBURG
ENGINE-TEST LABORATORY

TISSAU - Nr. HITZACHER

Reported By

MR. W.H. THOMAS - Brit. Min. of Fuel & Power

on behalf of the

BRITISH MINISTRY OF FUEL & POWER

AND THE

U.S. TECHNICAL INDUSTRIAL INTELLIGENCE COMMITTEE

JUNE, 1945

G. I. O. S. Target No. 30

FUELS AND LUBRICANTS

COMBINED INTELLIGENCE OBJECTIVES SUB-COMMITTEE

G-2 Division, S.H.A.E.F. (Rear) APO. 413

RHENANIA-OSSAG. ENGINE-TEST LABORATORY.

TIESSAU - NEAR HITZACKER.

The laboratory is situated in the over-house of a disused lime-brick works and had been removed from the Harburg refinery of Rhenania-Ossag for safety from air-raids. (See Report No. 2.)

It is devoted entirely to the engine testing of fuels and lubricants and contains:

- (a) One B.M.W. single cylinder engine for ring-sticking tests.
- (b) One D.K.W. " " " " " " " "
- (c) One B.M.W. " " " " " testing aviation fuels.
- (d) One C.F.R. engine " general fuel testing.
- (e) One I.G. Prüfmotor " " " "

and (f) One Deutz single cylinder engine for testing diesel fuels together with a collection of miscellaneous laboratory apparatus (much of it still in wooden cases) for which there appeared to be practically no accommodation or benching.

The B.M.W. engine for ring sticking tests is operated at 90-120 r.p.m. with a cylinder temperature of 265° - 275°C. a single 15 litre charge of lubricant being used for each test. Its crankcase is sealed and the amount of gas blow-by is used as an indication of stuck rings. The piston is normally fitted with four rings and one scraper ring but for ring-sticking test purposes, the third ring is removed and four holes are drilled in the groove in order to provide a greater degree of blow-by.

The D.K.W., 2 stroke glycol-cooled engine operates on a fuel containing 10 per cent of the lubricant under test and was intended as the basis of a quick sorting test to reduce the time and labour involved in carrying out B.M.W. tests. Dr. Reichel who is in charge of the laboratory considers that agreement between the two engines is poor and owing to the design of the D.K.W. engine and the method of applying the lubricant, it is not feasible to carry out any examination of the used oil.

During discussions, it was observed that normally refined mineral lubricating oil gave a result of 8 hours for the B.M.W. ring-sticking test, but when the mineral oil was blended 50/50 with Harburg synthetic oil, this figure was increased to 10 hours. The Politz synthetic oil gave a somewhat better result when blended 50/50 with refined mineral lubricant and it was thought that this might be due to its different method of preparation.

List of Documents removed

<u>No.</u>	<u>Date</u>	<u>Title</u>
88/43	25.6.43	Rotring D with special Voltol
91/43	10.6.43	Collected Tests up to 90/43
96/43	18.9.43	Winter Oil of the Wehrmacht
98/43	4.10.43	SS 1006
101/43	21.10.43	Rotring D + 0.2 % o-T inhibitor
120/43	28.3.44	Synthetic oils, charges 16-23
128/44	13.7.44	SS 1060
131/44	7.10.44	Synthetic oils; influence of contact after refining.

Personnel Interrogated: Dr. Reichel.

Date of Interrogation: May 18th, 1945.

Investigators:

Maj. W.H. Thomas.	(Brit.)
Mr. (SIM) L. Evans.	(U.S.)
Mr. (SIM) P.K. Kuhne.	(U.S.)
Maj. C.H. Barton.	(Brit.)
Lt. E.J. Bender.	(U.S. Navy)

(Signed) W.H. THOMAS.