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AIR HISTORICAL BRANCH

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ANGLO - AMERICAN AIR ATTACKS  
ON GERMAN INDUSTRIAL TARGETS  
IN 1943 - 44

Extracted from Luftwaffe Intelligence Report  
dated 25th April, 1944

TRANSLATED BY

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## THE ANGLO-AMERICAN AIR WAR AGAINST GERMANY

### PART I

#### THE COURSE OF AIR ATTACKS ON THE GERMAN REICH IN 1943 AND IN THE FIRST QUARTER OF 1944

A survey of monthly flights over Reich territory during the period covered by this report is given in the tables in Appendices 1 - 3.

The total number has risen from some 1,000 at the beginning of 1943 to 5,000 or 6,000 in the middle, and over 6,000 towards the end of the year. In the first quarter of 1944, it has risen to 7,000 and finally (in March) to 10,000.

While night operations (by British formations) reached their maximum with about 5,000 in the middle of 1943, day operations (by U.S. formations) have constantly increased since that time, reaching nearly 7,000 in March, 1944. The proportion of day operations has risen as follows:

First half of 1943	12%
Second half of 1943	31%
January/March, 1944	58%
March, 1944	68%

In Appendix 2 is a survey of targets attacked. These are subdivided into attacks on industrial targets and on towns, as well as other attacks.

In Appendix 3 a further subdivision of industrial attacks into six main groups is given.

A certain generalisation in the listing of targets was unavoidable, since in many cases the targets attacked overlap each other. In a doubtful case, the plan of attack has been taken as a basis, as far as this could be seen from prisoners' statements or from reports published by the enemy.

By the end of 1943, (see Appendix 2) attacks directed expressly against cities outweigh those which are made purely on industry; during this period, in the middle of 1943, "annihilation attacks" (Krefeld, Elberfeld-Barmen, Hamburg) reached their height. With the increase in daylight attacks in 1944 however, the proportion of industrial attacks rises steeply. Even in attacks on cities, the proportion of mixed attacks (terror and industry raids) shows a considerable increase.

### PART II

#### ASSESSMENT OF THE AIR WAR AGAINST GERMANY IN 1943 AND THE FIRST QUARTER OF 1944

##### A. Principles of the air war against Germany

1. The enemy's planning of the air war against Germany follows no rigid system, but depends on a number of variable conditions; according to these conditions, they are often forced to alter their plans.

Thus are explained apparent contradictions in the fixing of targets and the lack of a consistent plan in the attacks on German war economy.

2. The war in the air is only a part of the over-all war effort against Germany, and thus is firstly dependent on the development of the over-all situation in the military, political and economic fields.

3. It must be assumed that the enemy has complete knowledge of Germany's economic structure and of those points where the weight of an attack can be most felt.

Next to the correct choice of target, the enemy lays great stress on the choice of the correct time for the attack. Frequently, the effect of the heaviest economic damage is overcome after a short time, and no cumulative effect appears unless the times of attack are planned with that strategic purpose in mind. (The attacks on London, Coventry, etc. at the end of 1941 and the beginning of 1942 are cited by the British as examples of this.).

#### Second half of 1943

The attack on heavy industry in the Rhine and Ruhr districts (reaching its climax in April/June) is disappointing in its effect on the production of steel and coal. Here there is a switch-over of attacks to half finished and finished products.

#### First quarter of 1943 ? 1944

Two facts are pointers to invasion measures:

- (a) The striking fall in British night attacks as against those in summer 1943. This can be connected with a desire to conserve the strength of British formations.
- (b) The extraordinary increase of attacks on industrial targets.

Among the industrial targets, the centres of attraction are the aircraft industry and key industries (ball-bearing factories in Schweinfurt and Erkner, the electrical industry in Berlin, Nuremberg, and Mannheim). Increased attention is also paid to large scale chemical industries and to transport targets; but those vital chemical and transport targets which are of decisive importance at the moment are untouched. (With the exception of the works at Ludwigshafen/Oppau which have suffered only medium damage.)

The splitting-up of production among a number of small factories meant that, in spite of great damage to the city areas nearby, steel production received no decisive blow.

The maximum temporary loss in raw steel in the Ruhr area was about 20%; the average long-term loss for the Reich was less than 10%. The loss in production of coal and coke was even smaller. These losses in production were not so much due to damage to the actual works as to secondary causes, such as air-raid warnings, traffic obstructions, destruction of workers' quarters, etc.

The steel basis of the armament industry is being attacked at the sources of raw materials, especially by the systematic cutting-off of sources of supply for the refiners:

- Manganese: - Recapture of Nikopol (90% of supplies) by the Russians.
- Nickel: - Pressure on Finland (over 70% of supplies); threat to Norway.
- Chrome: - Pressure on Turkey (40%); threat to the Balkans (50-60%).
- Molybdenum: - Pressure on Finland; successful air-raids on mines in Norway (30%).
- Wolfram: - Pressure on Portugal and Spain (75%).

Pressure has also been brought to bear on Sweden to give up deliveries of iron ore to Germany; 20-25% of German iron production has been made from Swedish ore. Swedish deliveries in 1944 were out by 30% from those of 1943.

Chemical Industry: The main attack is directed against the production of nitrogen, methanol, synthetic rubber and fuel.

B. Basis of the enemy air strategy

1. The aim of British air strategy is to crush the material, physical and moral powers of resistance of the German people, and thus to take the first step towards a decisive military action in the war.

The British, from the point of view of war economy, are mainly interested in:

- (a) Gaining and keeping air superiority over German territory by attacking the Luftwaffe and the air armament industry,
- (b) Keeping down the U-boats by attacking U-boat production,
- (c) Attacking tank production to relieve the front line forces, and to protect the invasion.

Targets chosen on a "short-term" basis are:

Chemical works producing aircraft fuel: Leuna, Pölitz, Gelsenberg, Scholven;

Nitrogen, methanol, synthetic rubber: Leuna (see above), Ludwigshafen/Oppau, Holten, Rauxel, Scholven (see above), Heydebreck, Schkopau, Hüls.

VITAL FACTORIES WITHIN THE CHEMICAL INDUSTRY

(Most important of these underlined in red)

		Aircraft fuel	Nitrogen	Methanol	Synthetic rubber	
Western Germany	Oppau	X	X 30%	X 15%	X	} 20%
	Ludwigshafen	X				
Ruhr	Holten	.	X	.	.	} 18%
	Scholven	X 10%	X	.	.	
	Rauxel	.	X	.	.	
	Gelsenberg	X 17%	.	.	.	
	Hüls	.	.	.	X 30%	
Central Germany	Leuna	X 10%	X 30%	X 60%	.	} 50%
	Schkopau	.	.	.	X 50%	
North Germany	Pölitz	X 28%	.	.	.	
Upper Silesia	Heydebreck	X 2%	.	X 25%	.	
	Auschwitz (Starting production)	(X)	.	(X)	(X)	
Sudetenland	Brüx (Maltheuren)	X 13%	.	.	.	
Share of total production		83%	78%	100%	100%	

Monthly compilation of enemy flights over Reich territory  
from 1st January, 1943 until 31st March, 1944.

(Including nuisance raids over Rhine/Ruhr. Excluding mine-laying  
and nuisance raids over the rest of Reich territory)

Subdivided into day and night attacks

Month	Total number of flights.	By day	By night
1943			
January	900	50	850
February	1,200	250	950
March	2,700	250	2,450
April	3,000	200	2,800
May	4,800	600	4,200
June	6,000	900	5,100
July	5,800	1,100	4,700
August	4,500	700	3,800
September	4,400	400	4,000
October	6,000	2,200	3,800
November	6,300	2,700	3,600
December	5,300	3,000	2,300
Total for 1943	50,900	12,350	38,550
1944			
January	7,000	2,500	4,500
February	8,000	4,500	3,500
March	11,500	6,600	4,900
Total for first quarter of 1944	26,500	13,600	12,900
Total for 1943 + first quarter of 1944	77,400	25,950	51,450

Monthly compilation of enemy flights over Reich territory  
from 1st January, 1943 until 31st March, 1944.

(Including nuisance raids over Rhine/Ruhr. Excluding mine-laying and nuisance raids over the rest of Reich territory)

Subdivided into attacks on industrial and transport targets, terror raids, nuisance raids.

Month	Total of flights	Industry attacks. (Area and pinpoint targets).	Large scale attacks on towns			Raids split up by weather, area raids and nuisance raids.	
			Total	Terror attacks on industry and transport.	Annihilation attacks.	Total	Over Rhine/Ruhr.
1943							
January	900	50	320	320	-	530	530
February	1,200	400	170	170	-	630	300
March	2,700	250	2,000	1,500	500	450	400
April	3,000	600	1,000	800	200	1,400	500
May	4,800	600	3,400	1,600	1,800	800	600
June	6,000	900	4,300	1,200	3,100	800	500
July	5,800	800	4,700	400	4,300	300	300
August	4,500	900	3,200	1,600	1,600	400	400
September	4,400	100	3,000	1,700	1,300	1,300	600
October	6,000	1,500	3,900	2,700	1,200	600	500
November	6,300	700	3,600	1,500	2,100	2,000	700
December	5,300	1,300	3,200	2,300	900	800	-
Total for 1943	50,900	8,100	32,790	15,790	17,000	10,010	5,330
1944							
January	7,000	1,700	4,200	2,200	2,000	1,100	600
February	8,000	4,200	2,700	1,400	1,300	1,100	100
March	11,500	5,300	4,500	2,700	1,800	1,700	300
Total for first quarter of 1944	26,500	11,200	11,400	6,300	5,100	3,900	1,000
Total for 1943 + first quarter of 1944	77,400	19,300	44,190	22,090	22,100	13,910	6,330

Monthly compilation of flights over Reich territory  
from 1st January, 1943 until 31st March, 1944:

(Including nuisance raids over Rhine/Ruhr. Excluding mine-laying, and nuisance raids over the rest of Reich territory.)

Attacks on industrial targets subdivided into six main groups.

Month	Total	Attacks on targets					
		Transport installations.	Key industries ball-bearing, electrical industry.	U-boat wharves, etc.	Air armaments	Chemical industry	Heavy industry coal, steel, production.
1943							
January	50			50			
February	400	70		270		20	40
March	250	40		210			
April	600	20		50	200		330
May	600		30	370			200
June	900		50	400		200	250
July	800			200	500	50	50
August	900		300		200		400
September	100	100					
October	1,500	200	380	250	600	20	50
November	700		220	300	100	60	20
December	1,300	600	175	300	75	100	50
Total for 1943	8,100	1,030	1,155	2,400	1,675	450	1,390
1944							
January	1,700		50	400	750	300	200
February	4,200	150	800	550	2,000	150	550
March	5,300	500	1,400	100	1,000	800	1,500
Total for first quarter 1944	11,200	650	2,250	1,050	3,750	1,250	2,250
Total for 1943 + first quarter of 1944	19,300	1,680	3,405	3,450	5,425	1,700	3,640

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