

Home Guard personnel (Luftwaffehelfer), 15 and 16 year old schoolboys, were called away from their classes or out of their beds at night, to man the flak guns. and youths from the labor service (Reichs Arbeit Dienst), which all young men were taken into after leaving high school were also subject to flak duty.



88 mm flak gun in Linz, Austria in 1944 showing two victory rings painted around the outer barrel about where it screws into the larger barrel.

ing problems that were not completely solved, one being that the spent cartridges could not be cleared quickly from the platform. Further refinements were abandoned in favor of weapons of larger caliber.

The gun was capable of firing 25 rounds per minute. Normal rates of fire for the 88mm gun was reduced to 15-20 rounds per minute. The long barrel tended to vibrate under high rates of fire reducing the accuracy of the weapon so that the gun would have to lay silent for short periods to allow the barrel to cool.

There were two methods of fire control in the AA role; 1) Radar, 2) Predictor through a data transmission system. The gun crew consisted of 11 artillerymen, a) a gun layer, b) trainer, c) breech-worker, d) fuse setter, e) five ammunition workers, f) detachment commander, and g) the tractor driver. Each round weighed about 22 pounds. Muzzle velocity was 2690 feet per second.

Much of the fame of the 88mm gun rests not on its performance as a flak gun but as an anti-tank weapon. During its baptism of fire in Spain it was called upon for use as a defense weapon when tanks broke through front line positions and were threatening the anti-aircraft batteries. In the battle for France and in later campaigns it became common practice to attach motorized Luftwaffe flak companies to army field units when German air superiority was uncontested. Again in North Africa, when a German commander was faced with an attack of heavy British tanks, at Halfaya, Libya during the battle of Solum in June 1941, he used his 88s very effectively destroying 123 tanks of the total force of 238 tanks. Badly mauled the British tanks withdrew. The Germans claimed one British tank for every twenty rounds. When the Germans first confronted the new Russian T-34 and KV tanks their standard 5 cm anti-tank guns had little or no effect, so once again the trusty 88 was called upon to stop the Russian heavies. There is an account during the Russian fighting where one 88 gun

destroyed six T-34 tanks at a range of two miles. The 88 had earned its reputation.

Because the gun could be mounted on a mobile carriage, it was often towed from place to place creating problems for the Allied intelligence officer whose duties were to estimate the number of guns defending targets that were likely to be attacked by his bomb group. Bomber crews often cursed the pre-mission briefing on the expected defenses of their target because the information was often old and inaccurate. Generally the number of guns were under-estimated or not placed accurately. Bomber crews often had to interpolate the intelligence estimates using a sixth sense that developed over the experience of many missions. As the war progressed the formations began to loosen up as enemy fighter activity lessened, but mainly to allow the bombers more elbow room to take evasive action. When enemy fighters would appear suddenly the loose formations often suffered greatly as the defensive firepower was spread over a large area making it less effective.

The defense of the Reich was given to the Luftwaffe, the German air force. It employed in excess of a million men and auxiliaries to defend the country. The flak arm had two responsibilities, one was to protect military targets, cities, factories, and rail lines, and the other was to offer support to ground objectives of the field armies. As casualties in the field armies increased with the advancement of the war, able bodied men were drawn from the flak defenses to serve in the army. They were replaced by Home Guard personnel (Luftwaffehelfer), 15 and 16 year old schoolboys, who were called away from their classes or out of their beds at night, youths from the labor service (Reichs Arbeit Dienst), which all young men were taken into after leaving high school. Excepted were boys who went directly into the armed forces, female auxiliaries (Kampfhelferinnen) used in non combatant roles at the gun sites, Russian prisoners who volunteered for the labor battalions, and Italians and Hungarians who acquiesced to work in the flak arm. The flak division responsible for defense of the synthetic oil refinery at Leuna in southern Germany employed a total of about 62,000. Of this total the greater portion were of the auxiliaries shown above.

As this report is confined mostly to the 88, discussion of the larger caliber flak guns such as the 10.5 cm cannon and 12.8 cm cannon will be brief. They were used to obtain greater hitting power. The larger weapons were often mounted on top of the huge flak towers that were springing up in the larger cities during the later half of the war. These larger caliber guns shot mostly time fused rounds, eliminating the manually set fusing where a ring had to be rotated at the base of the projectile.

One method used by the Luftwaffe to increase the hitting power