Flamethrower



Flamethrower – Paper Example

The man-portable flamethrower consists of two elements: a backpack and the gun. The backpack element usually consists of two or three cylinders. In a two-cylinder system, one cylinder holds compressed, inert propellant gas (usually nitrogen), and the other holds flammable liquid—typically petrol with some form of fuel thickener added to it. A three-cylinder system often has two outer cylinders of flammable liquid and a central cylinder of propellant gas to maintain the balance of the soldier carrying it. The gas propels the liquid fuel out of the cylinder through a flexible pipe and then into the gun element of the flamethrower system.

The gun consists of a small reservoir, a spring-loaded valve, and an ignition system; depressing a trigger opens the valve, allowing pressurized flammable liquid to flow and pass over the igniter and out of the gun nozzle. The igniter can be one of several ignition systems: A simple type is an electrically-heated wire coil; another used a small pilot flame, fueled with pressurized gas from the system. The flamethrower is a potent weapon with great psychological impact upon unprepared soldiers, inflicting a particularly horrific death.

This has led to some calls for the weapon to be banned. It is primarily used against battlefield fortifications, bunkers, and other protected emplacements. A flamethrower projects a stream of flammable liquid, rather than flame, which allows bouncing the stream off walls and ceilings to project the fire into blind and unseen spaces, such as inside bunkers or pillboxes. Typically, popular visual media depict the flamethrower as shortranged and only effective for a few meters (due to the common use of propane gas as the fuel in flamethrowers in movies, for the safety of the actors).

Contemporary flamethrowers can incinerate a target some 50-80 meters (165-270 feet) from the gunner; moreover, an unignited stream of flammable liquid can be fired and afterwards ignited, possibly by a lamp or other flame inside the bunker. Flamethrowers pose many risks to the operator. The first disadvantage was the weapon's weight, which impairs the soldier's mobility. The weapon is limited to only a few seconds of burn time since it uses fuel very quickly, requiring the operator to be precise and conservative.

The weapon was very visible on the battlefield which caused operators to become immediately singled out as prominent targets, especially for snipers. Flamethrower operators were rarely taken prisoner, especially when their target survived an attack by the weapon; captured flamethrower users were often summarily executed[citation needed]. Finally, the flamethrower's effective range was short in comparison with that of other battlefield weapons of similar size. To be effective, flamethrower soldiers must approach their target, risking exposure to enemy fire.

Vehicular flamethrowers also have this problem; they may have considerably greater range than a man-portable flamethrower, but their range is still short compared with that of other infantry weapons. Army War Show November 27, 1942 The risk of a flamethrower operator being caught in the explosion of his weapon due to enemy hits on the tanks is exaggerated in Hollywood films. [1] The U. S. Army used flamethrower tanks during the campaign on Luzon. For example, the 13th Armored Group Flamethrower Detachment

(consisting of three flamethrower tanks) supported the 38th Division attack on Woodpecker Ridge east of Manila.

These tanks reduced numerous Japanese cave positions unassailable by the infantry. They were also used to drive Japanese riflemen out into the open, exposing them to fire from conventional weapons. The Flamethrower Detachment was attached to the 38th Division from 21 May through 20 June 1945. "Source: 38th Division Historical Report on the M-7 Operation. [2] " It should be noted that flame thrower operators did not usually face a fiery death from the slightest spark or even from having their tank hit by a normal bullet as often depicted in modern war films.

The Gas Container [i. . the pressurizer] is filled with a non-flammable gas that is under high pressure. If this tank were ruptured, it might knock the operator forward as it was expended in the same way a pressurized aerosol can bursts outward when punctured. The fuel mixture in the Fuel Containers is difficult to light which is why magnesium filled igniters are required when the weapon is fired. Fire a bullet into a metal can filled with diesel or napalm and it will merely leak out the hole unless the round was an incendiary type that could possibly ignite the mixture inside.

This also applies to the flame thrower Fuel Container. [3]" The best way to minimize the disadvantages of flame weapons was to mount them on armoured vehicles. The Commonwealth and the United States were the most prolific users of vehicle mounted flame weapons; the British and Canadians fielded the "Wasp" (a Universal Carrier fitted with a flamethrower) at infantry battalion level, beginning in mid 1944, and eventually incorporating them into infantry battalions.

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Early tank-mounted flamethrower vehicles included the 'Badger' (a converted Ram tank) and the 'Oke', used first at Dieppe; the most famous flame tank was the Churchill Crocodile. [1] Operation The M2A1-7 United States Army flamethrower with its parts labelled A propane-operated flamethrower is a relatively straightforward device. The gas is expelled through the gun assembly by its own pressure and is ignited at the exit of the barrel through piezo ignition. Liquid-operated flamethrowers use a smaller propane tank to expel the liquid.

For safety reasons, the propane tank is behind the combustible liquid tanks in order to prevent being hit by a bullet. The propane is fed to two tubes. The first opens in the napalm tanks, providing the pressure necessary for expelling the liquid. [4] The other tube leads to an ignition chamber behind the exit of the gun assembly, where it is mixed with air and ignited through piezo ignition. This pre-ignition propane line is the source of the flame seen in front of the gun assembly in movies and documentaries. As the napalm passes through the flame, it is ignited and propelled towards the target.