

Information Data Sheet

Category Pipe Mines

Description Often crudely made, pipe mines were pipes approximately 100mm in diameter and up to 55m long bored roughly horizontal beneath critical infrastructure such as airfield runways in World War Two (WWII). Mines were also installed at angles between ten and thirty degrees into river banks and railway embankments in places where invasion forces may land.

The pipes were filled with explosives and usually a sensitive fuzing mechanism. With Nitroglycerine or Polar Blasting Gelignite (PBG) being the primary component, over time, these devices can become increasingly unstable.

Pipe mines were not usually installed individually. The preferred method was to overlap them, usually in a grid pattern at intervals, at different depths of anything up to 5m below ground level (bgl), or to insert several parallel, closely spaced tubes.

Towards the end of 1941, if deterioration of the original explosives was discovered, they were removed by a specially designed pronged spear or corkscrew rod and a water flush technique and then burnt. In most cases the pipe mines were recharged with a new explosive mix.

After WWII, most remaining Canadian pipe mines were removed. Due to the method and speed of placement of many of them during 1940-41, detailed plans and maps were sometimes not available and a small number were missed.



Hazard The investigation of pipe mines is undertaken with extreme caution due to the increased probability of an accidental detonation as a result of the instability of their Nitroglycerine content.

The process typically involves identifying the extent of the pipe mines, where possible using non-intrusive geophysical techniques.

Significant blast protection is placed over the suspected pipe mine location on discovery. Careful excavation by hand is used to expose one end of the pipe mine allowing a donor charge to be placed on the pipe. The blast protection then permits a safe detonation of the pipe mine in situ.