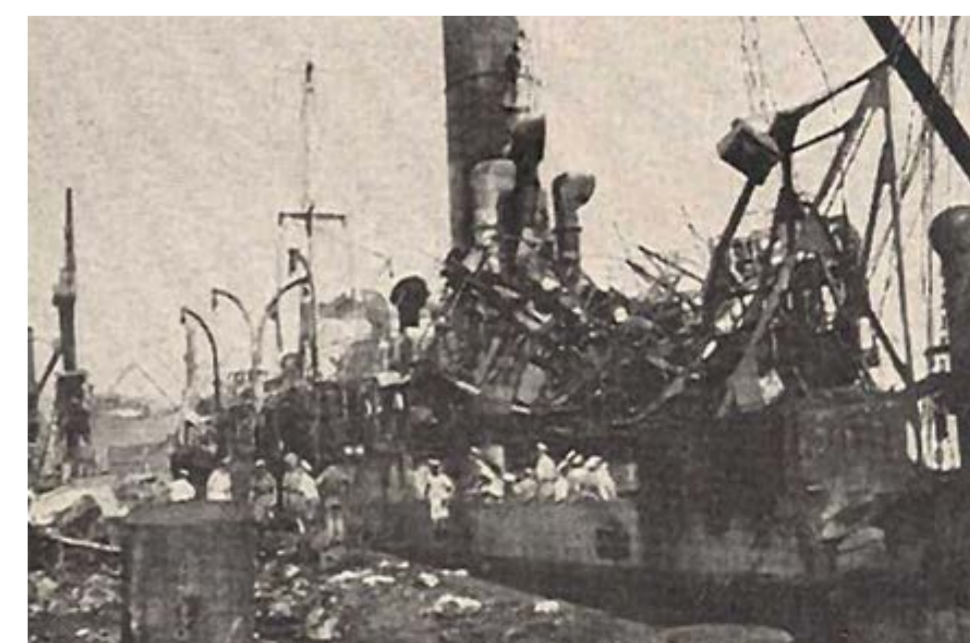
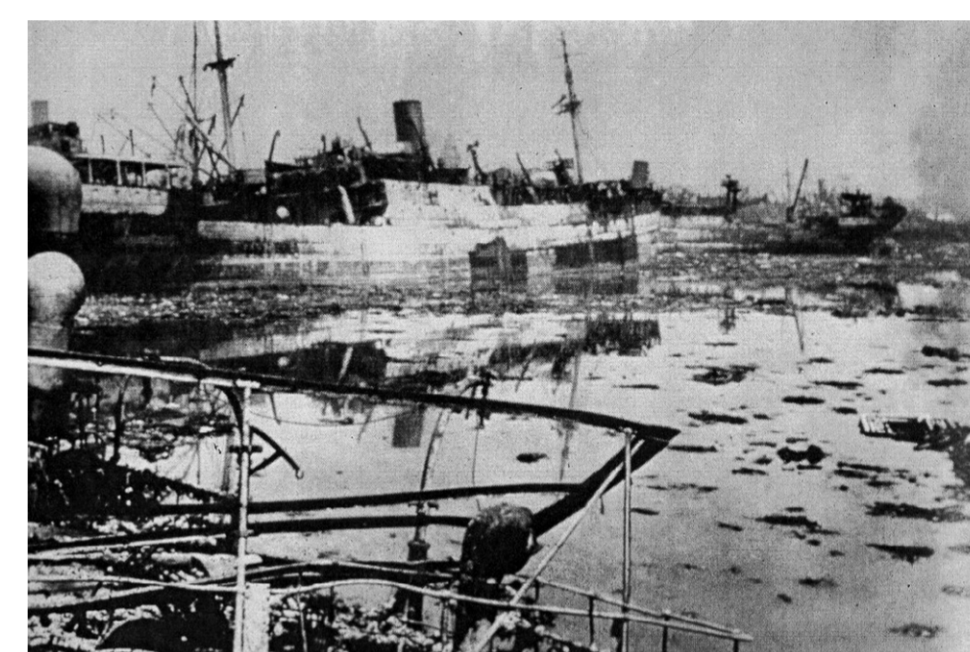
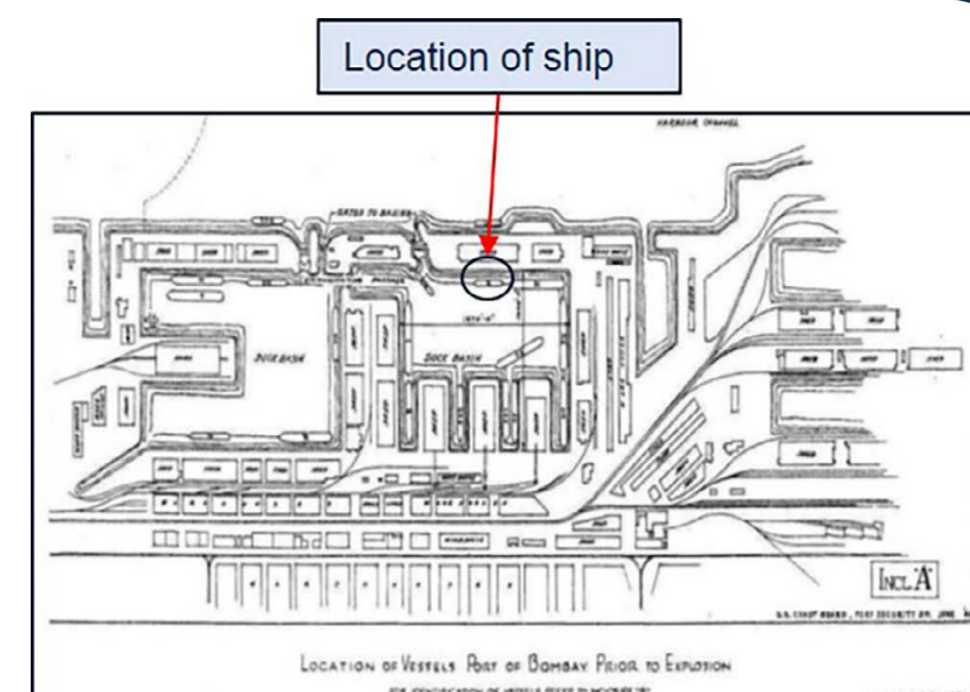


# Bombay (currently Mumbai), India – 14 Apr 1944



The accident took place in the commercial port of Bombay which was used at the time to stage an attack on Japan during WWII. It illustrates the impact that a large munitions accident in a port can have on a congested waterfront and its surroundings, as well as the impact on the mission.

Prior to 1940, dry docks, railways, pier sheds, temporary warehouses, long-term storage warehouses, cargo handling and other waterfront operations had already existed. Until then, no explosives had been allowed in the port area, but rules were relaxed to support the war effort. 21 ships were berthed in an area measuring about 500 by 800 m, one of which was the SS Fort Stikine, a cargo merchant ship with military supplies including ammunition and high explosives. The ship carried over a million kilograms NEQ of explosives in two main cargo holds. Within 1.5 to 2.5 km of the port docks, there were considerable concentrations of civilians.

Fire broke out, presumably by the ignition of moist cotton, which led to the initial detonation of about 363,000 kg TNT, followed by a second detonation 30 minutes later of about 544,000 kg TNT. The initial blast broke windows out to 2.5 km. Debris, missiles, and burning objects were launched; large vessel debris was thrown over 304 m. A 20 ton aft gun platform and a gun from an adjacent vessel were thrown 274 m.

It was estimated that in the first detonation, out of 150 firefighters, 67 were killed and 60 injured. Additional firefighters were killed and injured in the second detonation; they had gone in to fight the fires caused by the first event. After the second detonation and the intense fire that burned for over 7 days, there were an estimated 1,000 to 1,500 deaths and 4,000 injuries. Of 21 vessels, 11 vessels were considered a total loss, 5 others sustained major damage and 4 others had repairable structural damage. The waterfront was destroyed: 50 pier sheds and warehouses were completely demolished or gutted by fire, including ammunition and supply warehouses, as well as service infrastructure such as electric power, water, and fuel supply lines, some 24 cranes, and extensive damage to the tenement and business district adjacent to the port docks. Also, there was UXO strewn about.

A number of contributing factors have been mentioned in relation to the stowage of cargo in the vessel, use of a discharge berth in a congested area, lack of supervising military personnel, screening of longshoremen, accessibility of vessels to unauthorized persons, discharge of general and explosives cargo simultaneously, lack of fire guards, poor readiness of emergency fire extinguishing equipment, lack of trained firefighting personnel, adequacy of reserve firefighting equipment, adequacy of water supply, exposure of cargo holds to sparks from other vessels, lack of a casualty combat plan, and finally, storage of dangerous cargo in adjacent warehouses. Many of these factors are still concerns today.

**1,000-1,500 Fatalities**

**4,000 Injuries**

**US\$1-1.5 Billion Damages (1944)**