

Charles L. Keller, Director
(202) 639-2133



ASSOCIATION
OF AMERICAN
RAILROADS

Bureau of Explosives



17-1F

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**BUREAU OF EXPLOSIVES IMPACT APPARATUS
METHOD OF TESTING LIQUIDS**

The anvil is inserted in the receptacle in the anvil housing. A new cup is dropped into the cup-positioning block and one drop of the sample liquid, about 0.01 gram, is dropped into the cup from a pipette. The cup is then revolved until an even film forms on the base. The top striker and the main striker are inserted as far as possible into the upper housing. The upper housing is then placed over the cup-positioning block. The brass cup is picked up on the end of the main striker. When the two housings are screwed together, the brass cup automatically rests firmly on the anvil.

An eight-pound drop weight is dropped from predetermined heights until consistent failure results using the new sample portion and cup each time. An explosion is evidenced by flame or flame and noise, but in either event the brass cup will be belled out or bulged.

After making the drop, the drop weight is raised, the test assembly removed, and appropriate solvent is poured into the top end. The two housings are then separated, the striker removed, and the brass cup removed from the striker end.

All solvent is removed carefully and thoroughly before preparations are started for next drop and the apparatus cooled and cleaned. The test is then repeated in the same manner, but with a filter paper disc in the base of the cup under the composition being tested.

**BUREAU OF EXPLOSIVES IMPACT APPARATUS
METHOD OF TESTING SOLIDS**

The die is placed in the anvil assembly and a small amount (about 0.01 gram)* to make a thin film is placed into the die assembly. The steel striker pellet (plug) is inserted carefully and then the striker (plunger). The assembly is then placed in the apparatus and the drop weight allowed to rest on the striker top to effect even distribution of the explosive.

The eight-pound drop weight is then dropped on the striker

from predetermined heights until consistent failure results i.e., explosion etc., using a new sample portion each time.

The die assembly is removed carefully and then the striker is removed. A few drops of appropriate solvent are poured into the die assembly before it is disassembled.

All parts are cleaned and dried carefully before each test.

*NOTE: It is suggested that a tiny spoon be devised to measure the proper amount of test sample, since this is much more convenient and safer than other methods of measuring the sample.

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