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JAPANESE AMMUNITION

C.I.AMN. TECHNICAL REPORT

No. 41

“B CHERRY TREE” DYNAMITE, Mk. 3.

JAPANESE AMMUNITIONC. I. AMM. TECHNICAL REPORTSREPORT NO.41JUNE 1945JAPANESE "B CHERRY TREE" DYNAMITE Mk.3G E N E R A L

A package of Japanese nitroglycerine explosive was recently received from General Headquarters, India, Military Intelligence Directorate, G.S.I.(t) for technical examination. According to Japanese characters on the package it is known to the Japanese as "B Cherry Tree" Dynamite Mk.3. Its general appearance and feel resemble British and American service types of gelignites and the Chemical Analysis below confirms that its composition is somewhat similar to what we would term as a gelignite. Its composition was approximately N.G. and D.N.G. 50%, Potassium Nitrate 40%, N.C. 2% and wood meal and starch 8%, see detailed Chemical Analysis below.

2. According to information available, Japanese explosives of this nature are generally marked by brands representing trees or flowers and the marking on this explosive confirms this information. The marking on the paper wrapping of the cartridge is a chrysanthemum surrounded by Japanese characters for "Cherry Tree B Dynamite". This is shown clearly in the Plate attached.

3. Information available indicates that the service life of all types of gelignites is estimated at two years and storage after this period is forbidden. This presumably applies to normal conditions and it is very probable that this life will be extended according to stocks available and the supply position. The date of manufacture is not stencilled on the cardboard container, nor on the cartridge but on the packing case holding 200 cartridges (approx. 22.5-Kg. or 50-lb.). Once bulk is broken, therefore, it is not possible to determine the original date of manufacture.

4. The method of packing is fully described in the translation given under para. 5 below. Each cartridge is rolled to size and shape very similar to our method of packing gelignite etc. and weighs 4-oz. The external dimensions of the cartridge are approx. 3 3/4-in. long x 1 1/4-in. in diameter. The explosive being, to some extent, plastic, the shape of the cartridge depends on the packing and in this case the tendency is to form an oblong cartridge.

5. The following details of packing of these explosives including a translation of the labels were supplied by General Headquarters, India, Military Intelligence Directorate, G.S.I.(t):-

"The gelignite is contained in box (screwed down lid) 10.9-in. x 28.5-in. x 8-in. The box is marked "Cherry Tree Mk. B (OTSU)", "DYNAMITE 22.5-Kg." and "TWAHANA Depot" on lid and "Fresh B Cherry, Mk.3, 29-mm. 113-gm. 200 sticks" "Manf. 29 March 1944" on ends.

"Inside are 10 brown waxed paper wrapped cartons, with old "Chrysanthemum Ammonium Nitrate Dynamite" labels reversed and pasted on at the ends of the waxed paper. These labels are of no importance their use being for sealing.

"On top of the carton is a white label, translation of which is as follows below a cherry blossom:-

Fresh "B" Cherry Tree Dynamite Mk. 3	
Diam. of explosive	Approx. 29-mm.
Wt. of one stick	Approx. 113-gm.
Contents	20 sticks.



IWAHANA Manf. Depot

(Mark of the Tokyo Govt. Explosive Factory)

"Inside each carton are 4 wrapped packets each containing 5 sticks. These sticks (white paper wrapper) are marked in purple ink "FRESH" and also the Cherry Blossom surrounded by the following "Cherry Tree B, Dynamite Depot."

"According to document (dated July 1937) this is a gelignite composed of Nitro-glycerine and Nitro-cellulose with a 30% to 50% content of Potassium Nitrate and sawdust."

6. The word 'stick' used above is sometimes used instead of the word 'cartridge' to describe a small wrapped charge of explosive such as gelignite, dynamite etc.

Actually the cartridges examined were wrapped in unwaxed brown paper.

CHEMICAL ANALYSIS

(Chief Inspector of Military Explosives, Kirkee)

7. Appearance

Similar to N.S. Gelignite. No exudation, non-hygroscopic, good plasticity and not elastic. Packed in ordinary unwaxed brown paper, which is easily wetted with water.

Composition

Ether soluble - consists of N.G. and probably D.N.G.	.. 50.0%
Water soluble - consists mainly of Potassium Nitrate	.. 40.0%
Acetone soluble - consists of N.C.	.. 2.0%
Residue (wood meal and starch) - stabilisers and plasticisers absent	.. 8.0%

A P P R E C I A T I O N

(Economic, development and manufacture aspects)

8. A 4-oz. cartridge of this explosive was detonated for comparison with a 4-oz. cartridge of N.S. 50%, N.G., Gelignite (Lot A94 of 2/42). Initiation in both cases was by electric detonator (No.33) against a 1/4 M.S. plate. There was no significant difference in effect between the two explosives.

9. This Report is issued in close collaboration with the Chief Inspector of Military Explosives at Kirkee.

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LABEL (FREE TRANSLATION) : —

WAXED BROWN PAPER WRAPPED
ROUND CARDBOARD CONTAINER WITH
WHITE PAPER LABELS PASTED AT
BOTH ENDS.

FIVE CARTRIDGES WRAPPED IN
WAXED BROWN PAPER PACKET
 $1\frac{1}{4} \times 4\frac{1}{4} \times 5\frac{1}{2}$ "
WT. 1 LB. 4 OZS. (APPROX.)

FRESH B CHERRY TREE DYNAMITE	
MARK	3
DIAMETER OF EXPLOSIVE	APPROX. 29MM.
WT. OF ONE STICK	APPROX. 113 GMS.
CONTENTS	20 STICKS
IWAHANA MANUFACTURING DEPOT. TOKYO GOVT. EXPL. FACTORY (MONOGRAM)	

COMPLETE PACKAGE OF
TWENTY CARTRIDGES
 $2\frac{1}{2} \times 6 \times 9$ " (EXTERNAL)
WT. 5 LBS. 5 OZS. (APPROX.)
($2\frac{1}{2}$ kg)

"CHRYSANTHEMUM"
SURROUNDED BY
CHARACTERS FOR
CHERRY TREE B. DYNAMITE,
IWAHANA DEPOT "IN
PURPLE INK.



CARTRIDGE WRAPPED
IN BROWN PAPER
 $3\frac{3}{4}$ LONG $\times 1\frac{1}{8}$ "
WT. 4 OZS. (APPROX.)

CARDBOARD CONTAINER WITH
PAPER WRAPPING REMOVED
CONTAINING FOUR PACKETS
EACH HOLDING FIVE CARTRIDGES
 $2\frac{3}{8} \times 5\frac{7}{8} \times 8\frac{7}{8}$ "

JAPANESE "B CHERRY TREE" DYNAMITE MK 3