

STA IDOWU OCJ

CLASS SSS ONE

SUBJECT: ELECTRICAL

INSTALLATIONS WEEK THREE

TOPIC: CARTRIDGE FUSE

Fuse is enclosed in a

cartridge type. The cartridge may vary in length to match the fusing rating of the circuit to be protected. Since the fuse wire is enclosed, it is not opened to the effect of air; hence it does not deteriorate and is more reliable. The fuse wire passes through the tube from cap to cap and is welded or soldered to the inside of the cap.

Cartridge fuses only are used in fused plugs such as 13A

plug. It has a fusing factor of 1.5.

ADVANTAGES

(1) The rating is accurately known

(2) The fuse element is less prone to deteriorate.

DISADVANTAGES

(1) The fuse element

is more expensive to replace than the Rewireable fuse.

(11) It is unsuitable for use where

extremely high values of fault current may occur

(111) They are dangerous to the

operating personnel because of fire hazard.

The colour codes for cartridge fuses are 5Amps, 13Amps,

15Amps, 30Amps, 60Amps.

HIGH BREAKING CAPACITY FUSE

This type of fuse was

designed to overcome the disability of ordinary fuses that usually get damaged in the event of a very heavy overload. The H.B.C consists of a ceramic tube with metal end caps and fixing tags. H.B.C

tube usually prevents formation of an arc when the fuse element is broken due to overload thus;

prevent overheating of the fuse and its surrounding.

H.B.C are often used to protect large

industrial loads, mains cable and in other situations where large fault current can occur.

ADVANTAGES

(1) They have much higher breaking capacity.

(11) It does not

deteriorate.

(111) The H.B.C fuse is able to clear heavy fault current safely.

DISADVANTAGE

It is more expensive.

(Check your textbook for the diagram. page 75)

Assignment:

differentiate between Cartridge fuse and High Breaking capacity fuse.