Essay {Paper03]

[SPM05-03]

(a) Is hardness of metal affected by alloying ?

(b)Manipulated variable : alloy of copper and copper
Responding variable : size of dent
Fixed variable : size of weight

(c)Materials : Copper Block and Brass block
Substances : Steel bearing, 1 Kg weight, clamp, ruler, sellotape tape, thread

(d) 1. A steel ball bearing is fixed onto the surface of a copper block by using a sellotape.
2. A weight of mass 1 kg is held 1 metre above the surface of the copper block by using a thread and a rules
3. The weight is released so that it hits the steel ball bearing
4. The diameter of the dent formed on the copper block surface is measured with a ruler
5. The experiment is preformed three times
6. The experiment is repeated by using a brass block of similar thickness in place of the copper block
7. The data collected is tabulated.

(e)

Type of block	Diameter of dent/cm			Average/cm
	1	2	3	
Copper				
Brass				

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[SPM03-03]

(a) Is hardness of metal affected by alloying ?

(b) The steel is alloying metal, more hardness then the pure metal that is iron.

(c)Materials : Copper Block and Brass block
Substances : Steel bearing, 1 Kg weight, clamp, ruler, sellotape tape, thread

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