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SCHOOL :STA

SUBJ ECT: TECHNICAL DRAWING

CLASS SS1.

NOTES

TOPIC: SPECIAL CURVES.

CONTENT.

The special curve is referred to as locus which is the path traced by a moving point under restriction or pre- determined condition. The term loci is the plural of locus.

Examples of special curves or loci include the following : Ellipses, Parabolas, Hyperbolas, Helices, Cycloids, Hypocycloids, Epicycloids, involutes, and Link mechanism.

ARCHIMEDEAN SPIRAL.

The Archimedean spiral is the locus of a point with uniform velocity and uniform angular velocity as it moves away from another fixed point. Example can be found in the mechanical wrist watches and clocks.

PRINCIPLES.

The linear and angular distances moved through by an Archimedean Spiral must be divided into the same number of equal parts.

Example: To draw an Archimedean Spiral of diameter 50mm.

PROCEDURES.

1. Take a point and divide it into 12 equal parts.
2. Number the divisions 1-12.
3. Mark 12 equal divisions on horizontal line or divide horizontal line into 12 equal divisions.
4. With the compasses at the centre point O and open to horizontal mark 1, draw arc to radial 1. Repeat for 1, 2, 3, 4, 5.....12. Draw a curve through the points.

