To create a Hexagonal Head on a circular rod by using Plain indexing method.

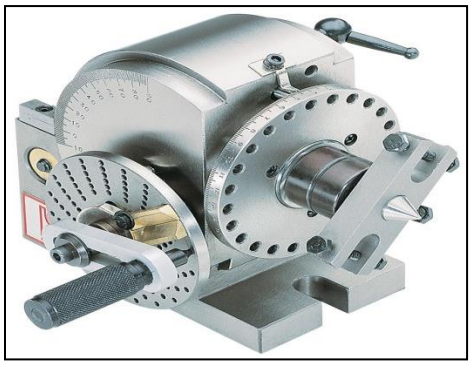
Apparatus:

Milling Machine, Aluminum rod, end mill cutter.

Theory

Indexing Head

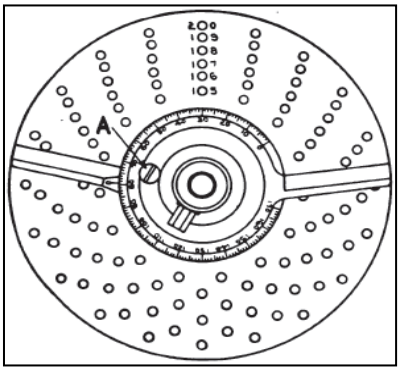
An indexing head, also known as a dividing head or spiral head, is a specialized tool that allows a workpiece to be circularly indexed; that is, easily and precisely rotated to preset angles or circular divisions. Indexing heads are usually used on the tables of milling machines, but may be used on many other machine tools including drill presses, grinders, and boring machines. An indexing head, also known as a dividing head or spiral head, is a specialized tool that allows a workpiece to be circularly indexed; that is, easily and precisely rotated to preset angles or circular divisions. Indexing heads are usually used on the tables of milling machines, but may be used on many other machine tools including drill presses, grinders, and boring machines.



Index Plates

Three index plates are furnished with the spiral head, and contain circles with the following numbers of holes: —

Plate 1— 15, 16, 17, 18, 19, 20.
Plate 2— 21, 23, 27, 29, 31, 33.
Plate 3— 37, 39, 41, 43, 47, 49.



Procedure

- To form hexagon head, divide 40 by 6, which equals 6-1/2 turns
- Give six full turns plus 2/3 of a turn on any circle whose number of holes is divisible by 3. Therefore, 6 full turns of the crank
- Move indexing crank 12 spaces on an 18-hole circle.

Observations and calculations

No. of divisions required=N=

No. of Turns of indexing crank=T= 40\N

Indexing Plate No. =

Number of holes to be moved =

Questions

Define indexing?

_____
_____
_____

What are different methods of indexing?

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_____

How to perform simple indexing?

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_____

What is difference between differential and angular indexing?

_____
_____
_____

Write the procedure of plain indexing?

_____
_____

Comments:

How to perform precise cutting?

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_____