



Industrial Technology Virtual Learning

CTE

May 6th, 2020



Machine Technology 2

Metal Taps May 6th, 2020

Objective: Students will explain how to use a tap and be able to differentiate between types and sizes .

Taps vs Dies

Tap



Die



SETS

TAP and DIE



(Cut and Clean)

RETHREADING



(Clean Only)

TAP

- Used to cut threads into a drilled hole.
- Used to clean up threads in an already threaded hole.



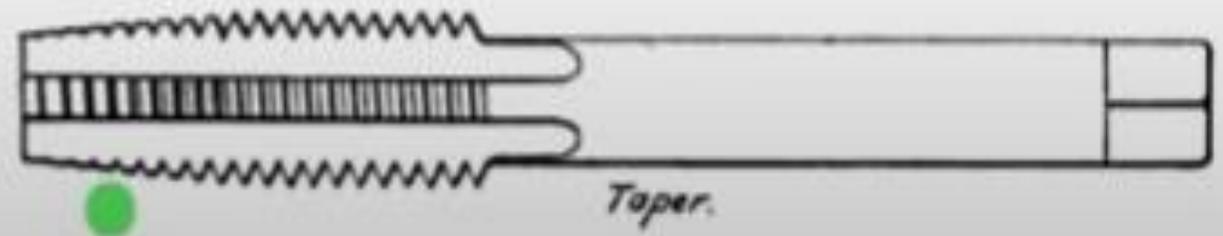
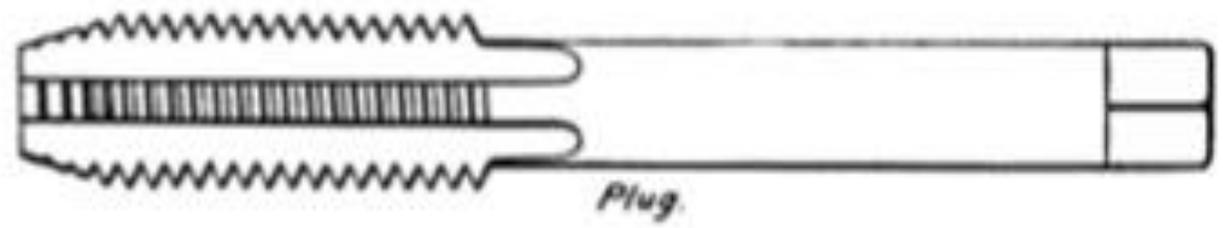
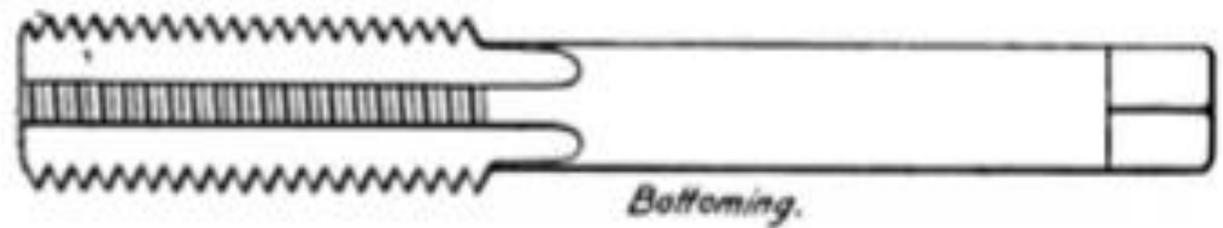
TAP WRENCH

- Used to turn the Tap



TYPES of TAPS

- Bottoming
- Plug
- Taper



Sizes of Taps

- Diameter and Pitch



Tap Sizes

Metric

M4x0.7
M5x0.8
M6x1
M8x1.25
M8x1
M10x1.5
M10x1.25
M12x1.75
M12x1.25
M14x2
M14x1.5

Pipe

Description
1/8" - 27 NPT
1/4" - 18 NPT
3/8" - 18 NPT
1/2" - 14 NPT
3/4" - 14 NPT
1" - 11-1/2 NPT
1-1/4" - 11-1/2 NPT
1-1/2" - 11-1/2 NPT
2" - 11-1/2 NPT
1/8" - 28 BSP
1/4" - 19 BSP

SAE

UNC

TAP
SIZE

#8-32
#10-24
#12-24
1/4-20
5/16-18
3/8-16
7/16-14
1/2-13
9/16-12
5/8-11
3/4-10

UNF

TAP
SIZE

#8-36
#10-32
#12-28
1/4-28
5/16-24
3/8-24
7/16-20
1/2-20
9/16-18
5/8-18
3/4-16

Using a Tap



- Turn $\frac{1}{2}$ to $\frac{1}{4}$ turn at a time.
- Reverse to clear metal chips.
- Lube as needed.

Review Questions

1. What is a tap used for in a drilled hole?
- 2.) What tool is used to turn a tap?
- 3.) list the 3 types of taps.
- 4.) what 2 features are used to size a tap?
- 5.) how far do you turn a tap before reversing?