



# Industrial Technology Virtual Learning

## CTE

### May 6<sup>th</sup>, 2020



# Machine Technology 2

## Metal Taps

May 6<sup>th</sup>, 2020

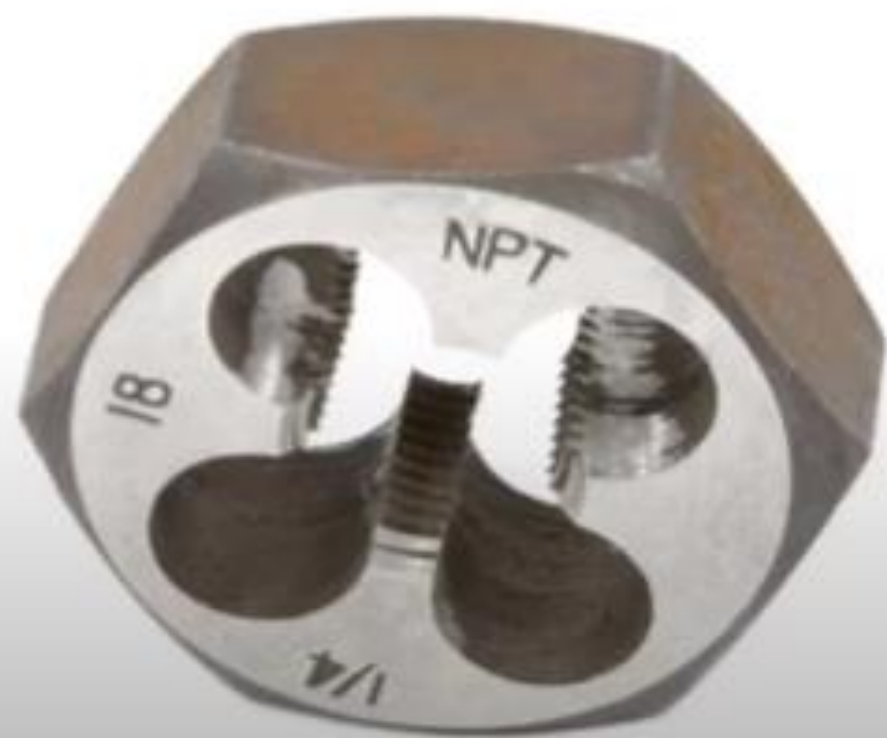
Objective: Students will explain how to use a tap and be able to differentiate between types and sizes .

# 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.



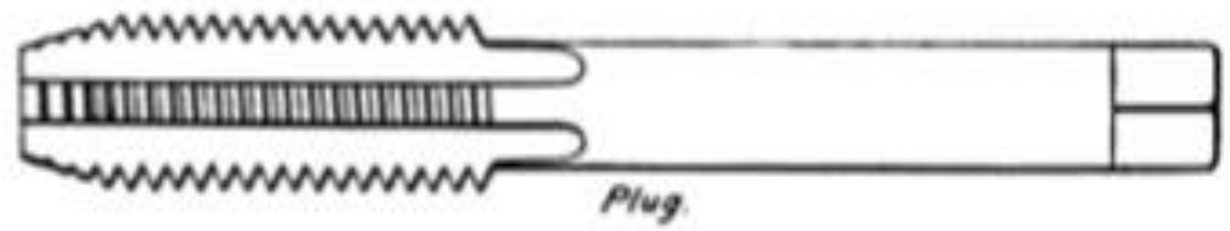
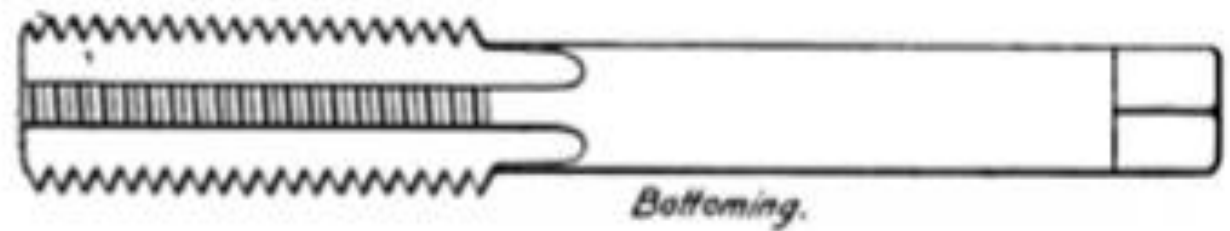
# TAP WRENCH

- 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?