

Pipe Cutting and Threading



Pipe Cutting and Threading Introduction

Pipes are connected in many ways on a typical well location, in this presentation we will look at 1 of the 3 most common methods, **Threaded**.

- Welded
- Flanged
- **Threaded**



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Natural gas production sites and production facilities are made up of many different pieces of equipment. There are well heads, separators, dehydration units and Storage tanks to name a few. All this equipment must be connected together in order to produce (move the products to market) natural gas and oil.

Threaded connections are often used in situations where it may be necessary to remove or replace equipment over the course of a well or facilities life. This type of connection requires that threads be cut into the pipe ends, so that they may be screwed together using any of a number of threaded fittings.



Pipe Cutting and Threading Information

There are a large amount of acronyms associated with Pipe Threading. Here are some you may come across:

NPT - National Pipe Thread Tapered

NPTF - (Dry seal) National Pipe Thread Fine or Fuel -- More leak resistant without tape or sealant

NPSM - National Pipe Straight Mechanical

GHT - Garden Hose Thread

BSPT - British Standard Taper Pipe Thread

API - American Petroleum Institute (Oil Field Threads)



Pipe Cutting and Threading Information

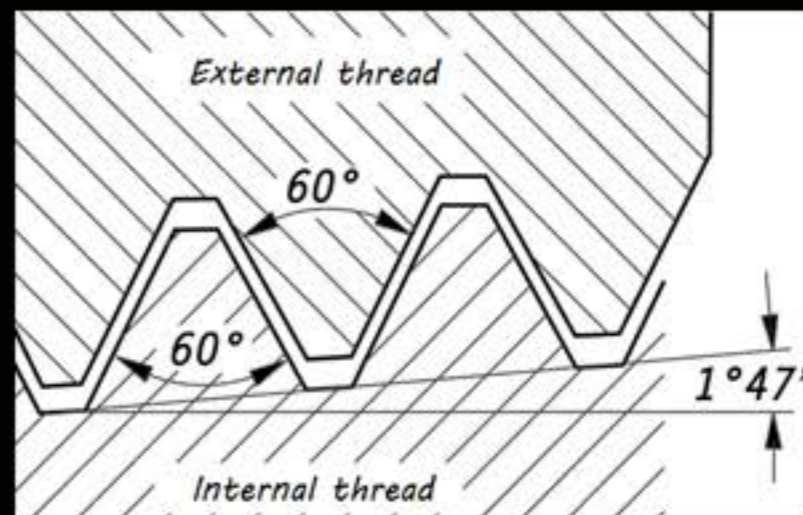
Threads are designed to only mate with a thread that matches itself.

American National - V thread, normally 11.5 threads to the inch.

Square - Frac iron, lubricators and hose connections, etc.

Buttress - Jacking thread, API used on drill pipe and collars.

Round Triangular thread - Found on tubular's such as production tubing strings, and also on casing pipe.



(American National)

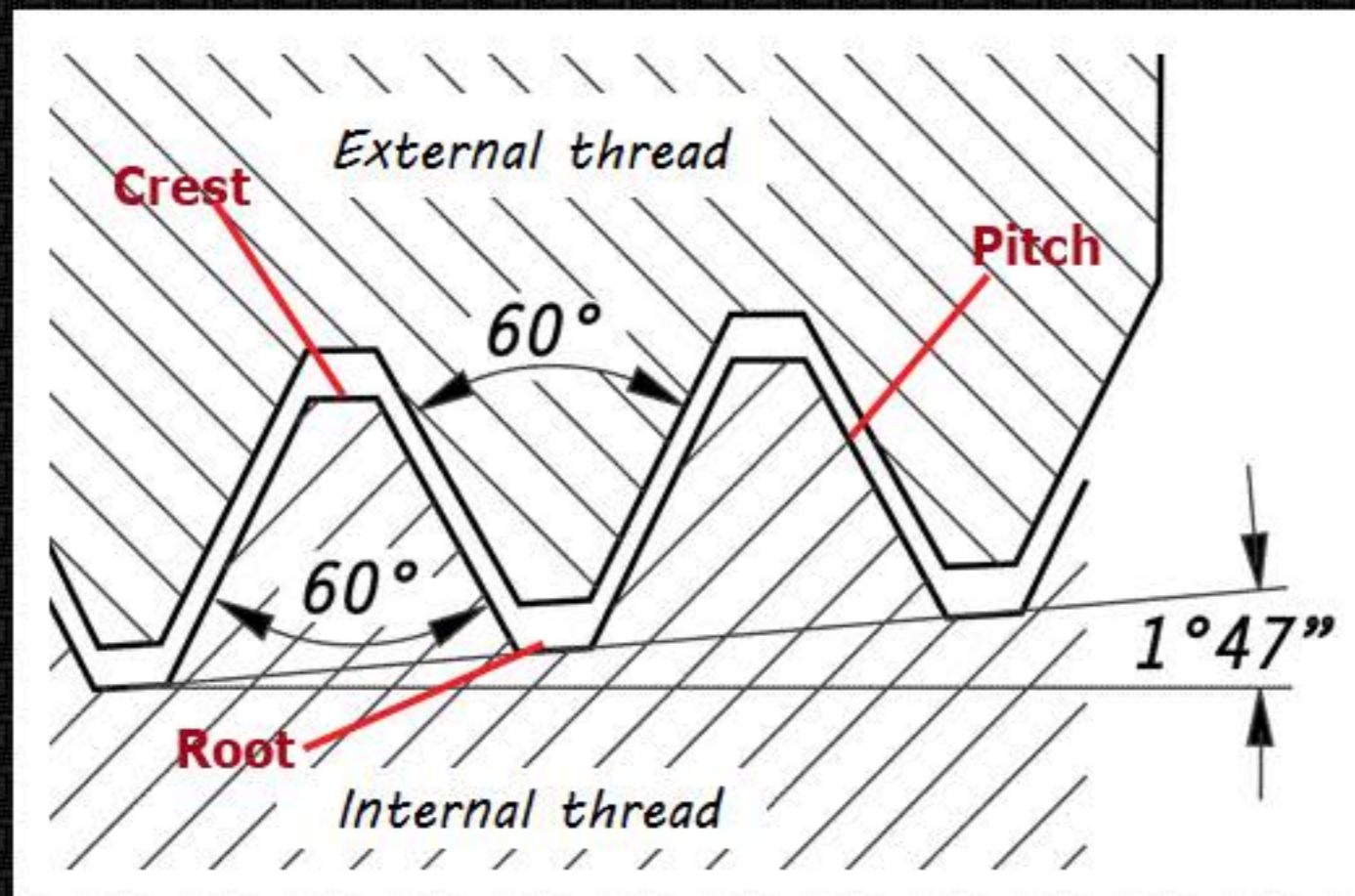


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Crest is the top of the thread. If flattened and the root is flattened, this is called **Truncated**.

Root is the bottom (valley between two crests).

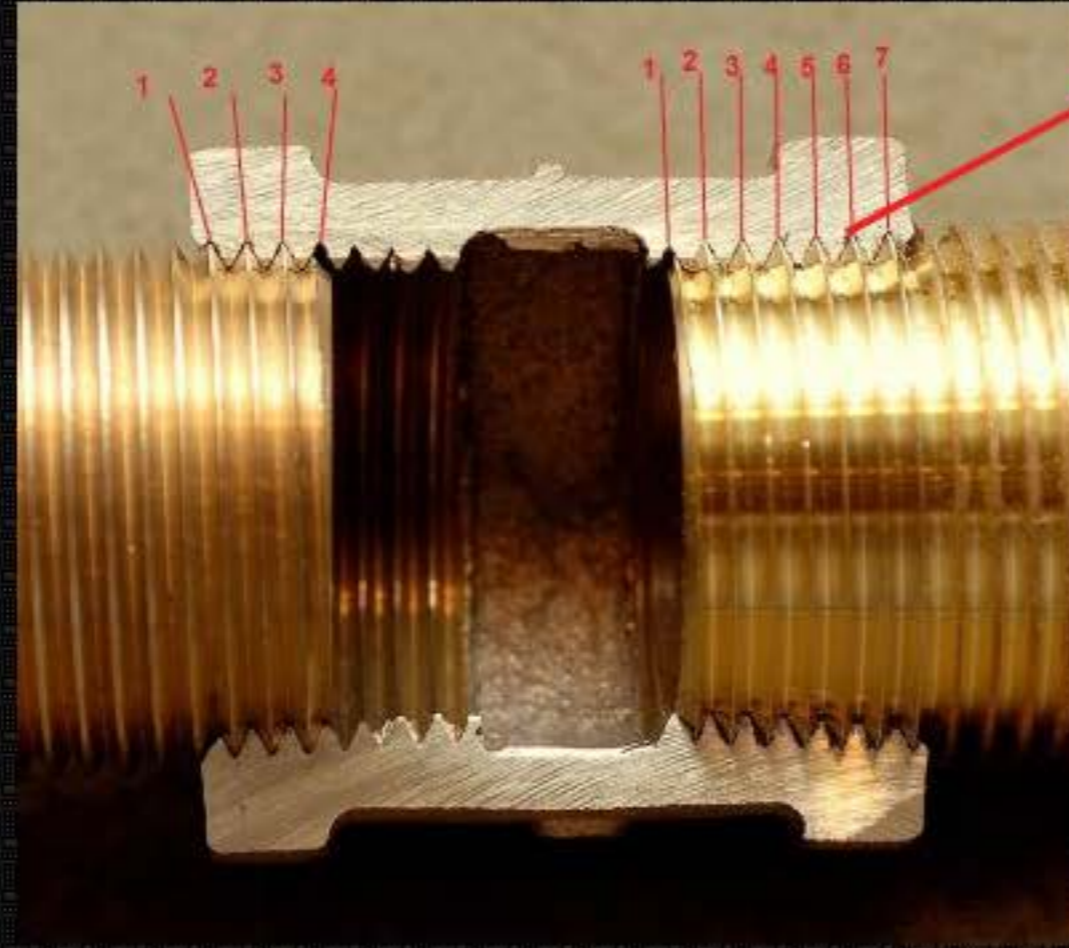
Pitch is the slope or angle of the thread sides.



Pipe Cutting and Threading Information

Cutaway of fitting and pipe

Tapered threads



Pipe Cutting and Threading Information

Threads are either tapered or straight. Tapered threads provide a better seal against leaks and typically have higher pressure ratings. (Joining and sealing)

Straight threads require tape and sealing compound (pipe dope) to make a leak proof seal. This type of thread is common on instruments, guages, and conduit (joining only).

Good threads should allow a joint to be screwed together slightly more then $1/2$ the total length of the threads by hand. The remaining $1/4$ inch is then made up by using a wrench.



Thank You

For more information about pipe threading, please visit www.detroitnippleworks.com.

We are glad to answer any questions you may have.

