

## Bag full of wisdom when you are in trouble

No.126

## 【Question】



Previously, I have worked with American pipe taper threads (NPT). This time, I have been asked to tap using American pipe taper threads (NPTF). What is the difference between “NPT” and “NPTF”?

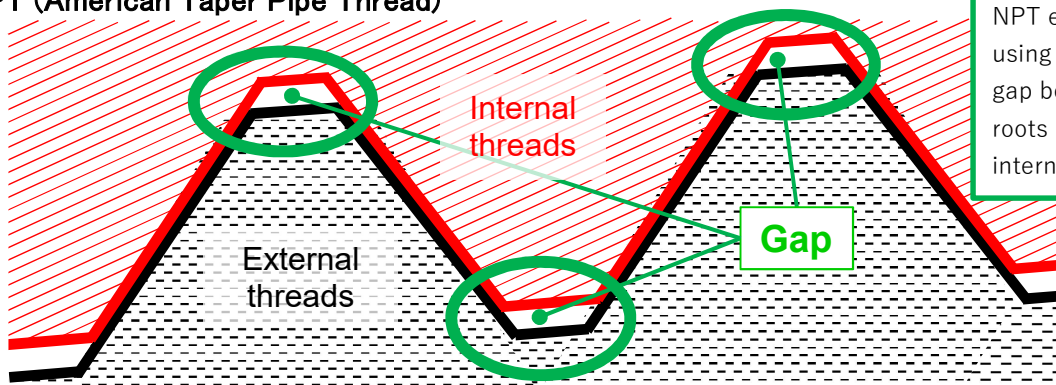
## 【Answer】

NPT is the American standard for general tapered pipe threads. When sealing is required, **sealants are used** to achieve **leak tightness**. On the other hand, NPTF is the American standard for **dryseal tapered pipe** threads. It is used in cases where the pipe may become hot and the sealant could melt. With NPTF, leak tightness can be ensured **without sealant**, thanks to its specially designed thread profile.



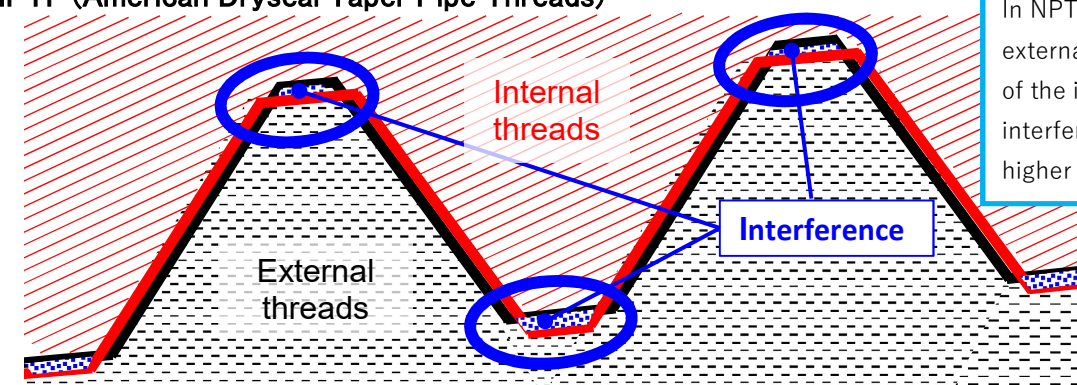
## 【Explain】

## ● NPT (American Taper Pipe Thread)



NPT ensures leak tightness by using sealant, since there is a gap between the crests and roots of the external and internal threads.

## ● NPTF (American Dryseal Taper Pipe Threads)



In NPTF, the crests of the external threads and the roots of the internal threads are interference, which provides higher leak tightness.

## 【Advice】

Were you able to get an idea of the difference between NPT and NPTF?

In NPTF threads, the crests are pointed and the roots are shallower, so when the external and internal threads are assembled, the crests and roots come into close contact or interfere. This provides leak tightness in pipe connections, fittings, and fluid equipment without using sealant.

As you can see, since the thread profiles of NPT and NPTF are different, do not use the same taps or tools interchangeably when machining these threads.

