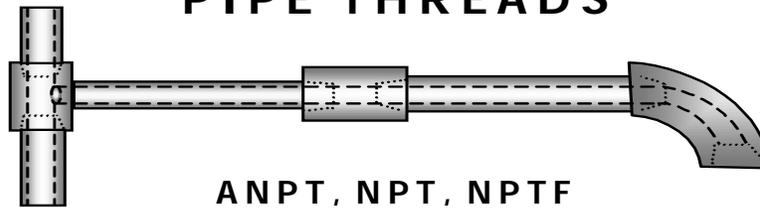


PIPE THREADS



ANPT, NPT, NPTF

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Pipe threads are with some exceptions a tapered self-locking thread produced on the outside diameter of a piece of pipe, tubing or fitting, and in the inside of the mating coupling, port, or fitting. As pipe is identified by the inside diameter of the pipe, so the pipe threads are identified. Therefore a ¼-18 NPT fitting has a ¼" diameter through hole. Pipe threads are designed to be assembled by hand 4 to 7 turns, depending on size, and drawn together an additional 2 turns by means of a pipe wrench or other mechanical device, locking the threads together.

Prior to the 1800's, pipes and couplings were manufactured as matched sets with little regard to formal thread profile or size. In 1820, Robert Briggs of the Pascal Iron Works of the Morris Tasker Co., began work to develop the first "pipe threads". In 1834 he made the first gage to inspect internal pipe threads, a L1 threaded plug. In 1862 Mr. Briggs developed a mating threaded ring gage for the external threads and published a standard for what was called the Briggs Standard Pipe Thread. By 1886, a large majority of manufactures threaded pipe to the Briggs standard, and acting jointly with A.S.M.E., they adopted it as a national standard.

Around 1905, The American Society of Mechanical Engineers, along with various government and military agencies, started the American Standards Association (ASA) with the purpose of developing the standards to be used nationally. In 1919 the ASA, using the Briggs Standard Pipe Thread as it basis created the National Pipe Taper (NPT) pipe threads and published the B2.1 standard complete with all taper pipe and straight pipe specifications and gaging. In 1927, to serve the automotive industry and create a self sealing (Dryseal) thread form, the ASA B2.2 standard was created using a modified form of the NPT pipe thread called the National Pipe Taper Fuel (NPTF) pipe thread.

In 1961, the military, wanting a higher quality NPT thread created Mil-P-7105, creating the "Aeronautical National Pipe Taper" (ANPT) Threads. The threads were the same as the NPT threads up to 2 ½" diameter, but required additional gaging and gage variation must be considered when gaging the threads.