Roll Threading vs. Cut Threading

Threads On A Mechanical Fastener Regardless Of Whether It Is A Headed Bolt - Rod Can Be Produced By Either Cutting OR Rolling

Rolled Threads:

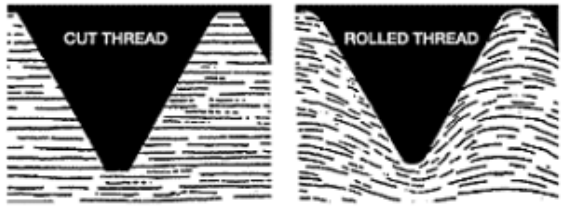
Roll Threading Is A Process By Which Steel Is Extruded To Form A Threaded Portion Of A Fastener, Instead Of Being Removed As In Cut Threading.
In This Process A Bolt Is Manufactured From A Reduced Diameter Bar.
EG: A 1" Diameter Bolt Is Manufactured From A 0.912" Diameter Round Bar. The Pitch Diameter Material Is Approximately The Mid Point Between The Major Diameter (peaks) And The Minor Diameter (valleys) Of The Threads.
The Bolt Is "Rolled" Through A Set Of Threading Dies Which Displaces The Steel And Forms The Threads.
The End Result Is A Fastener With A Full 1" Diameter Threaded Portion But With A Reduced Body Diameter (0.912").
Rolled Threads Are Smoother Than Cut Threads Due To The Burnishing Effect Of The Rolling Operation.

Please Click On The Following Link On The PDF Page To See The Thread Rolling Operation
https://youtu.be/MvWmH3Dr52o

Cut Threads:

Cut Threading Is A Process By Which Steel Is Cut Away From Around A Bar Of Steel To Form The Threads.
EG: A 1" Diameter Bolt For Example Is Produced By Cutting Threads Into A Full 1" Diameter Body Of The Bolt.
All Specifications Can Be Manufactured With Cut Threads.
Few Limitations To Diameter And Thread Lengths.

Please Click On The Following Link On The PDF Page To See The Thread Cutting Operation
https://youtu.be/4itib5n9AxY



With The Exception Of A325 AND A490 Structural Bolts, Any Bolts Can Be Produced With A Reduced Body And Rolled Threads