

GTMAX Gripper Marks

By design, GripTight MAX test plug grippers are engineered to securely bite into the pipe wall during testing. Through testing conducted by EST and third parties, the depth of the gripper marks typically measures between 0.004" and 0.016" (0.1 – 0.4 mm). In instances of higher-pressure testing on thick-wall pipes, the marks may be slightly deeper, while testing on tougher or harder pipes, such as stainless steel, results in shallower marks.

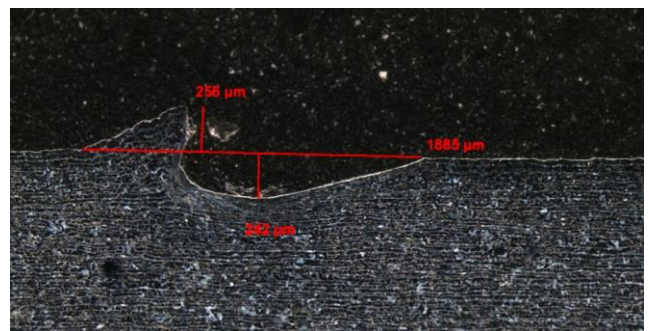
Since the ASME code does not specifically cover gripping marks, they should be classified as surface imperfections. Surface imperfections on pipes, including scratches, dents, gouges, and marks, are addressed in ASTM A333/A333M Section 10, titled "Workmanship, Finish, and Appearance." According to this section, surface imperfections penetrating more than 12.5% of the nominal wall thickness or encroaching on the minimum wall thickness are considered defects.

GTMAX Grippers are specifically engineered to operate within the allowable workmanship limits, ensuring full compliance with ASME and ASTM pipe codes. Additionally, our grippers are designed to utilize less than 50% of the allowable workmanship allowance, demonstrating an additional margin of safety and reliability. An example provided on Pic 1 is from testing a 6" schedule 80 ASTM A106B pipe with a wall thickness of 0.432" (11mm). The gripper mark depth, as shown in the picture, is 0.0095" (0.241mm), representing 2.2% of the nominal wall thickness.



Pic 1. GTMAX Gripper marks in 6" sch 80 pipe at 3,900 psi (276 bar)

In summary, GripTight MAX test plug grippers exhibit robust engineering and performance, demonstrated through extensive testing on diverse pipe materials. The observed variations in gripper mark depths underscore their adaptability under varying testing conditions. GTMAX Grippers' adherence to allowable workmanship limits and intentional utilization of less than 50% of the allowance exemplify their commitment to safety and reliability. These features should effectively mitigate customers' concerns related to gripping marks, ensuring a high level of confidence in their performance and overall reliability.



Pic 2. GTMAX Gripper marks under microscope

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