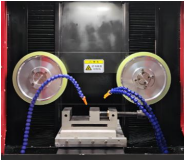


Summary

Trial test condition are as follows:
 Workpiece: Cast Iron
 Work geometry: 68 mm *50 mm
 Cutting width: 50 mm
 Cutting depth: 50 mm
 Downfeed rate: 3 mm/min
 Line speed of wire: 15 m/s
 Wheel diameter: 220 mm
 Dry cut on machine: Ensoll YSL2000
 Total length of wire: 1580 mm
 Wire diameter: 0.35 mm
 End of testing condition: Wire Breakage



1. The operational lifespan of the testing looped wire saw is quantified at 55 cuts, cumulatively amounting to 1130 minutes of cutting time.
2. Total cutting area of the whole testing by one wire is about 137,500.0 mm². The looped wire life is 87,025 mm²/meter.
3. The cutting efficiency is 121.7 mm²/minute.
4. As the number of cuts increases, the cutting power and the normal cutting force tend to rise incrementally due to the progressive dulling of the diamond wire.
5. Conversely, the cycle time per cut tends to decrease as the number of cuts escalates, because of bending of wire (increasing of normal force).
6. It is advisable to experiment with a higher downfeed

