

Sample Mating Ring Solution: Hydraulic Pump

Background

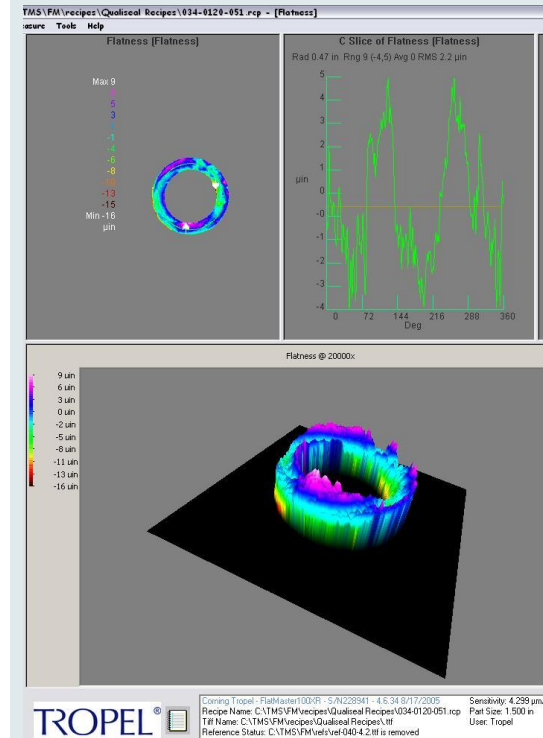
- ▶ An aerospace OEM historically purchased an inexpensive mating ring to pair with a precision carbon face seal in a hydraulic pump
- ▶ Supplier was capable of achieving flatness to 6 HLB
- ▶ Buyer was satisfied because the mating ring met the design requirements at a low cost

Operational Process

- ▶ After receiving the mating rings, the OEM inspected 100% of them using a laser interferometer to ensure sufficient flatness
- ▶ 80% of the mating rings needed to be re-lapped and re-inspected before they could be used even though they were built to spec
- ▶ “Total” cost of the final product was significantly greater than the amount on the purchase order

QT Solution

- ▶ QT manufactured mating rings to a standard above customer’s design requirements, achieving flatness to 3 HLB or better
- ▶ Inspected utilizing QT’s laser interferometer and delivered ready-to-use products to the customer
- ▶ Customer recognized savings in the “total cost” of the product and also reduced required inspection staff by two



Interferometer Flatness Readings