



CASE STUDY MIR50

SUMMARY

MATERIAL: MIR 50 (Typically 1-1/4" Dia through 3-1/2" Dia)
APPLICATION: Turbine Shaft
REPLACED: Various Commercial Stainless Grades

Associated Steel is a privately owned Steel Service Center that specializes in steel bars and plate for heavy maintenance applications. We have been furnishing the recognized names in industry (both large and small) for over 80 years. On occasion, we will get feedback from our customers regarding a specific material that has noticeably filled a need and made a positive impact at their company and for their customers.

The following represents dialog from D & G Machine. It is relevant to their use of **Mir 50®**. (Our proprietary, high strength, non-galling, double stress-relieved stainless shaft material, that is NACE approved for sour service applications.)

Steve White is the foreman. Trevor is the machinist. They have authorized use of their names in this text. Steve advised that **Mir 50®** performs well. It does the things we say it does. When compared to OEM replacement parts for turbine (Pump) shafts, it provides service life that is at least as good, in fact in many cases better. He advised that for all the years and the many replacement shafts, they have machined from **Mir 50®**, he has never had a shaft that broke.

The failure mode their customers are most concerned with is premature wear (from the packing), and damage from mechanical seals. Both areas have been addressed by switching to **Mir 50®**. Typical turbine shaft sizes are from 1 1/4" Diameter thru 3 1/2" Diameter. Lengths are typically from 5ft to 10ft.

Steve suggested I speak with Trevor (machine shop) to get his view of **Mir 50®**. Trevor advised that **Mir 50®** provides the machine shop benefits as advertised: ease of machining and minimal movement. He pointed out that he has not experienced the difficulties that are normally encountered when machining stainless steel bars. When asked about any advice for someone new to machining **Mir 50®**, Trevor advised that compared to machining commercial stainless grades there was not a lot to caution; slow it down within reason, use coolant liberally, and radius any contour changes. **Mir 50®** is easier to machine than most other stainless grades. The literature on this product lists the benefits and you can expect to experience those benefits.