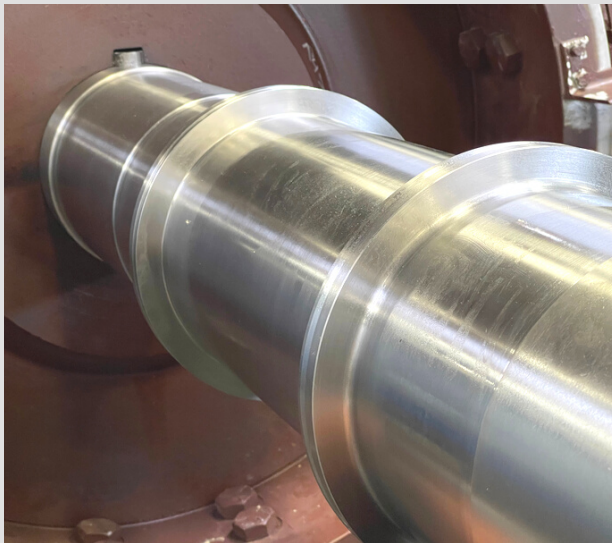
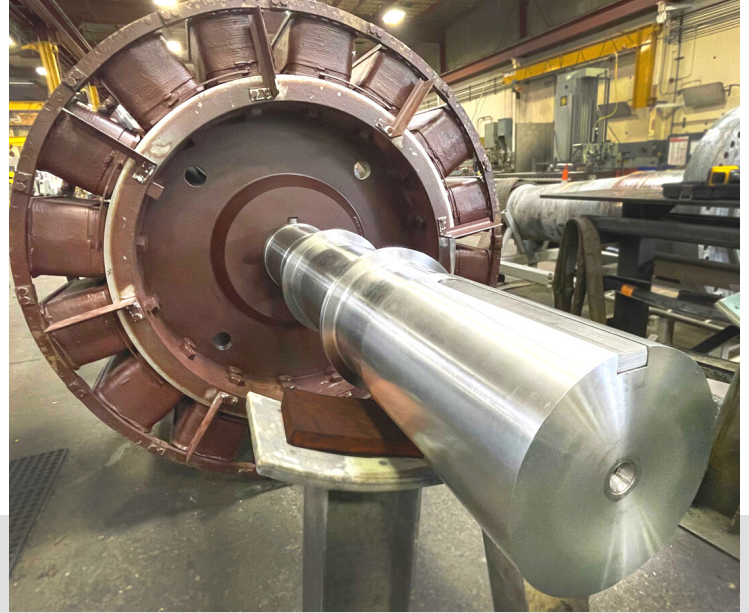




MOTOR ARMATURE NEW SHAFT MANUFACTURE



Project:

Part: Motor Armature

Customer: Motor Servicing and Manufacturing

Challenge:

- Existing shaft was damaged beyond repair.
- No detailed manufacturing drawings exist.

Engineered Solutions:

- Dimensionally inspect existing shaft to generate manufacturing drawings.
- Work with customer to correctly dimension all critical fits.
- Cut off existing shaft on both sides of the armature.
- Set up armature in VBM to bore out remaining shaft.
- Machine armature bore to 100% concentricity.
- Manufacture new shaft entirely out of 4140 alloy steel.
- Freeze new shaft in liquid nitrogen and install to the armature with interference fit.
- Set up armature and shaft in the lathe, and machine slip rings to 100% concentricity.
- Balance to ISO G1.0 specification.
- Demagnetize shaft.

Result:

With precision machining and manufacturing, the reverse-engineered new shaft fit in the armature perfectly.



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