INDUCTION/HEAT FORGING PROPOSAL

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Current operations in the PF line have been experiencing issues with twist pitch errors and imprecise joggle bends.

OBJECTIVE

Test if induction heating will increase joggle bend precision

Benefits of induction heating:

- Non-Contact and equal heating in tight spaces
- Low-cost Options
- Precision Heating targets only specified material and minimizes unwanted heat zones.

WHAT'S THE PROCESS?

Prepare sample

Find a sample jacket piece with HTS, Copper petals, and cooling tube. Document all the imperfections and face profiling of each of the 4 faces and two ends.

Heat Up sample to 200C (use Melt out oven)

heat up sample till it reaches an even distributed temperature ~200C but not above.

Verify results

Check for deformities on face profiling. Check HTS, Copper, and cooling tube. Are there any workpiece handling improves? What can be changed? Any improvemens?

Remove sample and setup fixture

Handle Cable with High Temp. Gloves, Setup Joggle fixture below cable. Then complete compression bends to reach joggle region spec.

CONCLUSION

Trying new methods for joggle bending may end up fixing the problems with broken fibers and twist pitch errors. But we will never know unless we try. I think induction heating may give us just what we need to prevent crushing of the PF jackets.

QUESTIONS OR COMMENTS?