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Inspection Main Magnet Coil with Video Therm Portable Infrared System

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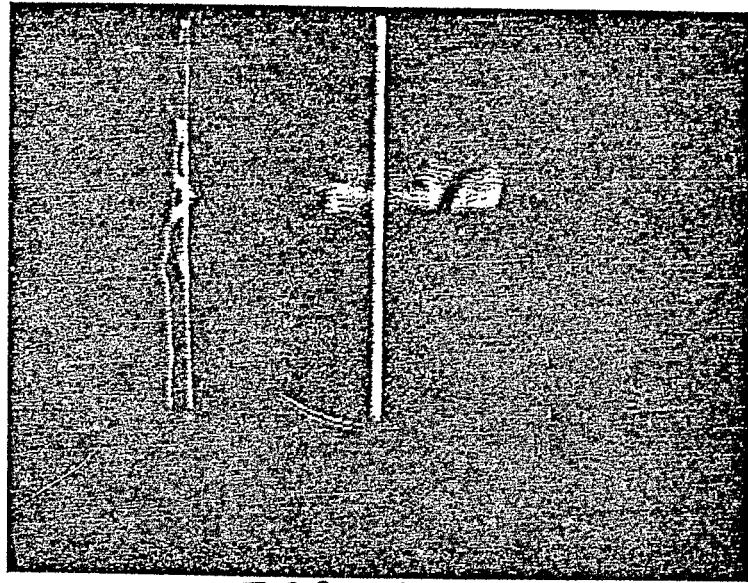
AGS STUDIES REPORTDate May 5, 1983Time 0700Experimenters Maintenance Group, M. Clancy, H. Farrell, E. Tombler, M.A. ZgurisReported by M.A. ZgurisSubject Inspection of Main Magnet Coil With Video Therm Portable Infrared SystemOBSERVATIONS AND CONCLUSION

A sweep of the main magnet coils with a Model LIC-84 Video Therm Camera was done with the AGS operating at a repetition rate of 3 sec, FT 1350 ms. The test results indicate that a normal operating temperature of 79°-85°F can be expected. The inspection group was able to distinguish a 2°F temperature difference in coil temperatures with the Therm Camera. A contact thermometer was then used to record the actual temperature of an indicated hot magnet. The results indicated five magnets were above 100°F: A6 - 100°F bottom (top coil); A5 - 108°F bottom (top coil); I17 - 112°F bottom (top coil); G20 - 125°F bottom (bottom coil); and C17 - 145°F bottom (bottom coil). Four coils were at 86°F A3, A4, A17 and A18. One coil was at 93°F (B4).

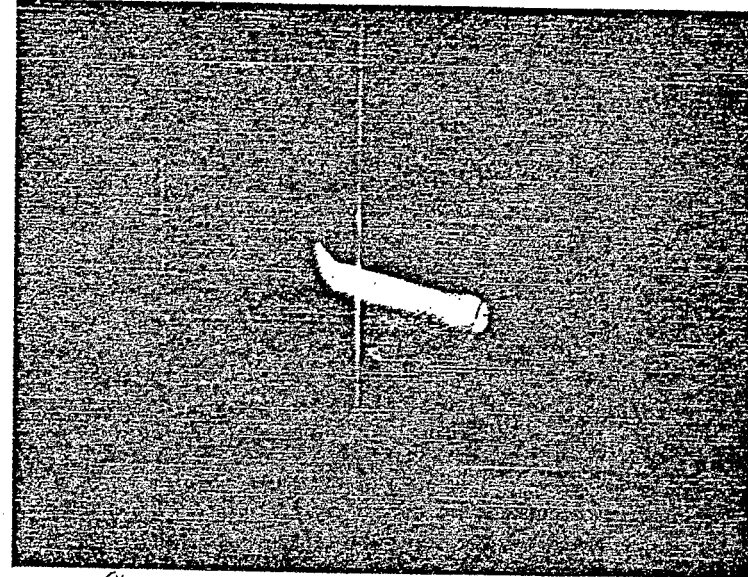
The five hot coils were backflushed during maintenance that day. In the future, after backflushing, a measured flow check will be made using a flow meter.

In conclusion, the group feels inspections with the Video Therm camera should be taken every three months with logging of coils with high temperature, plus the results of backflushing (flow check readings).

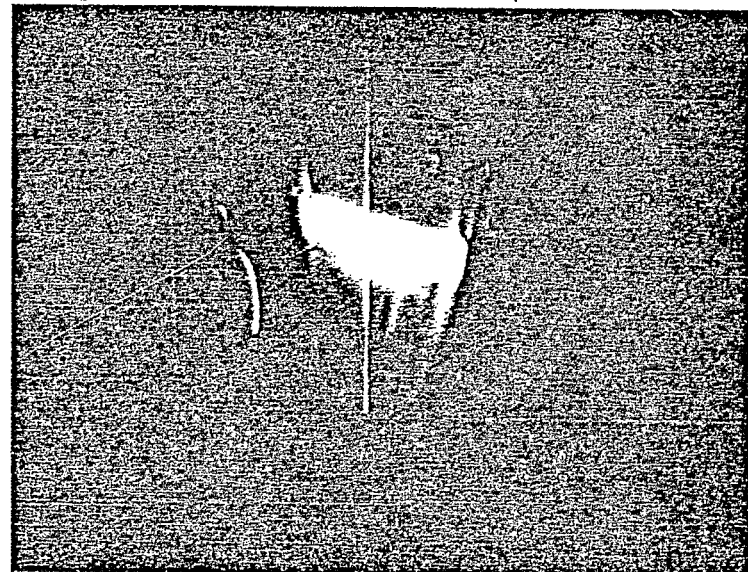
A video tape of the test is available with E. Tombler. The attached pictures show what coils look like, first when warm, second when hot and third when very hot.



79° - 85° F



6-10 125 F°



0-11 145 - F