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**EVALUATION OF FISCHER-TROPSCH SYNTHETIC FUELS AS BLENDING
STOCKS FOR NAVAL APPLICATIONS**

Philip H. Chang and Richard Kamin

Senior Fuels Chemist, Fuels and Fuel Systems Division, Naval Air Systems Command, 22229
Elmer Rd, Bldg. 2360. Patuxent River, MD 20670

Although Fischer-Tropsch (FT) technologies have existed for decades, only recently has the United States Department of Defense begun to look at Fischer-Tropsch derived synthetic liquid fuels for potential military applications. The US Navy evaluated several synthetically derived fuels and their blends with petroleum based JP-5 and F-76 for both potential aircraft and shipboard propulsion applications.

In this study, the U.S. Navy tested several FT fuels and their blends against the requirements of the JP-5 and F-76 specifications (MIL-DTL-5624 and MIL-PRF-16884), non-specification area of concern such as storage stability, lubricity, etc. and Petroleum Quality Information System (PQIS) data from Defense Energy Support Center (DESC). Statistical comparisons were made between our test results and values of specifications and past PQIS data. The linear and non-linear properties were identified upon blending with petroleum based fuels. Subsequently, the maximum/minimum allowable blending ratio was determined for FT blends to satisfy the specifications, non-specification and PQIS data.