

# SUR/ICE ENGINEERING COMPANY

### **ROTORCRAFT SURVIVABILITY**

#### **BACKGROUND**

The SURVICE Engineering Company is a small business that has been providing the U.S. Department of Defense (DoD) and related customers with high-quality analytical products and services since 1981. Originally founded with a specific focus on rotorcraft survivability, we have supported more than 100 rotorcraft programs for all major airframers, conducting a wide range of vulnerability analyses, susceptibility analyses, armor optimization & evaluation, modeling and simulation (M&S), and test & evaluation.

#### **VULNERABILITY ANALYSES**

Building on our founder's experience enhancing the Black Hawk's survivability in the 1970s, SURVICE has been a pioneer in implementing and enhancing vulnerability analyses for rotorcraft. We specialize in ballistic and fire vulnerability analyses, providing complete support from concept to fielding and beyond. Our unique relationship with rotorcraft manufacturers and DoD customers allows us to understand manufacturer design processes and Government requirements to maximize the vulnerability reduction features incorporated into the platform.

#### SUSCEPTIBILITY ANALYSES

SURVICE uses Government-approved M&S codes to assess and evaluate rotorcraft susceptibility. We provide target infrared (IR) and radar cross section (RCS) signature modeling, endgame modeling, target countermeasure



models, threat models, and environment models to analyze parameters, such as airframe, exhaust cavities, and plume signatures, as well as missile flyout characterization.

## ARMOR OPTIMIZATION & EVALUATION

SURVICE applies M&S, validated by test, to develop aircraft armor configurations that will reduce aircraft weight yet still provide optimal personnel protection. Working with the vehicle manufacturers and the armor suppliers, SURVICE is able to provide guidance and evaluation from concept through final design.

#### **TEST & EVALUATION**

SURVICE supports both the Live Fire Test & Evaluation (LFT&E) and the developmental and operational test & evaluation rotorcraft community. We provide test planning and management, pre-test predictions, data collection, post-test analysis, and 3D damage measurement and assessment.



Recent Supported Platforms Include:

- All Army aviation programs
- CH-53K
- CH148
- H-47F
- CH-47D
- MH-47G
- V-22

- S-92
- MH-60S
- UH-60M
- RAH-66
- VH-X
- AH-64D
- OH-58D



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