

Chemical Propulsion Information Analysis Center



The Chemical Propulsion Information Analysis Center (CPIAC) is the premier resource for members of the propulsion community. CPIAC is the Department of Defense's clearinghouse for worldwide information, data, and analysis on chemical, electrical, nuclear, and advanced-propulsion concepts for missile, space, and gun-propulsion systems. CPIAC provides technical problem solving, state-of-the-art studies and assessments, subject matter expertise, and secure technical reference data.

CPIAC offers a wide variety of information, products, and services not readily available in open sources, including:

- Technology assessments;
- Responses to user technical inquiries;
- Secure, web-accessible and searchable literature and technical-paper databases;
- Propulsion modeling and simulation tools;
- Propulsion reference standards, specifications and manuals;
- And meeting administration and proceedings.

CPIAC'S INQUIRY SERVICES

CPIAC's Technical Inquiry Service provides evaluations and summaries of RDT&E results that may be used to solve problems in specific technical areas. CPIAC responds to more than 300 technical inquiries a year; with 8500 of those responses available in a searchable database. CPIAC's Bibliographic Inquiry

Service provides rapid, focus, and in-depth compilations of the available literature on selected topic areas of interest to the propulsion community.

The CPIAC Technology Reviews and State-of-the-Art Reports provide propulsion scientists and engineers with valuable summaries and assessments of emerging technology trends and developments.

TECHNOLOGY ASSESSMENT AND ANALYSIS

As a knowledgeable and impartial agent, CPIAC assists sponsors in focusing increasingly limited research and development funding on data and technologies that can truly enhance project development. CPIAC can target key propulsion system requirements by providing subject matter expertise, technology transfer assessments, technology readiness assessments, workshops and symposia.

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DATABASE ACCESS

The Chemical Propulsion Information Network (CPIN) offers users secure electronic access to a host of vetted and definitive energetic material, missile and space propulsion technical data source:

- **Rocket Motor Electronic**

Database (RMED), a comprehensive and versatile source of solid propulsion data for rockets, missiles, and similar applications.

- **Solid Propellant Database (SPD)**, unclassified propellant data for operational and historical US systems dating to the 1950s.

- **Liquid Propellant and Fuels Database (LPFD)**, the national technical reference for liquid rocket propellants and air breathing fuels.

- **Propellant Explosives and Ingredients Database (PEID)**, containing detailed physical, thermo chemical, and production status of ingredients.

- **Spacecraft Propulsion Database (SCPD)**, design, schematic and performance on domestic NASA and DoD satellite propulsion systems.

- **Rocket Propulsion Test Facilities (RPTF)**, comprehensive data on technical capabilities and points of contacts for all US government, industry and academic rocket test facilities.

MODELING AND SIMULATION TOOLS

CPIAC maintains and distributes several government sponsored standard modeling and simulation for rockets, missiles and exhaust plume signatures.

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These codes are used to simulate:

- Performance prediction;
- Motor grain regression and flow field characterization;
- Exhaust plume characterization;
- And spectral signature analysis.

TECHNICAL DOCUMENT MANAGEMENT, PUBLICATION AND DIGITIZATION

CPIAC manages a collection of over 175,000 technical documents and reports and specializes in assessing, cataloging, managing, archiving and digitizing large DoD and USGOV technical collections; and in particular developing electronic and web based solutions for ready access to users. CPIAC library staff manages and digitizes over 20,000 documents per year to strict DTIC quality assurance standards.

Additionally, CPIAC routinely publishes DoD limited technical reports and proceedings, as many as 400 papers and reports a year.

PROPULSION ORGANIZATION AND MEETING SUPPORT

CPIAC's meeting planning services provide technical, consulting, administrative, and logistical support for propulsion-related technical meetings, workshops, conferences, and symposia. All requisite functions are managed by CPIAC, including:

- Preparing agendas, course notebooks and event proceedings;
- Registration processing for attendees;
- Providing meeting facilities and catering;
- And full audio and video support.