



# Value Engineering Tools for Contractor Support

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# Agenda

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- Castings & Forgings
- Value Engineering Change Proposals (VECP's)
- Replenishment Parts Purchase or Borrow (RPPOB)
- Sustaining Engineering (SE)



# Castings and Forgings



# Castings & Forgings



- Castings are complex metal shapes
  - Structural, mechanical, engineered applications
  - Formed from liquid metal, produced in a mold
  - Often are “hidden” components of an assembly
- Forgings can be complex or simple shapes
  - Forging is heated metal, but not molten
  - Formed by pounding or pressing it into the desired shape
  - Sometimes tooling is required,
  - Sometimes are “hidden” components of an assembly



## DLA's Goal

Procure high-quality, cost-effective cast or forged parts for weapon systems to meet readiness requirements



# Procurement Issues

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- Long lead times
- Defaulted contracts
- Identifying cast or forged parts/components at the assembly level
- Tooling availability
- Diminishing manufacturing sources
- Low quantity procurements
- Contracting to correct sources





# How to Identify

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- Look at the “notes” section on the drawing for a casting process or forging process
- Look at the detail listings or separate parts list where it calls out alloys and processes
- Check on-line specs and standards for reference
  - Defense Standards
    - <http://assist2.daps.dla.mil/quicksearch>
  - SAE Website for AMS standards
    - <http://www.sae.org/technicalcommittees/index.htm>



# A Common Plan



- HQ DLA has implemented two programs
  - Shared cost between Government and Industry
  - Address key technical needs
- Castings for Improved Readiness (CIR)
  - Supported by American Metalcasting Consortium (AMC)
  - Managed by Advanced Technology Institute (ATI)
- PRO-FAST
  - Supported by Forging Defense Manufacturing Consortium (FDMC)
  - Managed by ATI
- Programs focus on three areas
  - Resolve casting/forging part problems
  - Training for Government personnel
  - Research & Development







# Strategic Direction

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- Ensure a viable casting or forging supply chain future
- Apply new technologies
- Reduce administrative and production lead times
- Utilize extensive casting and forging experience and knowledge to solve supply chain backorders
- Incorporate AMC/FDMC information into DLA's procurement processes to improve readiness

**AMC**

**EDMC**





# Remember, When Using AMC or FDMC they...

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- Do not change your contractual responsibility
- Are not part of your contract
- Won't charge you, or won't pay you
- Are available to consult and assist
- Are an industrial organization, not government
- Cannot approve any tech data changes
- Cannot change anything in the terms and conditions of the contract

**AMC**

**EDMC**



# DSCC's X-IT Team

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- Provides casting & forging assistance
- X-IT is comprised of Government and Industry representation
- X-IT is a resource available to the following:
  - DSCC Personnel: Product Specialists, Buyers, Planners
  - Engineering Support Activities (ESAs)
  - Contractors/Suppliers
    - With active DSCC contracts (w/Contracting Officers' approval)
    - Bidding on open DSCC solicitations



**AMC**

**EDMC**



# How X-IT Provides Assistance



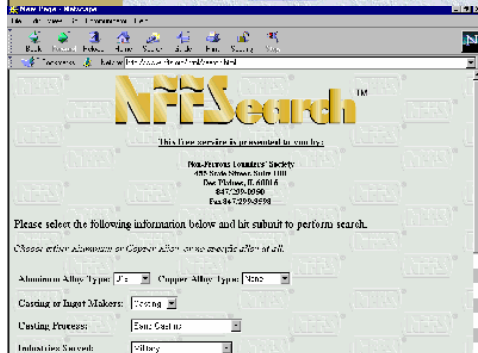
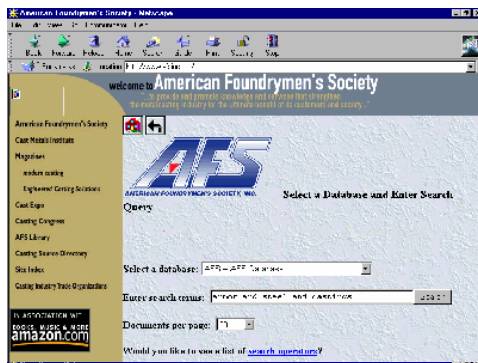
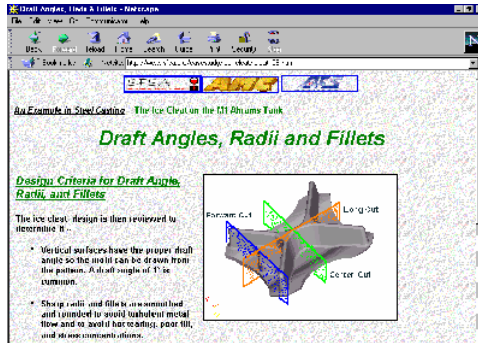
- **Process and Material** - Understand the required casting or forging process and material (may be buried in a OEM specification and not be apparent)
  - **As-cast or forged tolerances**
  - **Surface finish requirements**
- **Sourcing** – Identify capable sources when unable to manufacture due to unresponsive supply chain
- **Tooling** – Find source for tooling when unable to manufacture due to unavailable tooling
- **Technical Field Support** to foundry/forge, process, design, manufacture, or other problems
- **Update TDP** with current specifications, processes, etc and their interpretation
- **Assist Engineering Support Activity** in expediting required engineering analysis/response



# Additional Casting Resources



- **Defense Tooling Locator**
  - <http://www.defensetooling.net>
- **Steel Founders Society of America**
  - <http://www.sfsa.org>
- **America Founders Society Inc.**
  - <http://www.afsinc.org>
- **North American Die Casting Association**
  - <http://www.diecasting.org>
- **Non-Ferrous Founders Society**
  - <http://www.nffs.org>
- **American Metalcasting Consortium**
  - <http://www.amc.aticorp.org>



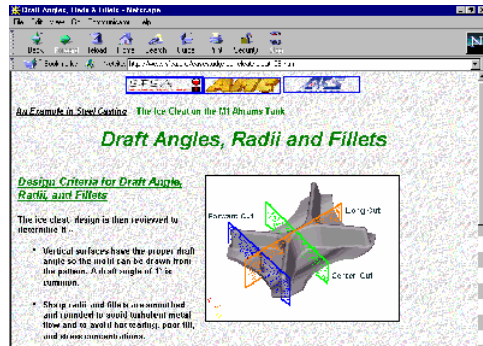
# AMC



# Additional Casting Resources



- **American Metalcasting Consortium**
  - <http://www.amc.atcorp.org>
- **Defense Casting Suppliers**
  - <http://www.defensecastingsuppliers.com>
- **Defense Tooling Locator**
  - <http://www.defensetooling.net>
- **Steel Founders' Society of America**
  - <http://www.sfsa.org>
- **American Foundry Society**
  - <http://www.afsinc.org>
- **North American Die Casting Association**
  - <http://www.diecasting.org>
- **Non-Ferrous Founders' Society**
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# AMC

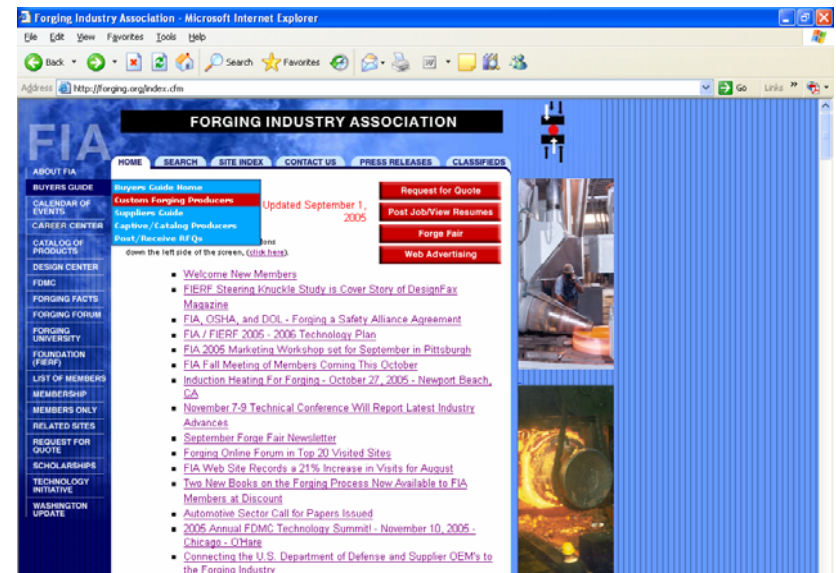




# Additional Forging Resources



- **The Forging Industry Association (FIA) website:**
  - <http://www.forging.org>
- **FIA website for Custom Forging Producers:**
  - <http://forging.org/bgguide/index.cfm>
- **Forging Defense Manufacturing Consortium**
  - <http://www.fdmc.aticorp.org>





# Yoke: Universal Joint



**NSN 2520-00-679-9246**

- Used on M113 Armored Personnel Carrier
- Supplier had no forging source
- FORGE-IT Team
  - Located forging source
  - Located tooling
- Enabled on-time delivery
- Lead time savings over 100 days
- Tooling cost avoidance of \$25,000







# Turbine Blowers



- Used on JFK Aircraft Carrier
  - Numerous NSNs involved
- Hardie-Tynes sole source supplier
  - Foundry source went out of business
- CAST-IT Team
  - Salvaged tooling for 78 parts
  - Identified new foundry source
- Supply chain was kept intact



# AMC



# Value Engineering Change Proposals

## VECPs



# Value Engineering Change Proposals



- Contractual method to share savings
  - Improve DoD supplies and/or equipment
  - Savings shared between Contractor and DoD
  - Described in FAR Clause 52.248.1
- Improvements include any price savings
  - Processes
  - Materials
  - Manufacturing techniques
  - Other





# Rules and Tools

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- VECP clause in all DSCC contracts > \$25K
- Clause can be added by modification
- VECP can only be received on an instant contract
- Typical share ratio: 50/50
- Collateral lifecycle savings may be negotiated



# Desiccant Canister



**NSN 4440-01-004-8602**

- VECP submitted by Drytech Inc. resulted in significant lifecycle savings and increased lifespan for the waveguides on F-15 Aircraft radar
- After a strenuous approval process, Drytech Inc. received \$55,036 for the approved VECP





# Replenishment Parts Purchase or Borrow Program

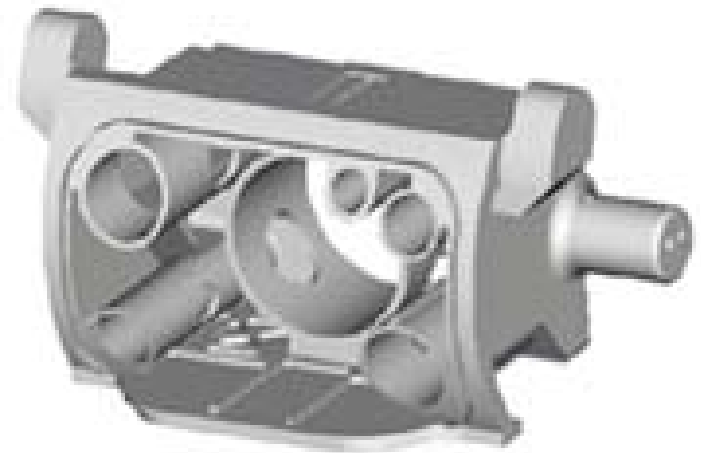
## RPPOB



# Why RPPOB



- Statutory Requirement
  - Defense Procurement Reform Act of 1984
    - Public Law 98-525, Section 1216(a)
    - Codified at Title 10 U.S.C. 2320(B)
- Promote full and open competition
- Develop new sources
  - Sole Source
  - Limited Competition Items





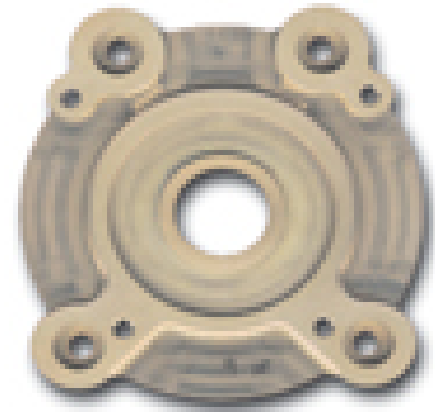


# RPPOB Methods

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- Direct Purchase
  - Contractor purchases at Standard Unit Price (SUP)
  - Item is not returned
- Bailment
  - Item loaned at SUP
  - SUP held in Trust by DFAS
  - SUP monies returned
    - If item is returned in “A” condition
- View of Part
  - Contractors may inspect part in a designated area





# RPPOB – What it is Not



- Not intended to proof their manufacturing
- Not available on solicitations/contracts when:
  - In accordance with a drawing
  - In accordance with a specification
- Not to test a competitors part



**Purpose: Develop New Sources**



# RPPOB Process

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- Contractor request received
- Item reviewed as an RPPOB candidate
- Contact with ESA for approval to bail out
- Contractor provides monies and signs the agreement
- Item directly sent to Contractor
- Contractor provides alternate offer data package
- Data package sent to ESA for final approval
- System updated with approval



# Benefits

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- Break Sole Source
- Provide additional sources on limited source items
- Provide source for obsolete items
- Reduce cost through enhanced competition
- Potential for Unlimited Rights TDPs

**Increased Competition = Lower Cost to Taxpayers**



# Sustaining Engineering Program

## SE



# Sustaining Engineering



- Improve/upgrade DLA-managed items
  - New technology
  - Quality/reliability improvements
  - Ease of maintenance improvements
  - Improve logistics footprint
- Save money!!
- DLA initiates SE Program
  - Aviation items
    - DSCR: Jan 03
  - Land and Maritime items
    - DSCC: Jan 04





# DSCC Sustaining Engineering



- Proposals solicited from all services
- Proposals evaluated by DSCC team
  - Value Management Team lead
  - Weapon System Support Manager (WSSM)
  - Cognizant Maritime/Land Application Team
    - Engineer/technical
    - Product Assurance
    - Buyer
- Selections funded/implemented in order of
  - Date of receipt
  - Weapon system support impact
  - Overall best value to customer
- Accepted proposals funded by DSCC
  - Coordinated with ESA
  - Funds available FY06: \$5M







# Project Selection Criteria



- DLA/DSCC managed item
- Minimum ROI of 10:1
  - Lifecycle savings
- Make positive impact
  - Operational readiness
  - ALT/PLT
  - Item demand
  - Unit price
- Reduce field maintenance actions
- Improve competitive position
  - Availability of tech data
  - Increase sources of supply





# Naval Transmitter Buoy



**NSN 5820-01-500-7012**

- Upgrade Transmitter Buoy to a single buoy to replace the current four-buoy system used by all US Navy submarines
- Benefits include:
  - Four NSNs cancelled
  - Four Allowance Parts Lists (APL's) replaced with one
  - Shipboard storage space reduced
  - 50% reduction in acquisition cost
  - CONUS source



**Investment: \$409K**

**ROI: 24:1**

**Project Savings: \$10M**

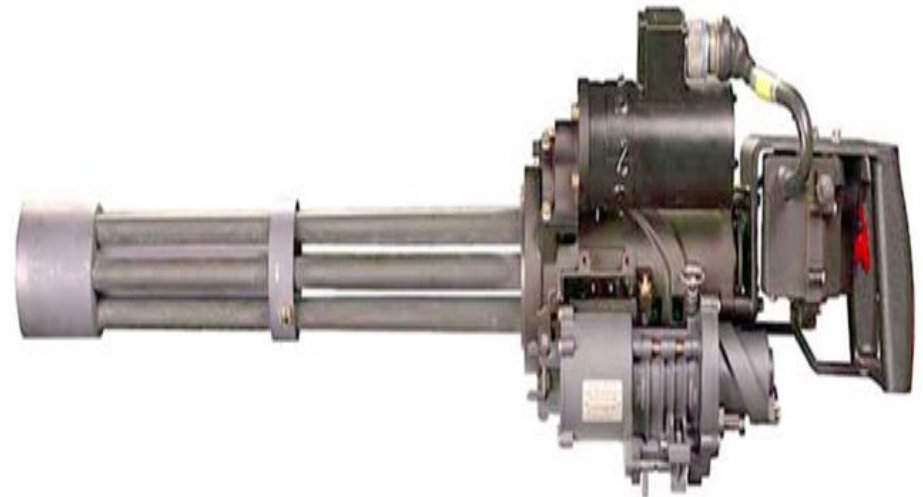


# M-134 Mini-Gun Wear Gage



**NSN 1005-00-903-0933**

- Rock Island Arsenal (RIA) developing barrel wear gage for M-134 Mini-gun
- Barrels currently replaced every 100,000 rounds fired
- Barrel wear gage will assess remaining barrel life
- RIA estimates a lifespan of over 200,000 rounds a barrel
- Extending barrel life will reduce support and operating cost



**Investment: \$115K**

**ROI: 31:1**

**Project Savings: \$4.5M**



# Summary



- DSCC's Value Management Office provides support
  - Government
  - Customers
  - Suppliers
- Our focus
  - Provide solutions on problem parts
  - Reduce acquisition and support costs
- For further information
  - Contact attached P.O.C.'s
  - Visit our booths: #711 & #712 on DSCC row



**Overall Goal: Support the Warfighter**





# Points of Contact

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