

# Engineering Sea Bag Requirements - Cruise 2009

The tools, books, and safety equipment listed below are requirements for all engineering cadets including all 4/C cadets participating in the 2009 Sea Term.

## Safety Equipment required for all Classes

- Steel Toed Shoes or Boots
- Boiler Suit *with long sleeves*
- Hearing protection with a noise reduction rating of (NRR-22) or higher. Ear muffs are required in the Engineerroom.
- Safety Glasses meeting the ANSI Z87.1-2003 standard with clear lenses. No colored lenses are allowed in the Engineering labs or in the Engineerroom.
- Safety Goggles
- Hard Hat color coded to class
- Canvas/Leather work gloves
- **Plastic** 2 D-Cell or equivalent, including medium size Pelican xenon or LED flashlights. *Small size, mini size, and metal flashlights are not acceptable for engineering work.*
- Extra Batteries and bulbs for flashlights

## 4/C Tools

- One Adjustable Wrench, 6-8"
- One Grove-Joint Pliers, 6-8"
- One Jackknife *no sheath knives*

## Books 4/c

- Introduction to Steam Engineering

## Books 3/c and up

- Marine Engineering Workbooks
- Engineering Training Manual

## 3/C and 2/C Tools

All tools previously mentioned plus:

- *Tool Box with Lock*
- *6" - 8" Pipe Wrench*
- *Assorted Flat Blade & Phillips Blade Screwdrivers*
- *Tape Measure, 6' minimum*
- *Socket Set, 3/8" drive, (1/4" to 7/8")*
- *Combination Wrench Set, (1/4"-7/8")*
- *Feeler Gage Set*
- *Lock-out/Tag-out kit*

## 1/C Tools

All tools previously mentioned plus:

- *Allen Wrench Set (up to 1/4")*
- *Utility Knife w/blades*
- *6" Vernier Calipers*
- *1" Micrometer*
- *Needle Nose Pliers*
- *Vise Grip Pliers, 6" or 8"*
- *Wire Stripper 8 – 18 AWG*
- *Wire Crimper 8 – 18 AWG*
- *Electrical Multi-meter*
- *Lock-out/Tag-out kit*
- *Tool Bag (suggested)*

## Engineering Rate Tools (1/C)

All tools previously mentioned plus:

- *1/2" Drive Socket Set to 1"*
- *Nut Driver Set*
- *6" Steel Rule*
- *Lock-out/Tag-out kit*

## Electrical Rate Tools (1/C)

All tools previously mentioned plus:

- *Wire Stripper 8 – 18 AWG*
- *Insulated Screwdriver Set*
- *Electrical Gloves*
- *Fuse Puller*
- *Electrical Multi-meter*
- *Lock-out/Tag-out kit*