



# From Lab to the Deck-plate

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Petter Kristiansen  
Assistant for Maintenance  
Process Improvement, SEA 05N  
(202) 781-3572  
[kristiansenpa@navsea.navy.mil](mailto:kristiansenpa@navsea.navy.mil)



*“Common Ship”*



## Lab to Deck Plate – Impact Technology

- Paints, deck coverings, fuel control, couplings, are improving quality of life aboard ship
- Some are high tech and some not – but they all solve an existing Fleet problem



Savings To-Date

\$27M and more than 2,150 Sailor Man-Years





## Getting Technology to the Fleet

- Solution approval process involves *Implementation*
  - Meeting military specs (testing)
  - Delivery method (AER, SHIPALT, MACHALT)
  - Planning for funding

Solution idea → Solution approval  
In less than 12 months using this process



## Industry Lab Example

### Problem:

Shipboard alignments between pumps and motors are time consuming and difficult. Misalignments cause premature bearing and seal failure and lead to motor winding and coupling failures.

### Solution:

Magnetic couplings eliminate precision alignments, eliminate coupling maintenance, increase bearing and seal life and lower starting currents for electric motors.



### *Magnetic Couplings*



*Old Style Coupling*



*New Magnetic Coupling*



## Industry Lab Example

### Testing:

- Despite widespread commercial application testing included:
  - Shock & vibration testing
  - Electro-magnetic interference testing
  - Prototype shipboard testing of 6 months for each application
  - An economic analysis

### Implementation:

- Funding in place for purchase and installation of 700 couplings in 10 applications using the MACHALT program from FY03-FY06
- Other applications undergoing economic analysis

### *Magnetic Couplings*



Solution idea → Solution approval  
7 months using this process for the mag coupling