



## Marine Industry

SIFCO Applied Surface Concepts (ASC) is the global leader in the selective plating industry. The SIFCO Process® - a portable method to electroplate localized areas without the use of an immersion tank - is used for many different, demanding applications in the Marine industry. Our process does not require extensive masking and can minimize or eliminate the need for component disassembly.



Due to the significant time and cost savings it can offer in extending maintenance intervals and service life, selective plating plays a vital role on-board military and ABS-certified vessels. While the process can be used in the shop to repair worn bearing journals and housings on small generators, pumps and fans; it can also be taken aboard the ship for in-place repairs of large, hard to move, components such as propeller shafts, bearing seats, and turbine casings.

When timing is critical and you want it done right the first time, contact SIFCO ASC at one of our seven locations worldwide.

### APPROVALS

- ▶ American Bureau of Shipping
- ▶ MIL-STD 2197(SH)
- ▶ NAVSEA



SMITHERS  
QUALITY ASSESSMENTS



SMITHERS  
QUALITY ASSESSMENTS



**ACCREDITED**

Chemical Processing

### US Headquarters

5708 E Schaaf Road  
Independence, Ohio 44131, USA

**T** +1 800 765 4131

+1 216 524 0099

**F** +1 216 524 6331

**E** info@sifcoasc.com

# Marine Applications

## SIFCO ASC ENGINEERED DEPOSITS PROVIDE THE FOLLOWING CHARACTERISTICS FOR THE APPLICATIONS BELOW:

- Anti-galling
- Surface Hardness
- Wear Resistance
- Corrosion Resistance
- Refurbishments

### PUMPS

Bearing housings • Impeller bores • Shaft bearing journals • Seal areas

### VALVES

Gates • Discs • Valve stems • Seal rings

### PROPULSION COMPONENTS

Propeller (line) shaft journal • Seal areas • Line shaft bearings • Bearing saddles

### ELECTRICAL

Motor generator bearing housings • Rotor journals • Commutators • Bus bars

### POWER GENERATION

Steam turbine bearing journals • Flange faces • Diesel engine cylinder liners • Connecting rod bores • Crankshaft journals • SSTG horizontal steam joints

### STRUCTURAL

Watertight door knife edge sealing areas • Hatch covers • Hull inserts • Access doors

### HYDRAULICS

Steering gear cylinders • Steering gear rods

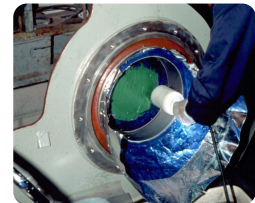
### ADHESION OF SIFCO PROCESS DEPOSITS

By using ASTM C633-79 Standard Test Method for Adhesion or Cohesive Strength of Flame Sprayed Coatings, SIFCO ASC established values for adhesion of SIFCO Process deposits which indicate that the cohesive strength of the deposit exceeds that of the cement. For example, the minimum tensile strength value established (at the point of cement failure during testing) for Nickel High Speed is 22,803 kPa (11,200psi) on a SAE 4130 steel base material.

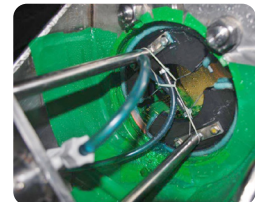
Additional qualitative tests, as described in AMS-QQ-N-290 were conducted in which the plated areas were subjected to high stresses and strains. These tests consisted of compressive and tensile bend tests as well as chisel tests into the deposit. The results showed excellent adhesion to the base material.



Outside Diameter  
Bearing Housing Application



In-place Inside Diameter  
Bearing Housing Repair



Diesel Engine Cylinder Liner  
Repair



Engine Block  
Dimensional Restoration

#### US Headquarters

5708 E Schaaf Road  
Independence, Ohio 44131, USA

**T** +1 800 765 4131

+1 216 524 0099

**F** +1 216 524 6331

**E** info@sifcoasc.com