

Condition Assessment Program (CAP)

Keeping your aging vessel competitive



ABS Consulting

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Why CAP?

Cargo owners and many of the largest charterers either require or prefer a CAP 1 or CAP 2 rating for all older vessels fixed to carry their cargo.

The commercial opportunities for an older tanker, bulk carrier or container vessel without a satisfactory CAP rating may be severely limited.

Why CAP with Fatigue Assessment?

The major charterers have introduced even tougher CAP standards as a requirement for charter. They demand that the CAP 1 or 2 rating include a detailed Fatigue Assessment. Other charterers are expected to follow this lead.

Only SafeHull (SHCAP) is able to quickly and cost effectively assess the cumulative impact of fatigue on a vessel's critical structural components.

What is CAP?

As a vessel ages, the manner in which the hull structure and principal machinery and equipment has been maintained is the most critical element to determine the likelihood of accidents, failures and pollution.

CAP is the recognized method for a shipowner to demonstrate the quality and suitability of a vessel for charter.

An older ship may be structurally sound, but casualty statistics clearly show that ships over the age of 20 are four times more likely to be involved in an accident.

CAP is a voluntary program, initially developed by the oil industry, to assess the continued fitness of older ships to carry their cargo safely.

CAP provides a charterer with a technical evaluation that determines that an older vessel may have been maintained to a standard that should minimize the possibility of a casualty, oil spill, mechanical failure or General Average claim.

CAP involves a detailed survey, including gauging of the vessel's structure and a sophisticated strength and fatigue engineering analysis. It also includes extensive testing of the vessel's machinery, equipment and cargo systems.

A CAP rating is assigned to the vessel. A CAP 1 (Very Good) or CAP 2 (Good) rating is required by most charterers.

Both of these ratings suggest that the vessel has been maintained to a standard in excess of Classification minimums.

When is a CAP Rating Required?

Most charterers require a CAP rating on all vessels aged 15 years and above.

ABS Consulting Maritime Services recommends that the CAP survey and analysis be coordinated with the vessel's Special and Intermediate Class surveys whenever possible to minimize cost and service disruption.

Hull thickness measurements taken no more than 15 months prior to the CAP survey by an approved gauging firm will be accepted provided they are verified by ABS Consulting Maritime Services and accompanied by subsequent trading and repair histories.



The ABS Consulting Maritime Services Advantage

- Professional, responsive service that meets or exceeds client expectations
- Commitment to quality and excellence
- Reduced overall cost
- Less time off hire
- Reduced exposure to pollution liability claims
- Close-up survey of cargo and ballast spaces
- Comprehensive, cost-effective fatigue and strength assessment of the vessel's structure
- Recommendations for enhancement of critical areas
- Projected possible structural performance for up to five years
- Comprehensive management of structural failure risk through identification and enhancement of critical areas
- More effective identification of required steel replacements through dynamic-based structural evaluation, including fatigue assessment
- Targeted maintenance and lower life cycle repair costs
- Potentially higher resale value
- Possible reduced insurance premiums

Where is a CAP Survey Undertaken?

The survey and gauging usually take about 10 days. To minimize operational disruption, ABS Consulting Maritime Services recommends that the survey and gauging be undertaken while the vessel is on passage in ballast. Free access to all cargo and ballast spaces must be provided.

How is a CAP Rating Determined?

Two experienced surveyors, informed of specific areas of fatigue concern, will conduct a close-up visual inspection, supported by an extensive photographic record, of all cargo and ballast spaces to determine the degree of structural deterioration.

Only ABS Consulting Maritime Services conducts such an extensive survey.

An approved gauging (thickness measurement) firm will conduct a comprehensive ultrasonic gauging of three complete girthbelts within 0.4L of the section of the hull subject to the maximum bending moment.

Engineers use these gaugings, together with as-built scantlings and subsequent trading and repair histories, to conduct a SafeHull evaluation of the vessel's structural strength.

The analysis takes into account potential realistic dynamic loads acting on the vessel.

The surveyors will carry out function tests on the main propulsion and auxiliary systems including steering gear, electrical power supply, cargo pumps, ballast pumps and venting systems among others.

The results of these tests, together with the strength and fatigue assessments and survey records, are evaluated by ABS Consulting Maritime Services experts and then a final CAP rating (Grade) is assigned to the vessel.

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