The followings are the diminution limits to hull structural members. These limits are specified subject to the condition that the ship is registered with this Society and undergoing the surveys by this Society's surveyor(s). These limits are also determined subject to the condition of a stand-alone corrosion of the structural member in question. In case of the corrosion associated with other structural members special consideration may be paid. This Society does not hold the responsibility for the application of these diminution limits to the ship not registered with this Society in order to make the judgement of renewals or repairs.

Criteria for Corrosion

When corrosion is found at survey, the Surveyor should evaluate the corrosion and judge the necessity of repair. This chapter shows the principle of the criteria for this purpose.

1.1 Corrosion pattern

Following corrosion patterns are defined as 'uniform corrosion' in this chapter.

-1. Corrosion spreading over frame spaces, including pitting corrosion whose area exceeds 70% of the intended area

-2. Corrosion spreading over the breadth or length of the plate, including grooving along frames, longitudinals, girders, etc.

-3. Pitting corrosion and local corrosion whose area exceeds 70% of intended area

1.2 Permissible diminution level

-1. Permissible diminution level for uniform corrosion

Structural Member	Permissible diminution Level
-Shell plates -Strength deck plates -Longitudinal beams.(flat bow) on shear strake and strength deck -Tight bulkheads in deep tanks -Inner bottom plates	20% of original thickness + 1 mm
-Floors and girders in double bottom -Primary members (web & face) -Web, face and bracket of hold frames -Watertight bulkhead plates	25% of original thickness
-Web and Face of flames (excluding hold frames), longitudinal beams, stiffeners and brackets. -Effective deck plates -Hatch cover and hatch beam	30% of original thickness

-2. Min. thickness of hold frame web an their end bracket

Length of ship (m)	L < 150	150 ≦ L < 200	200 ≦ L
Min. Thickness (mm)	6	7	7.5

-3. Permissible corrosion level of high-tensile steel

Permissible corrosion level of high-tensile steels used for bottom longitudinals of single-hull oil tankers is 25% of original thickness. Permissible corrosion level of high-tensile steels used for another structural members are as per the above -1. and -2.

-4. Allowable limit for local corrosion

Nevertheless the above, necessity of repair for local corrosion is to be determined at the Surveyor's discretion. However, permissible corrosion level for local corrosion, except for stress corrosion, should not exceed 40% of original thickness in general.

1.3 Measure against corrosion

When remarkable corrosion is found in the results of thickness measurement, the Surveyor should examine the pattern and extent of the corrosion through intensive inspection and take a necessary measure as below. Especially in case where substantial corrosion exceeding 75% of allowable corrosion margin is found, the corrosion should be examined more carefully by further intensive inspection including additional gauging as found necessary.

-1. The Head Office examines longitudinal strength and/or shearing strength based on the record of thickness measurement, when deemed necessary. For this purpose, the Surveyor is requested to make following description on the survey record when;

(a) Average corrosion of each strake in strength deck or bottom plate exceeds 2.5 mm or 15% of original thickness, which is greater, through the results of belt gaugings,

(b) Average corrosion of any strake in side shell or longitudinal bulkhead of oil tankers exceeds 3.0 mm, or

(c) Average corrosion of any strake in side shell or longitudinal bulkhead of ore carriers or bulk carriers intended for alternate loading exceeds 2.5 mm.

"Surveyor's note : the reduction of longitudinal strength due to the wastage of the longitudinal structural members is to be checked and evaluated by the Society's Head Office based on the thickness measurement record."

-2. Special requirements for bulkhead plates in cargo holds of existing bulk carriers carrying high density cargoes

Allowable diminution limits are required to be applied according to the structural requirements (IACS UR S19) for corrugated bulkhead plates in cargo holds for which assumed flooding is taken into consideration. These limits are noted in the attachment Form ATT(BCS-1) to survey record Form CLF/CLJ.