

Calculating minimum freeing port area

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Maritime New Zealand Technical Clarification

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What this regulator guideline contains

This regulator guideline is for surveyors calculating the minimum area of freeing ports required by rule 47.65(5).

Application

This guidance applies to section 2 of Part 47.

Section 2 applies to ships less than 24 metres in length that carry cargo, provided that the ship is a decked ship or a barge that carries persons on board during a voyage.

Section 2 does not apply to fishing ships unless they carry goods for reward other than their catch.

Issue

Surveyors have advised Maritime NZ that rule 47.65(5) is difficult to apply. Maritime NZ understands that the drafting of these rules has caused issues.

The rule has been modeled on corresponding requirements for ships 24 metres and over in the Load Line Convention. However, while the intent is clear, a literal reading of the rule has created provisions that are extremely hard to reconcile.

Rules 47.65(5) and 47.65(5B) contain cross-references that can be read as limiting the application of the rule to ships with standard sheer or greater than standard sheer. However, the rules were not intended to exclude the ships with less than standard sheer. This guidance seeks to clarify Maritime NZ's interpretation of the rule.

Maritime NZs view

Rule 47.65(5) is intended to reflect the approach to freeing port calculations set out in regulation 38 of the Load Line Convention.

Maritime NZ's interpretation of the requirements of rule 47.65(5) for calculating minimum freeing port area is set out below.

1. Determine the base calculation of minimum freeing port area on each side of ship

Length of the well is 20 metres or less

Where the length of the well is 20 metres or less, the minimum freeing port area should be no less than the values in the table below, with intermediate lengths determined by interpolation.

Length of well (metres)	Freeing port area (each bulwark, square metres)
2.5	0.28
5.0	0.52
7.5	0.72
10.0	0.90
12.5	1.07
15.0	1.21
17.5	1.32

Length of the well is more than 20 metres

Where the length of the well is more than 20 metres, the minimum freeing port area should be equal to $0.07 \times l$ (where: l = length of well in metres).

2. Correct for bulwark height

Greater than 1.2 metres in average height

For each 0.1 metre increase in height, the minimum freeing port area should increase by 0.004 square metres per metre of length of well.

Less than 0.9 metres in average height

For each 0.1 metre decrease in height, the minimum freeing port area can reduce by 0.004 square metres per metre of length of well.

3. Adjust the base calculation and correction for height to allow for sheer

No sheer

First apply the base calculation and correction for height as set out above in steps 1 and 2 above. Then multiply the result by a factor of 1.5 (50% increase).

Less than standard sheer

First apply the base calculation and correction for height as set out above in steps 1 and 2 above. Then use linear interpolation to calculate a percentage increase in minimum freeing port area.

Note: The % increase will be determined by the degree to which the sheer is less than standard, and will fall between 50% (no sheer) and 0% (standard or greater than standard sheer).

Standard sheer or greater than standard sheer

Apply the base calculation and correct for height as set out in steps 1 and 2 above.