

15. The compasses of iron ships are more or less affected by what is termed the heeling error; on what courses does this error vanish, and on what courses is it the greatest?
 Vanishes on East or West course, is greatest on North or South Course.
16. State to which side of the Ship, in the majority of cases, is the North point of the Compass drawn in the Northern Hemisphere, and what effect has it on the assumed position of the Ship when she is steering on Northerly, and also on Southerly Courses?
 Generally to windward, consequently the ship will be to windward of her position on Northerly, and to leeward on Southerly Courses.
17. The effect being as you state, on what courses would you keep away, and on what courses would you keep closer to the wind, in order to make good a given Compass Course?
 I would keep away on Northerly courses, and keep closer to the wind on Southerly Courses.
18. Does the same rule hold good in both Hemispheres with regard to the heeling error?
 No, it generally reverses in the Southern Hemisphere.
19. Your steering Compass having a large Error, how would you proceed to correct that Compass, by compensating magnets and soft iron, in order to reduce the error within manageable limits.

Draw two chalk lines on the deck, one fore and aft, and the other athwartships, immediately under the centre of the Compass. Get the ship perfectly upright, and lay her head N. or S. correct magnetic. Provide two powerful magnets from 18 inches, to two feet in length—place one of these ~~on~~ the athwartship line, with its centre on the fore and aft line, and the N. or marked end to Starboard if the N. point of the needle is drawn to Starboard, and *vice versa*, keep the centre on the fore and aft line, and move the bar to or from the Compass until her head is N. or S. by Compass. Then get her head E. or W. correct magnetic, place the other magnet ~~on the~~ fore and aft line, with its centre on the athwartship line, and the N. or marked end aft, if the N. end of the needle is drawn towards the stern, and *vice versa*, keep the centre on the athwartship line, and move the bar to or from the Compass, until her head is E. or W. by Compass—next lay her head on one of the four point Courses. Place two boxes with soft iron on each side of the Compass, and level with the needle, add to, or reduce the iron in either box until the Compass is correct. This adjustment when once made should remain perfect, at all times, and in all latitudes.