

(Column 3) Clearing Line

When navigating near the coastline, it is essential to set a "clearing line" in advance on nautical charts, GPS plotters, or radar screens to prevent grounding on reefs or stranded.

- A clearing line is used to separate dangerous and safe zones by establishing **bearing lines or equidistant lines from prominent landmarks** on nautical charts (or GPS plotter screens). It helps prevent grounding in shallow or narrow waters. By setting a clearing line, deviations into dangerous areas can be immediately detected without frequent position checks, allowing the operator to focus on navigation.

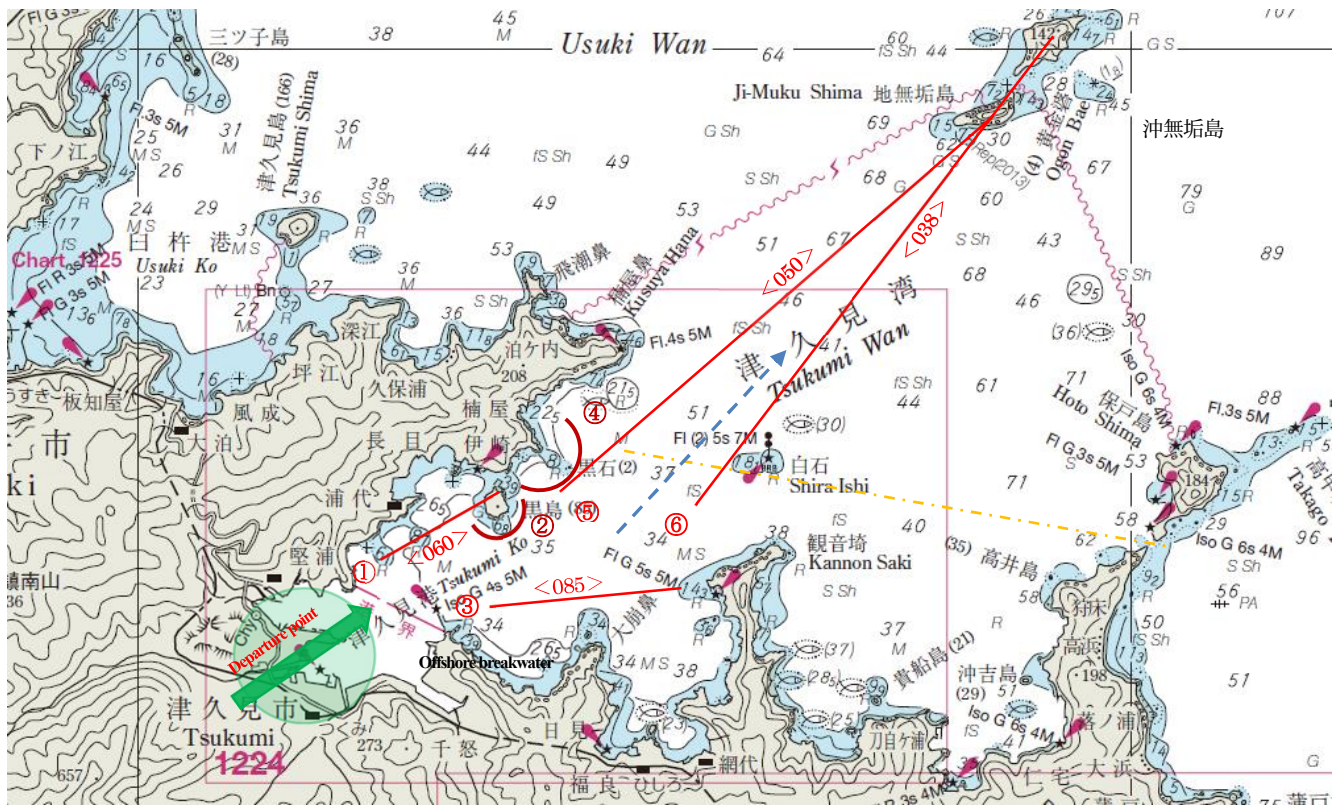


Figure 17- Resource: Japan Coast Guard website (nautical charts W151 modified)
<https://www1.kaiho.mlit.go.jp/TUHO/tuho/html/tuho/pdf/2016hoseizu/2016-39-577-W151.pdf>

Figure 17 illustrates an example of a clearing line for a route departing from Tsukumi Port, Oita, toward open waters (blue dashed line).

For a while after departure, maintaining a steady course is challenging due to avoidance maneuvers. Additionally, the narrow coastal waters contain shallow areas with sunken rocks ("+" symbol), the prominent rock above water "Kuroishi", and the "Shiroishi" isolated danger mark. To prevent grounding in an uncertain course state, clearing lines ①–⑥ have been set.

1. Immediately after departure, navigate with caution regarding **clearing line ①** (a true bearing of 060° connecting Kuroshima's peak and the edge of the shallow area with sunken rocks). If Kuroshima's peak exceeds a true bearing of 60°, the vessel enters the danger zone.
2. After passing the harbor breakwater's tip at a true bearing of 180°, avoid entering the inside of **clearing line ②** (a hazard avoidance circle equidistant from Kuroshima's peak to the shallow area). Additionally, pay attention to **clearing line ③** while navigating.
3. After passing Kuroshima, navigate without entering the inside of **clearing line ④** (a hazard avoidance circle based on the cape northwest of Kuroishi). Sail between **clearing line ⑤** (a true bearing of 050° connecting Chimuku Island's peak and the intersection of clearing line ④) and **clearing line ⑥** (a transit line on a true bearing of 038°, connecting Okinuku Island and Chimuku Island's peaks and extending to the shallow area west of Shiroishi). Once past the yellow line connecting Kusuyahana and Hoto Island, the vessel enters wide area, allowing for steady course alignment as needed.