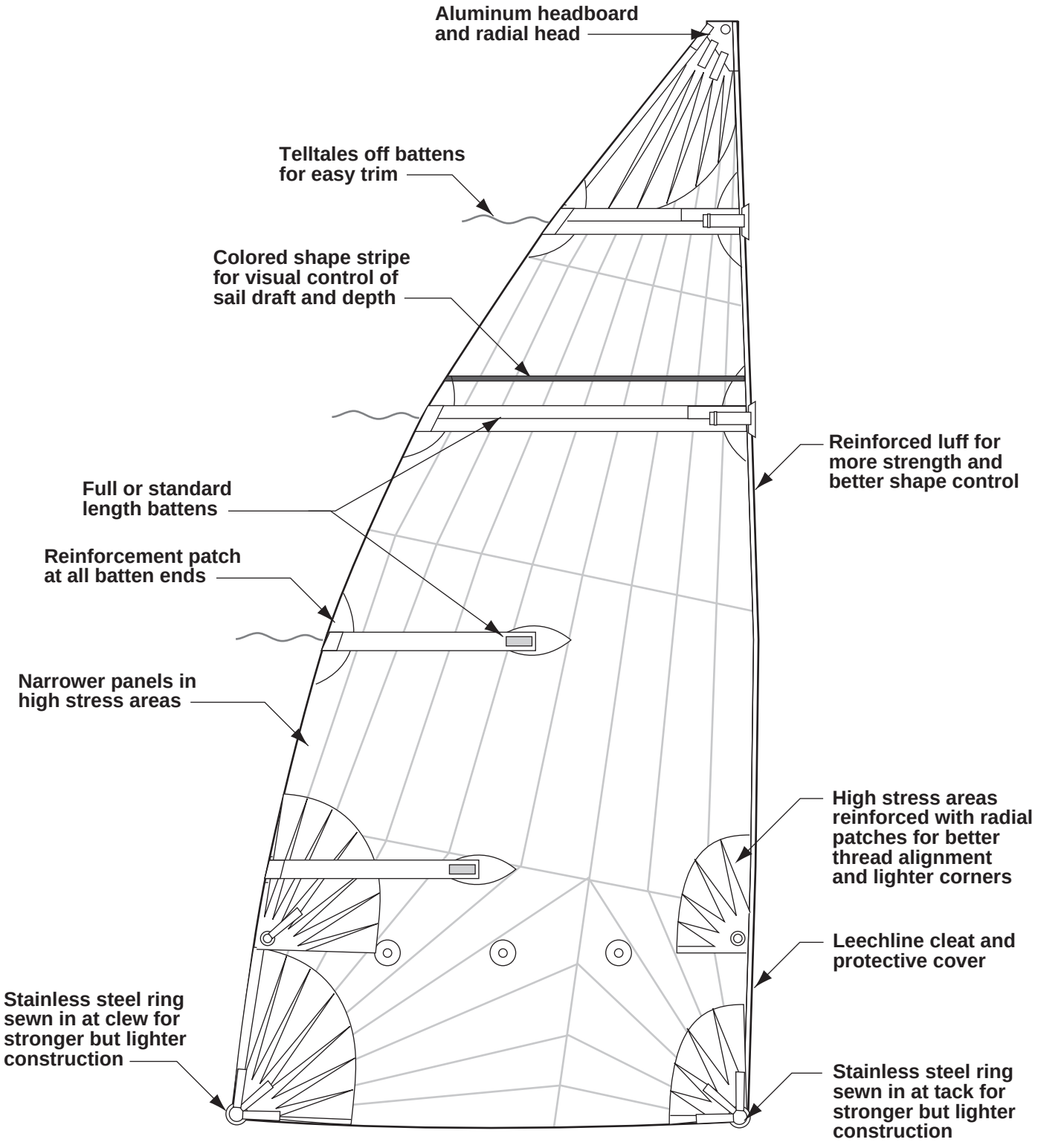HALLETT TRI-RADIAL MAIN