

Abstract

ACOUSTIC TRANSMITTING ANTENNA

An acoustic antenna (ANT) intended to equip a sonar, the antenna being centred around a first longitudinal axis (Al) and comprising at least a first assembly of at least two transducers (T1) and a second assembly of at least two transducers (T2) stacked along the longitudinal axis, each transducer having at least a radial mode having a resonance frequency, referred to as the radial frequency, and a cavity mode having a resonance frequency, referred to as the cavity frequency, characterised in that the transducers of the first assembly are configured to transmit sound waves in a first continuous frequency band extending at least between the cavity and radial frequencies of the transducers of the first assembly and the transducers of the second assembly are configured to transmit sound waves in a second continuous frequency band extending at least between the cavity and radial frequencies of the transducers of the second assembly, in that the cavity frequency of a transducer of the second assembly is equal to the radial frequency of a transducer of the first assembly plus or minus $(f_{r1}-f_{c1})/10$, f_{r1} being the radial frequency of the transducer of the first assembly and f_{c1} being the cavity frequency of the transducers of the first assembly and characterised in that the transducers of the second assembly are positioned between the transducers of the first assembly and in that no transducer of the first assembly is positioned between the transducers of the second assembly.