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There Is More to Warships Than the Eye Can See!

Ships shift towards total invisibility

Indeed there is. Warships may seem rather powerful, but this showoff of sheer power would not be very efficient against people that don't give a penny on looks. What the modern warfare needs is invisibility. You might have noticed the trend followed by a series of armies around the world, starting with the development of stealth technologies, effective against radar and heat-seeking missiles, all the way to the minimization of sound vibrations emitted by the respective machine, or even the reduction of the magnetic distortions produced by the simple presence of a massive object. Camouflage is a technique of deception invented by nature. It might not seem much, but the truth is that camouflage is being widely used in modern warfare. Did you know that during the World War II, US engineers considered camouflage such an important aspect that they even calculated the precise brightness of a warship so that it would fall in the background of the sea? Stealth technologies are no different than that, beginning with a painting technique that achieves partial invisibility through the use of flamboyant cubist patterns, called 'dazzle painting'. During the World War II conflagration, a British physicist by the name of Robert Watson Watt had the task of designing what we now call a 'death ray', capable of destroying entire cities at a time, but failed in finding the solution to the problem. Alternatively, he realized that he could use the radio wave to his advantage in order to spot objects far more distant that the human eye is capable of seeing. This was the radar device. Nonetheless, physicists soon realized that they could make radar invisible ships and aircrafts just by slightly altering the shape of the object and coating it with a special radio-wave absorbent paint. Great advantage, but quickly overpowered by the fact that most of the ships produce acoustic and magnetic signatures which can be used to make accurate detections. Today's ships imply the use of vibration dampners and metamaterials to reduce the magnetic signature, making them truly invisible. Metamaterials are artificially-created structures specially created to alter the electromagnetic properties of light, such as bending it around a specific object so that it would appear completely invisible in the electromagnetic spectrum. The problem is that, for now, such materials are currently in development and only work in 2-D and specific frequency ranges.