

A Short Communication of Oceanic Lithosphere

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Oceanic lithosphere is produced at ocean ridges and cools, thickens, and increases in age as it moves away from ridges. Between the oceanic lithosphere and asthenosphere may be a thermal physical phenomenon. Oceanic lithosphere is often about 50-100 km thick (but beneath the mid-ocean ridges is not any thicker than the crust). The continental lithosphere is thicker (about 150 km). New oceanic lithosphere is created by frequent volcanic eruptions along the length of mid-ocean ridges and is pushed outward from them gradually. It is bounded by the atmosphere above and also the asthenosphere (another part of the upper mantle) below. Oceanic lithosphere consists mainly of mafic crust and ultramafic mantle (peridotite) and is denser than continental lithosphere. Young oceanic lithosphere, found at mid-ocean ridges, is not any thicker than the crust, but oceanic lithosphere thickens because it ages and moves far from the mid-ocean ridge. The identical crop over and over strips vital nutrients within the lithosphere [1].

Overgrazing is a process that removes excessive amounts of plants by using animals to strip and erode the topsoil so no plants should be ready to grow. Oceanic plates are formed by divergent plate boundaries. As lava flows from these volcanic ridges, it quickly cools, forming extrusive stone. As oceanic plates subduct, they melt to create magma. Humans can affect the lithosphere by farming, building structures (urbanization), mining and every one manner of activities that change the initial. After deforestation occurs the soil is left nutrient poor, after this the land is unusable and vegetation can now not grow. The chemical compounds that are found within the soil change thanks to the dearth of vegetation. When two oceanic plates converge, the denser

plate will find itself sinking below the less dense plate, resulting in the formation of an oceanic subduction zone. Whenever a subduction zone is created, the subducted plate will find itself being partially melted by the earth's internal magma and molten [2].

Once new oceanic lithosphere forms it begins to cool down. The lithosphere is extremely warm relative to the cold ocean water above it. These natural processes are a type of metamorphism. Ultramafic rock (rocks enriched in magnesium and iron) that formed deep within the layer and oceanic lithosphere can gradually be altered into serpentinite. Large amounts of serpentinite are exposed within the Coast Ranges of northern California where old ocean crust has been pushed up and exposed within the mountain ranges. In some locations, the extremely popular, fluid lava migrating upward from the asthenosphere (upper mantle) reaches the surface of the seafloor leading to formation of undersea volcanoes. These undersea eruptions produce pillow basalts - pillow-shaped pods of basalt rock formed where the recent lava cools rapidly when exposed to seawater. Oceanic sediments gradually blanket the aging oceanic crust because it moves far from the spreading center. The layer of sediment grows thicker and thicker because it moves far from the mid-ocean ridge [3].

References

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