The Aegean Region is located in western part of Turkey. The region is one of the most seismically active region and is affected by Hellenic subduction system. This study presents correlation of thermal structure and Vp velocities of the Aegean Region. In order to determine thermal structure for the region, CPD (Curie Point Depths) were estimated from power spectrum of magnetic data. Estimating CPD and heat flow calculated from them are ranges 9.8-19.5 km and 51-125 mWm-2, respectively. Using heat flow values, the distribution of Vp velocities was determined to be 3.6- 4 km/s. Obtained distribution maps of heat flow and Vp velocities indicate that low heat flow values correspond to high Vp velocities in the Aegean Sea and this situation is thought to be related to asthenospheric upwelling. All results show good agreement with the thermal structure and slab geometry in the Aegean Region.