

Heavy Mineral Sands Resources and What We Know About These Deposits in China

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China has considerable mineral resources of Ti, Zr, rare earth elements and thorium in the forms of ilmenite, rutile, zircon, and monazite, respectively, within coastal deposits of heavy mineral sands (HMS), with about 200 known deposits. Commercially important HMS deposits in China occur almost entirely in Cenozoic beach and sand dune deposits, principally along the eastern coast (e.g., Shandong Province) and southern coast (e.g., Guangxi, Guangdong, Hainan, and Fujian Provinces), and particularly on Hainan Island. There are also important deposits of HMS along coastal areas of Taiwan Island. More than 20 HMS deposits in coastal environments have been reported in China during the past three decades, of which 13 have been reported to have industrial resources. Most significantly, China reportedly has the largest share of the world's economic ilmenite resources (31%). Due to nearly exhausted placer reserves in the Chinese coastal zone, as well as increased environmental restrictions, future prospecting for heavy minerals will likely focus on ancient beach systems in China's inland sedimentary basins.