

论文

西藏羊八井-康马地区现今地应力测量结果与应力状态分析

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摘要 本文给出了西藏羊八井-康马地区不同地点的现今地应力实测值的大小和方向. 为了解青藏高原现今地应力状态, 结合青藏铁路工程的需要, 我们在羊八井-康马地区进行了现场地应力测量. 测量方法采用压磁应力解除法, 测点分别布置在羊八井、拉萨、曲水和康马等四个不同的构造部位, 测量深度为11~18m. 测量结果表明, 本区最大水平主应力方向以NW-NNW为主, 最大水平主应力值一般为3~10 MPa, 但在板块缝合带上的曲水测点最大水平主应力值为2~3 MPa. 与其他地区相比较, 本区属中高应力区. 而在曲水应力值属中等偏小, 可能反映了板块缝合带现今处于应力释放状态, 板块缝合带附近应力具有复杂性.

关键词 [青藏高原](#) [现今地应力](#) [地应力状态分析](#)

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The result of current stress measurements and stress state analysis in the region of Yangbajain_Kangmar in Tibet

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Abstract This paper provides the values and the directions of current stress measurements of different sites in the region of Yangbajain_Kangmar in Tibet. In order to learn the current state of stress in Qinghai_Tibet plateau and to meet the demands of Qinghai_Tibet railway construction, we carried out in_situ stress measurements in the region of Yangbajain_Kangmar. The measurement sites were located at different tectonic positions, Yangbajain, Lhasa, Quxu and Kangmar, and the test depth is between 11m and 18m using piezomagnetic stress gauge. The results of stress measurement indicate that the direction of maximum principal stress is mainly NW_NNW and the values of maximum principal stress is between 3~10 MPa, which are high or middle as compared with the values obtained elsewhere in China. But in Quxu site of the plate suture zone, the value of maximum principal stress is 2~3 MPa, which may indicate that the stress is partially released and the stress state is very complex in the plate suture zone.

Key words [Qinghai_Tibet plateau](#); [Current stress](#); [Analysis of stress state](#)

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