

1.7.8. STUDY ON SPECTRUM OF ACOUSTIC EMISSION SIGNALS OF BRIDGE CRANE

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The characteristics of acoustic emission signals were studied by performing AE test for more than 20 bridge cranes and destructive test of one box beam. The results indicate that AE sources of bridge cranes are mainly from cracking, plastic deformation, structural friction, the noise of vehicle and trolley, and et al. It was found that the peak frequencies of AE signals near 130 kHz and 330 kHz respectively for crack growth, 150 kHz for plastic deformation, 70 kHz for structure friction and 90 kHz for vehicles moving. AE test is a good and quick nondestructive testing and safety evaluation method for bridge cranes.