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考虑双向非线性的橡胶垫隔震层静力性能(PDF)

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Title: Static behavior of isolation rubber bearing with consideration of its bidirectional nonlinearity

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关键词: 平扭耦联; 隔震体系; 双向非线性; 静力性能

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摘要: 在高阻尼橡胶垫单向双折线非线性假设的基础上,运用塑性流动法则,建立了平扭耦联隔震体系隔震层的双向非线性弹塑性本构关系计算模型及其静力计算方法.同时,通过隔震层模型的计算,分析了隔震垫非线性及隔震垫不同布置对其静力性能的影响,供平扭耦联隔震体系双向非线性动力性能的进一步研究参考.

Abstract: Based on the assumption of unidirectional bilinearity for high damping rubber bearing and by use of plastic flow law,the bidirectional nonlineare lastoplastic constitutive model of the isolation system with coupled horizontal and torsional motion and its calculation method are established.The influence of the nonlinearity and arrangement of the isolation rubber bearing on the static behavior of the system are analized.The results could give a reference to further research on bidirectional non linear olynamic behavior of the horizontal-torsional coupled vibration-isolation system.

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