

釧路地域における強震記録と免震建物の応答

Strong Motion Records and Response of Base Isolated Buildings in Kushiro Region

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要 旨

2003年十勝沖地震では、釧路地域に建つ複数の免震建物で10cmを超える変位応答を観測した。本報告では、釧路市内で得られた強震記録を分析し、地震動の特性が免震建物の変位応答に及ぼす影響について検討した。また、釧路地域の $V_s=700\text{m/s}$ 程度の工学的基盤深さの地震動特性に及ぼす影響について検討を行った。その結果、釧路中心部より西側の観測点ほど工学的基盤（浦幌層群）は深くなり、浦幌層以浅の地盤構造モデルを仮定した等価線形解析により得られる各観測点の伝達関数および変位応答スペクトル（減衰20%）は、観測結果と調和的であった。

キーワード：2003年十勝沖地震，免震建物，やや長周期地震動，応答スペクトル，地盤構造

Summary

Strong motion records of the Tokachi-oki earthquake in 2003 were obtained at several base isolated buildings in Kushiro region. We investigated accelerations of the observed records and calculated displacement response spectra having a damping factor of 20%.

Based on the form of the geologic profile along a EW line at the region, Urahoro layer can be considered to be the engineering bedrock with the shear wave velocity of about 700 m/sec, and the level of bedrock becomes deeper as the distance to the west increases from the center of Kushiro-City.

Then the soil structure models at each site were assumed, and displacement response spectra having a damping factor of 20% were calculated using the equivalent linear method.

As a result, it was shown that the predominant period of spectra of each point corresponded to those of observed records at the engineering bedrock depth.

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