

## **MODEL TESTS AS MEANS TO PREDICT FULL SCALE BEHAVIOUR UNDER BLAST LOAD - A STUDY**

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The Swedish personnel shelter named GROUP HELMET consists of an earth-covered hemicylindrical corrugated steel structure. From calculations and shock-tube tests on models scaled 1:10 it has been assigned a protection level of 400 kPa. In the DICE THROW Event two full-scale objects were placed at the expected overpressure levels of 700 kPa -and 400 kPa respectively. Final results were in excellent agreement with prior model-scale tests. It might be concluded that proper handling of experimental data from blast tests in model scale may form a basis for the design of full-sized structures. Model tests can indicate weak spots in a preliminary design. Careful treatment of model test data can also indicate the final protection level of the full-size object. It should be noted that ordinary shock-tube tests giving an expected blast pressure do not generate the corresponding ground shock effects.