

## MODEL-ASSISTED DESIGN

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For a first approximation to the effect of conventional blast- effect weapons on structures, the designer may make use of nomographs giving the loading under idealized conditions (plane wall in a semi infinite medium, etc.).

If he wishes to allow for the effect of the geometry and environment of his design on the distribution of the pressure field, he must have recourse to computation codes dealing with the three-dimensional propagation of airborne shock waves. These codes are reliable ( based on established thermodynamic laws ), but are not for beginners and require rather large computing resources. Few designers can justify the necessary investment in personnel and equipment. It is for this reason that LEA, on the basis of work done at the Institute Saint Louis ( ISL ), has developed a simple procedure for tests on models. which it proposes presenting as follows:

- 1) The experimenter's approach. Presentation of the device. Costs.
- 2) Extend of derivative possibilities of the method description of equipments, lowering of civil engineering costs, practically immediate estimation of the extra cost of the increase in survivability, etc. ).
- 3) Concrete example of an imaginary case of a standard entrance.
- 4) Correlation of the results with numerical simulations DTM/Brest)