Blast Resistant Modular Building for the Petroleum and Chemical Processing Industry

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ABSTRACT

There exists a need for blast resistant yet portable buildings to protect personnel temporarily assigned duties within explosively hazardous areas. Several companies have designed products to meet this need. Blast resistant portable buildings the size of a typical office trailer. The buildings are similar in design and construction to steel shipping containers but they are larger in scale, are much stronger, and are intended to be occupied within hazardous areas.

Typical siting issues for modular buildings involve blast related requirements, process related requirements and conventional loading requirements. Examples of these requirements include:

- Sliding and Overturning During Blast Response
- Positive Pressure and Forced Ventilation Requirements
- Seismic and Wind Loading

This paper describes blast performance, structural siting issues, and presents different applications of blast resistant modular buildings that have been installed at various facilities.