

Are insulated concrete forms a good way to build?

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Insulated Concrete Forms, or ICF construction, is a growing and viable way to build houses. Initially sold just to make insulated foundations, whole homes are now being built out of concrete because of these techniques. ICF actually stands for the whole field of pouring concrete into forms made out of rigid polystyrene forms and then leaving the forms there as the house insulation, with the concrete sandwiched in the middle. There are two basic types of forms: those made out of panels of insulation, and those made out of blocks that resemble large Legos. Then there are three basic types of final walls defined by the shape of the concrete: slab, which is much like the standard concrete wall; waffle, where there is a significant economy of concrete by having thin and thick sections that look like a waffle; and post-and-beam, where there is also a savings in concrete by shaping the concrete into structural posts and beams rather than one massive slab. All are legitimate. Each has its advantages. ICF is noted for its quick assembly and for the flexibility of design -- you can easily make irregular, even curved, walls both in the foundation and all the way up the house. The houses are very solid and beautifully insulated because the insulation is continuous on both sides of the wall. You could also use ICF just for the foundation and build a traditional wood structure house on top of it, your basement insulation being done. It is a different way to pour a wall and requires special experience and discipline to make good concrete, to flow it correctly, to vibrate it correctly -- all details that are more critically important than with traditional concrete forms. You do have the potential for a "blow out" where the freshly poured wet concrete bursts through and creates quite a mess, but that is more common with contractors first houses than with an experienced ICF builder. That is to say that you don't want to be someone's first ICF house as there is definitely a learning curve to the process. You will need to listen to the sales pitches, and check the references, to evaluate one system against another. Two of the many companies in the business supplied me with some samples to show on the TV: Amvic Forms and Phil-Insul Corp. For general information on ICF construction, or for a complete list of ICF systems available in your area, contact the Cement Association of Canada in Ottawa.

Keywords:

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