i-Tec-w Ltd
Turning Knowledge into Performance

Housing application
"Environmental Housing" at its finest
i-Tec-w Ltd

- Is a technology company providing enzyme-based soil stabilization and rural development solutions.
- Company applied for a patent on enzyme application
- It has experience and unique technology that is versatile, easy to use and implemented in fields of:
  - Roadways (paved and unpaved) and Asphalt rehabilitation
  - Low cost Housing
  - Construction Industry
- Company is in final processes of receiving certifications for its enzyme technology in European Community and in Israel.

Combination of company’s technology provides fast, simple and low cost development of rural community...
Technology for Housing

• The i-Tec-w Ltd know-how for building houses is based on natural non toxic enzyme-formula. The application is done where houses are going to be built by mixing the in-situ soil with enzyme-formula and production of bricks on-site with brick machine which is drawn into location by any pick-up car.

• i-Tec-w Ltd has tremendous cost advantages over the older brick and mortar throughout the World
Main Advantages

• The main advantage of this technology is using in-situ soil and block production on-site. Bricks which are made from the local soil, so only enzyme needs to be transported. The bricks are ready for building with/without mortal after 3 days of curing.

• The use of enzyme-bricks and building walls without mortal saves on cost and reduce the building time.

• The thermal efficiency of i-Tec-w Ltd bricks reduces the outside temperatures from 35°C to a mild 20°C inside the structure without any air-conditioning. The “High Thermal Capacity” of the i-Tec-w Ltd bricks, absorbs the high outside temperature, leaving the inside of the structure cool and comfortable without the need for air-conditioning.
Cost Saving

1. Bricks are cheaper to produce because:
   - Soil constitutes the bulk of raw material use
   - Transport cost are minimized, production on-site
   - Local labor is used

2. The cost labor is reduced because:
   - Bricks are interlocking largely dry-stacked (with no mortar)
   - Little skilled construction labor is required
   - Construction is faster
Brick Specification

- **Curing time**
  The compressed brick may be used to construct a wall right out of the machine.

- **Load bearing capacity of a brick**
  as block strength is determined by soil type used and the extent of curing after manufacture up to 8 MPa modulus of rupture.

- **Thermal quality**
  Can be up to 3 times higher than conventional products.
  Stands in temperature of 1200°C

- **Permeability rating of a finished brick**
  Brick does not absorb or allow moisture to penetrate any more that 2.5% of the brick’s dry weight.

*The following parameters are an indication only, as block parameters are determined by soil type used*
How much Enzyme is required for Enzyme-bricks?

1 Liter Enzyme treats in-situ soil for wall of $130m^2 \times 20cm$ width
Enzyme based Building bricks

Pipe for water or/and electricity

channel for pipe
Enzyme based Building bricks
Brick Machines
Building steps
Possible use of \textit{Technology} for various buildings
Possible use of *Technology* for various walls
Enzyme based pavement blocks

Saving of cement and Improvement of compressive strength by addition of enzyme
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