Lytton, British Columbia

In British Columbia, the profound devastation that resulted from the tragic summer wildfires of 2021 was extensive and expensive.

To build back better it is imperative, on a number of levels, that we learn from our past mistakes. Wood burns. Autoclaved Aerated Concrete (AAC) does not burn.

Autoclaved Aerated Concrete (AAC) is a loyal friend of our environment. It is energy conservant and meets or surpasses all construction requirements for remote regions of northern Canada.

Remarkably, from production to construction, AAC is Carbon Neutral with no waste of precious raw materials. Exactly zero pollutants or hazardous wastes are generated in the process. AAC does not contain any VOCs (volitale organic contaminates), and can be recycled into other useful products.

The foremost urgency is to rapidly and permanently rebuild those communities ravaged by the wildfires. Once accomplished there remains a pressing need for the construction of new single and multifamily homes on-reserve, as well as community and commercial buildings.

The fully integrated building system of AAC panels and block are the 21st century solution for commercial, industrial, educational, public, and residential projects.

BACKGROUND

Available in various classes, AAC is an ultra-light and versatile concrete building material. At 1/5th the weight of conventional concrete, its compressive strength canreach 1090 lbs. psi.

Following the decimation of forests in Europe during World War I, AAC was developed by a Swedish inventor in 1923. His findings provided a much-needed alternative to wood for post-war reconstruction. Drawing directly from the original formula, today's AAC consists of five basic ingredients:

- Portland cement
- Hydrated lime
- Silica sand, (the most predominate raw material on the planet)
- Water

and a minuscule amount of expansion agent to generate the cellular make-up.

Again, there is no toxicity its manufacturing. When in place, there is no off-gassing or release of any VOCs. It hits all points of the U.S. "Leeds" program for environmental integrity and being considered as an "ultra-green" building material.
Once the cellular generation has occurred, there is pure hydrogen gas released which mitigates Co2 in the atmosphere.
AAC, is a silica crystalline building material. Similar to the trees in our forests, it can absorb CO2 into its structural make-up, but unlike our forests, once it has absorbed the Co2, it binds it and does not release it back into the atmosphere.

Here are a few of the many benefits of building with AAC:

- ✓ The relatively simple AAC HOME BUILDING system follows the "Lego System" approach.
- ✓ The outer envelope (walls) of an AAC home can be erected rapidly, (big labour cost savings!!)
- ✓ An Indigenous labour force will be trained and employed, (provides employment)
- ✓ Significant reduction in energy costs of up to 65% in most of Canada

- ✓ The highest fire rating in the construction industry. AAC does not combust into a flame. AAC must reach 2900 degrees F for any structural change to take place.
- ✓ Can be engineered to withstand a wind load of 200 + mph. It will not degrade if exposed to moisture
- ✓ AAC is impervious to burrowing rodents or insect damage such as termites and wood ants. It does not require harmful pesticides to protect it resulting in no seepage into ground water sources
- ✓ AAC has the highest Sound Transmission Class (STC) rating of any building material. This reduces the transmission of sound vibrations from room to room.
- ✓ AAC will not warp, rot, rust, corrode, mold or mildew. There is no expansion or contraction that would contribute to cracking of the substrate
- ✓ The low cost of AAC is beyond competitive with contemporary building systems.
- ✓ AAC can be designed to easily achieve the desired look and standards for residential, commercial, and industrial construction with far fewer design restrictions than other conventional materials
- ✓ AAC HOME BUILDING systems have been in use for decades years in most civilized countries including Europe and Russia, China, India, Australia, New Zealand and the USA (where only one (1) plant presently operates, and meeting or exceeding all "green" test criteria, but NOT in Canada.)

All computer models confirm the incredible longevity of AAC. Buildings constructed of AAC may well last for centuries. We don't know how many yet, because AAC has barely been used for the first 100 years.

Rarely in history does an innovation offer such an abundance of hope for a better future as does AAC. It is the wise, planet friendly choice for any and all building applications, including multi-family, senior's housing, schools, hospitals, hotels, and community centres. The list grows with every new idea and application. AAC will keep the wolves of sudden calamity from the door

The citizens of villages and towns need never again experience the deep trauma associated with the loss of belongings, memories, livelihoods and even loved ones. This time, permanently rebuild lives, communities, and dignity with respect and foresight. Build it with AAC.