X-Rok

Chemically-Bonded Ceramic Radiation Shielding Solidification / Containment Solutions

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CERAMIC CEMENT CORP.

A Seattle-based Co-Operations Inc. Alliance Company

X-ROK PROVIDES UNIQUE REPAIR / CONTAINMENT / SHIELDING SOLUTIONS FOR ALL LEVELS OF RADIATION

X-Rok is a globally patented, water-activated, non-toxic, high strength, ‘cold-fired’ ceramic concrete / coating material produced and applied using conventional Portland concrete / coating technologies that;

a. strongly bonds to Portland concrete, mineral, metal, cellulose, and self-bonds (eliminating cold joints),

b. uniquely blocks all levels of radiation ranging from lower-level RF to highest level gamma/neutron emissions,

c. durably resists water decay, salt erosion, high heat, fire, cold, mold, moss, bacteria & acid rain,

d. does not corrode metal rebar, leach, expand, shrink, or crack (deteriorate) with aging,

e. with optional working times ranging from 15-mins. to 1-hr.

NUCLEAR SHIELDING BENEFITS

Excerpts from Idaho National Lab nuclear shielding test report -

"The X-Rok formulas evaluated had a range of compositions, densities, and neutron and gamma-ray absorption characteristics. The validation measurements demonstrate the effectiveness of the X-Rok ceramic cement compositions for both gamma-ray and neutron shielding."

"Consequently, it is expected that layers or sequential X-Rok ceramic cements with layers of boron carbide cement layers and layers of more effective cements such as Wollastonite might be more effective for both gamma and neutron shielding."

(Important note: Wollastonite and boron carbide are minerals included within C3's global X-Rok patent rights.)

REPAIRING / REPLACING DAMAGED NUCLEAR FACILITIES

- In addition to its unique radiation shielding properties, X-Rok bonds strongly to Portland concrete providing durable, easy to use repair, resurfacing, replacement solutions for the structural failures currently plaguing the nuclear energy & radiated waste containment industries.

- Hanford, Chernobyl, Yucca Flats and Fukushima are well known examples of the aging and severely damaged nuclear facilities that can immediately benefit from the unique repair and durable storage solutions X-Rok offers.

C3 SCIENCE / INDUSTRY ADVISORY TEAM

- Dr. Rhys Lawson, PhD. - Patent Attorney / Christensen, O'Connor, Johnson, Kindness – Seattle, WA.
- Dr. Gerald Barnett – Academic / Science Consultant
- Charlie May - Concrete Industry Consultant - Former VP/GM Oldcastle/CPM Concrete Company (Retired)
- David Anderson - U.S. Gov./DOE Consultant - Former Management / Operations Contractor Idaho National Labs (Retired)

GLOBAL PATENT RIGHTS

X-Rok has been granted full patent rights in the United States, Europe (including Britain, France, Germany and numerous other EU countries), China, Japan, S. Korea, Russian Federation, Israel, New Zealand, Canada, Mexico, with patent's pending in other countries.

"CHEMICALLY BONDED CERAMIC RADIATION SHIELDING MATERIAL AND METHOD OF PREPARATION"

Inventors: Judd Hamilton, Vernon Hamilton

Assignees: Co-Operations, Inc.

Origin: SEATTLE, WA. USA

US Patent: RE48,014 / WIPO Patent: RE048014

U.S. patent can be viewed by clicking on following link:

https://patents.justia.com/patent/RE48014

For more information contact C3 Chairman/CEO Judd Hamilton at 206-935-7161 / judd@ceramiccement.com