Innovative technology for producing a family of “green” binders (cement) as an improved alternative to the existing cementitious materials, while reducing carbon footprint to a minimum

Summary

An Israeli SME has developed a family of green binders for the construction industry. The novel green cement, due to its superior qualities, can make a cost effective improved alternative to existing cementitious materials, while reducing carbon footprint to a minimum. The company is looking for a manufacturing agreement or license agreement with cement and steel manufacturers and will also consider a joint venture or technical cooperation.

Creation Date	31 July 2013
Last Update	04 June 2014
Expiration Date	04 June 2015
Reference	11 IL 80ER 3MH8

Details

Description

The cement manufacturing industry is the second largest CO2 producer, only behind the power generation industry, and typically produces about 5% of global man-made CO2 emissions. At the same time, cement is one of the world’s most important industries for several reasons. First, cement is an essential part of concrete and concrete is the foundational material for any construction industry. Second, because of the importance of cement for assorted construction-related activities such as roads,residential and commercial buildings, tunnels and dams, production progression generally reflect economic activity. The company developed a family of cementitious green binders, based on Ground Granulated Blast furnace Slag (a waste by-product of the still industry), activators and additives. Compared to Ordinary Portland Cement “OPC” (most commonly used cement in the industry), The innovative cement is much “greener” and can be made from available raw materials and waste materials. The unique composition of it contains very low to zero calcined materials resulting in minimum carbon footprint. The ratio of its ingredients can be tailored to give the desired physical properties needed for concrete products production process. Also, the use of green binders in concrete products makes the control of the final physical properties of the products very easy, to meet market needs. Production of green binder can be done with the same equipment used in any common blending cement factory and manufacturing concrete products with green binder requires the very same equipment used in production of Portland Cement based concrete products. The company is looking to reach a license agreement or manufacturing agreement with one of the following: Cement manufacturers Steel manufacturers Albeit each one of them may find different use for the product, it expands their market to new areas that were unreachable for them before. The

product also enriches them with technological and marketing advantages over their competitors. The company will also consider a joint venture or technical cooperation. The founders of the company are highly experienced chemists and engineers bringing more than 30 years of experience in the relevant industry, having vast knowledge on market exact needs. Current and Potential Domain of Application: Innovative cement binders

Advantages and Innovations

While slag is known for many years in the construction industry, its slow hardening makes him not so popular in regular construction. The company developed a unique technology to activate the Slag allowing both early and final strength which are superior compared to OPC or slag cement. It is very easy to control its setting time and its early and final strength. Advantages “Greener” 1. Saving up to ~100% of CO2 emission compared to OPC production. 2. Recycling by-products and wastes of other industries. 3. It’s bright colour, reduces the amount of toxic pigments required for colored elements. 4. Reducing the need for cooling energy thanks to it’s bright colour. 5. Lower radioactive radiation in concrete elements using the product compared to the levels of radiation emitted from concrete elements using certain types of OPC with certain additives such as Fly Ash or natural Pozzolanas. Cost Effective 1. The majority of its ingredients are cheaper than OPC 2. Allows faster production rate, in particular of concrete products using continuous or batch process and molds. 3. No need for costly curing energy. 4. Significant savings in production equipment (molds, racks, etc.). 5. Significant savings in curing spaces. 6. For colored elements – allows significant savings in costly pigments, thanks to its light colour. Better qualities than OPC or other commonly used cements 1. Excellent early strength development, 3-6 MPa after 3 hours compared to 10-15 hours with OPC. 2. Superior final strength of 70-100 MPa after 7-28 days compared to maximum 70 MPa with OPC after 28 days (standard compressive strength according to EN-197). 3

Stage of Development

Under development/lab tested

IPR Status

Patent(s) applied for but not yet granted

Profile Origin

Other

Client

Type and Size of Organisation Behind the Profile

Other

Partner Sought

Type and Role of Partner Sought

- Type of partner sought: Industry - Specific area of activity of the partner: Cement Manufacturers and Steel Manufacturers - Task to be performed by the partner sought: Manufacturing of cement

Type of Partnership Considered

License agreement
Manufacturing agreement
Technical cooperation agreement
Joint venture agreement

Green Recyclable Hollow Fibre for House Building, Mattresses and Home ware.

Summary

An Israeli company has developed an environmentally friendly new composite material providing thermal and acoustic insulation for all types of construction. Advantages over the materials in the market include its absolute friendliness & recyclability, high insulation efficiency and simple installation. The company is looking for strategic industrial partners as well as representatives. License, joint venture and commercial agreements with technical assistance are offered.

Creation Date	24 October 2013
Last Update	04 June 2014
Expiration Date	04 June 2015
Reference	11 IL 80ER 3NFA

Details

Description

The company has been producing insulation products for over 30 years. Recently the world has given a special emphasis for enviromentally friendly products and recyclable materials. The company has developed high performance insulation adapted to the EU & US standards and being "Green". The fibers used to produce the special products are made of recyclable materials and achieve the performance of the original product & better. The fibers are specially finished for better isolation. The insulation is composed of an optimal mix of fibers with different features for maximal efficiency. The products are non toxic, non cancerogenic, odourless and of no sesitivity to humidity. The range presents different thicknesses & layers, double reflective & of low emisssivity (3%). The line of MX products is of the highest level in fire resistance on the market. The developed insulating product is used as thermal insulation of shingle roofs, paraphenalia roofs & hollow external walls. The product of high isolation performance is used for acoustic partition walls. Special line is used for matresses. The end-users may be Building companies , private market, bed/ matress manufacturers, DYI companies. Specific industries for use are building & bedding. Innovative character of this offer is that a new Green product provides for unic performance in isolation. The company is privately owned, established in 1964. They constantly develop new products with adaptation to market needs & corresponding to environmental requirements. Current and Potential Domain of Application: Big building companies, distributing / consulting agencies / free lancers, the "Do-It-Yourself"(DIY) chain-stores. State Building Organisations.

Advantages and Innovations

Innovative insulation materials enabling to: 1. Use "Green" (absolutely environmentally friendly & recyclable) materials in building processes. 2. Get higher product quality with no environmental damage. 3. Achieve high Insulation efficiency – as for requirements of European main countries. 4. Can be installed with no need for special equipment / tools.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Partner Sought

Type and Role of Partner Sought

1. type of the partner sought: industry, engineering companies, technical centers, agencies 2. the specific area of activity of the partner: building manufacturer / sales offices, agencies, building specialists (engineers etc.), governmental officers in building tenders. 3. the tasks to be performed – to implement the technology offered.

Type of Partnership Considered

License agreement
Commercial agreement with technical assistance
Technical cooperation agreement
Joint venture agreement

Polyester-fiber-based products for thermal and acoustic insulation

Summary

An Israeli SME has developed a new composition of polyester-based fibers for any industry seeking for thermal and acoustic eco-friendly insulation. Advantages over the existing products include high fire resistance, impressive cost-efficiency and ecological friendliness in the processes of manufacturing, using, recycling. Looking for strategic partners interested in cooperaton for entering new markets and expanding those existing as well as further development of new applications.

Creation Date	05 November 2013
Last Update	04 June 2014
Expiration Date	04 June 2015
Reference	11 IL 80ER 3NNJ

Details

Description

Every building needs insulation, thermal and acoustic. The company is offering an eco- friendly product with high values of insulation and fire resistance In order to replace use of rockwool or fiberglass. The fibers to produce the special products are made of recyclable materials, their production process includes special finishing for better isolation. In fact, the company developed and uses an improved process to manufacture thermal and acoustic insulation. The insulation product undergoes the process resulting in optimal mix of fibers with different features for maximal efficiency. The products are non-toxic, non-cancerogenic, odourless and are not sensitive to humidity. The final insulation material is used anywhere, e.g. rooftops, plasterboard walls, under flooring heat systems, acoustic ceilings, elements that require insulation made of concrete pouring, air conditioning channels, air-shipment sensitive to heat products such as pharmaceutical, spices, flowers, electronic devices etc. - in every application that requires insulation materials and prefers a new advanced development and eco friendly product. The end-users may be contractors, DIY users, air shipment companies, manufacturers of the products sensitive to heat. They may belong to private, industrial building industry or air shipment users industry. The company with international activity has been specializing in development and manufacture of textile and insulation products since 1964. They market their advanced product line to many countries around the world and serve the leading international brand manufacturers. The company has set exceptional standards of excellence, innovation and quality, for which it has been granted the ISO9001 quality standard awarded by the Standard Association and a certificate of quality by IQNET, as well as the endorsement of the world’s leading brand names. Current and Potential Domain of Application: Industrial, livestock and office building industry - Contractors, manufacturers of the products sensitive to heat air shipment companies. DIY companies Insulation materials distributors Any other company type requiring insulation

Advantages and Innovations

Innovative Aspects of the Offer: 1. Innovative fibers' composition based on polyester. Main advantages of the Offer: 1. High fire resistance (approx. 2-6 ranks above those on the market) combined with: 2. Cost-efficiency (approx. 30% cheaper), 3. Ecologically friendly in manufacturing process, in using process & possessing ability of recycling.

Stage of Development

Already on the market

IPR Status

Secret Know-how

Profile Origin

Private (in-house) research

Client

Type and Size of Organisation Behind the Profile

Industry SME 50-249

Partner Sought

Type and Role of Partner Sought

1. type of the partner sought -: industry, academy, research organisation, technical / engineering centers, 2. the specific area of activity of the partner - manufacturer / distributor / big users (constructors) of insulation materials. 3. the tasks to be performed –local market technical information and connection to the standards facilities; strong connection to the relevant market activity companies.

Type of Partnership Considered

License agreement
Financial agreement
Commercial agreement with technical assistance
Technical cooperation agreement
Joint venture agreement

