



**ROSCATOM Registry of innovative solutions, technologies, products and materials approved for use in capital construction of objects utilizing atomic energy (Data Base of Best Available Technologies) - EXTRACT**

Name of innovative product/Developer-Supplier - AO «Institute of Material Science and Efficient Technologies» (IMET)	Technology description, application	Intellectual Property Rights	Competitive and technico-economical advantage.	Market Potential	Team and production potential
<b>Architectural construction system developed by IMET for all year round building with prefabricated elements with framework out of new structural units</b>	New frames from prefabricated structures manufactured at a plant – tube confined concrete, beams, slabs and panels with bolted-type joints	Russian Federation Patents, regulatory documents	Radical acceleration of construction process, obsolescence of monolithic concrete, decrease in weight of building mass by 1.5-2 times, energy savings, increase in earthquake resistance and building longevity, reduction of construction costs	Civil and specialized construction	Housing built in Moscow, Tver', Samara and Kalinigrad regions
<b>IMETSTROY system for prefabricated construction of roads out of prestressed reinforced concrete slabs tightened together by steel wire cables</b>	Load bearing roadbed of different categories with simplified basis made out of prestressed concrete slabs wired by steel cables	Russian Federation Patents, regulatory documents	Improvement of load bearing capacity and longevity of roads up to 30-40 years, decrease of operational costs.	Road construction in RF and abroad	Roads built in Belgorod and Chuvashiya regions
<b>New equipment for fine grinding, Nano encapsulation and macro encapsulation</b>	Equipment is based on new kinematics, no analogues in the world	Russian Federation Patents	Equipment for Nano encapsulation of dispersions in vertical ball mills for production of dispersion composites; Equipment for construction of energy saving structures via KAPSIMET technology; Equipment for manufacturing of drainage concretes, for, among others, road construction.	There is no analogues in RF and abroad	Small industrial batches of the new equipment are manufactured for construction application
<b>Concretes and structures with the use of Nano cements</b>	For the first time in the world, the phenomenon of dispersion Nano encapsulation is utilized in manufacturing of Portland cement, thus allowing to produce cements of classes 62.5, 72.5, 82.5; as well as concretes on its basis with improved quality and longevity.	Discovery diploma № A-568, Patents RF USA, patenting in different countries	Switch of nuclear industry construction to concretes and structures with improved quality providing for increased safety and lower costs of construction.	All-purpose and specialized concretes for construction everywhere.	Production of Nano cements in Russia and abroad. Many years of experience in concrete technology, including among others, objects of defense industry.