

QUESTIONNAIRE

(*) – mandatory fields

	Details about organisation
* Organisation name	Sota Rustaveli State University
Organisation acronym	SRSU
* Organisation Activity Type (RES - Research, HE - University, SME - Small and Medium Enterprise, IND - Industry, OTH - Other)	HE
* Keywords of main research areas	Falsifications, naturalness, citrous, juice
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* Description of organisation and its research achievements for the last five years (~ 5000 signs)
<p style="text-align: center;">ISTC Project G -725 “Regeneration of Na- Cation exchangers by Sulfate – Natrium Solution and recycling of spent regenerating solution.”, successfully completed 2004-2008.</p> <p>Developed was the technology of Na-cation exchangers regeneration by natrium sulphate solution and the reuse of spent sulphate regenerant solutions after thermo chemical softening. Developed were the recommendations on carrying out regeneration of Na-cation exchangers by natrium sulphate and thermo chemical treatment of spent regenerant solutions for their reuse (appendix 8). Technical and economical comparison of regeneration variants for Na-cation exchangers showed that the proposed technology not only meets environmental requirements but also is economically sound.</p> <p>Developed was the mathematical model and the algorithm of each layer calculation for the regeneration process of the Na-cation exchanger. Developed was the package of computer programs (appendix 9) allowing:</p> <ul style="list-style-type: none"> - to get the dependence of working exchange capacity on the specific discharge of the reagent; - to get the distribution of trapped ions along the layer (height) of the exchanger’s charge; - to get the distribution of the removed ions of hardness in portions of the regenerant solution; - to calculate optimal operating parameters for cation exchanger installations work.. <p>All these data can be got under any changes of input parameters of the cation exchanger The proposed package of programs can be used in designing new or reconstructing the existing cation exchanger installations and in investigating the process of exchangers regeneration as well as in an educational process in higher education institutions.</p> <p>In many chemical plants (the production of potash fertilizer, tungsten, cord and etc.)</p>

sodium sulphate is multiton industrial waste. The use of the technology for Na-cation exchangers regeneration by sodium sulphate is becoming more effective for environmental protection and for material expenditures while using for regeneration the solutions prepared from sodium sulphate which are industrial waste products.

	Contact Information
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* Qualification and research experience	Ph. D. Manager Project G-725
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International co-operation / Participation in EU RTD programmes or other bilateral / multilateral actions INTAS, TACIS, TEMPUS, COST, EUREKA, other RTD programmes (please specify programme/s, project title/s and year/s)
ISTC Project G -725 “Regeneration of Na- Cation exchangers by Sulfate – Sodium Solution and recycling of spent regenerating solution.”, successfully completed 2004-2008.

	* Please, use “X” to indicate the scientific area/s of your potential project
CHEMISTRY	
SOCIAL AND HUMAN SCIENCES	
ECONOMIC SCIENCES	
ENGINEERING SCIENCE	X
ENVIRONMENT	X
AGRICULTURE AND FOOD	
HEALTH	
MATHEMATICS	
INFORMATION SCIENCE	
PHYSICS	
NANOTECHNOLOGIES	
ENERGY	
TRANSPORT	

SPACE	
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* Summary of potential research project envisaged hosting of European researcher for the period of between 1 and 2 years
<p>The creation of data base for each layer calculation of the regeneration process of Na-cation exchangers.</p> <p>The definition of the interdiffusion coefficients of natrium ions on ions of metals.</p> <p>The definition of delution coefficients of regenerant solution flowing into the exchanger in accordance with the size of the exchanger and the capacity of the water cushion.</p>

	Please, confirm your agreement on data publication and dissemination
I agree with the publication of the data on the web-site http://www.inco-ecca.net , and dissemination among Mobility National Contact Points of the EU MS and AC (YES / NO)	yes
Date	10.12.08