



**Ministry of Education and Science
of the Russian Federation**

**National Research
Tomsk Polytechnic University**

ISSN 2312-2978

JOURNAL OF ECONOMICS AND SOCIAL SCIENCES

School of Core Engineering Education

<http://jess.esrae.ru/>

№ 16, 2020

Tomsk

JOURNAL OF ECONOMICS AND SOCIAL SCIENCES

Editorial Board

Editor in chief

Yulia Zeremskaya, Cand. Sc. (Russia)

Deputy chief editor

Lyubov Averkieva (Russia)

Members of editorial staff

Olga Solodovnikova, Cand. Sc.

(Russia)

Nina Nikolaenko, Cand. Sc. (Russia)

Elena Yakimenko, (Russia)

JOURNAL INFO

The major purpose of the online “Journal of Economics and Social Sciences” is the presentation of student and young scientist research results.

ISSN 2312-2978

Russian Science Citation Index (RISC)

UDC 30+33

LBC 60+65

The main headings:

1. Business studies
2. Social philosophy
3. Resource-efficient technologies
4. Engineering development
5. Innovations and technologies
6. Social responsibilities of modern engineering

Issue of journal is two times a year (December and May); extra issues are possible

Founder:

Institute of Humanities, Social Sciences and Technologies of National Research Tomsk Polytechnic University

Open access full-text articles can be found on websites: www.elibrary.ru,
www.e.lanbook.com.

JOURNAL OF ECONOMICS AND SOCIAL SCIENCES

2020 №16

CONTENTS

SOCIAL SCIENCES

- Investigation of localized surface plasmon resonance of nanoparticles with various shape** 6-13
Averkiev A.A.
- Environmental problem in organization of works related to electroplating of parts** 14-21
Malaeva E.A.
- Elimination of starting pores in manual shielded-metal arc welding** 22-24
Butsykin S.E., Kiselev A.S.
- Equipping excavators with distance sensors to pipelines** 25-30
Rybin A.S.
- Application of gravel pack technology to the "x" field on Sakhalin island** 31-34
Sin D.O.
- Numerical model of ultrasonic multi-channel data transfer for servicing subsea production complex** 35-39
Nikulina Yu.A., Shubin A.S.
- Hydrodynamic studies correctness of a well equipped with a single-packer single-pump design for Multizone selective completion** 40-44
Marina A.A., Volkov A.A.
- Load-bearing of axle-box assemblies** 45-48
Cheremiskina M.S., Pashkov E.N.
- Preparation of regulatory documents for sodium heparin** 49-58
Aseeva N.V., Elena Dorozhko, Daria Vishenkova.
- Coordinate control of the proportional directional control valve** 59-62
Svoykin A.O.
- The problem of breast cancer diagnosis** 63-66
Tretyakova M.S.

Sustainable Development in Engineering Education Rokotyanskaya Yu.A.	67-71
ECONOMICS	
Structure of coating based on 10R6M5-steel after wearing in friction pair Fedin E.A., Gnyusov S.F.	72-76
Simulation model of Permanent Magnet Synchronous Motor in phase loss operation mode Tinnikov P.E.	77-80
Selection of optimal milling modes for NiTi-TiB2 composite Volkov S.Yu., Arlyapov A.Yu.	81-86
Analysis of the efficiency of the application of binary mixtures technology for the development of hard-to-recover fields of Western Siberia Konovalov A.A.	87-91
The technology of radial drilling as a method of improved oil recovery Kurilovich R.O.	
Elderly employment under the conditions of economy digitalization Antipanova O.A.	69-71
The research use of silicate coatings with aluminosilicate filler Borovoy V.Yu.	72-75
Brittle fracture strength analysis for reactor pressure vessel of VVER-1000 reactor unit Ovsenev A.E., Permikin A.A., Balachkov M.M., Belyavskiy S.V.	76-81
Overview of achievements in the refractory industry Tolegenov D.T., Tolegenova D.Zh.	82-85

SCIENTIFIC PUBLICATION

JOURNAL OF ECONOMICS AND SOCIAL SCIENCES

Journal site is created on the platform RAE Editorial System

Site: <http://jess.esrae.ru/>

Correspondence address:

School of Core Engineering Education,
Division of Foreign Languages
National Research Tomsk Polytechnic University
30, Lenin Street,
634050, Tomsk
Russia