

OPINION

on a competition for occupation the academic position "Associate Professor" in professional field 5.1 Mechanical engineering, and course "Materials science and technology of materials" for the needs of the department "Materials science and technology" of the Technical University of Varna, announced in the State Gazette, issue 2 from 05.01.2024, with a single candidate: **Chief Assistant Professor Daniela Todorova Spasova, Ph.D**

Member of the scientific jury: **Prof. Eng. Stoyan Dimitrov Slavov, Ph.D**

1. General characteristics of the candidate's research and applied scientific activity.

The research and scientific-applied activity of Ch. Assistant Professor Daniela Todorova Spasova, Ph.D is oriented in the following thematic areas:

- Area 1: Research of materials and technologies applicable to facilities in the marine and mining industry, in which the candidate has presented 10 publications - from B 4.1 to B 4.10;
- Area 2: Development of new and improvement of existing methods and technologies for making casting molds and obtaining complex non-technological castings from various alloys, with 5 publications presented - Г.8.1, Г.8.2, Г.8.3, Г. 8.16, and Г.8.18;
- Area 3: Conducting research on technologies for the production of composite materials and evaluation of their quality and properties, with 5 publications - Г.8.5, Г.8.6, Г.8.7, Г.8.8, and Г.8.14
- Area 4: Research in application of software for automating data processing and modeling of thermal processes, which is discussed in 2 publications - Г.7.1, and Г.8.10;
- Area 5: Increasing the strength and operational characteristics of construction materials through additional applied technological processes, developed in 5 publications - Г.8.4, Г.8.9, Г.8.11, Г.8.15, Г.8.17, Г.8.19
- Area 6: Conducting research, quality control and restoration procedures on the operational condition of production objects in 2 publications - Г.8.12, and Г.8.13.

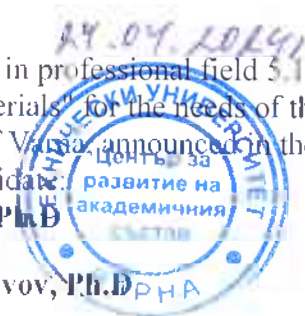
In addition, the candidate has submitted references and evidence of participation in three national research projects with external for TU of Varna funding, as well as in 10 internal projects, earmarked funded by the state budget. She participated in 18 scientific conferences, seminars and symposia, and was awarded three times with prizes for scientific and creative activity. She participated in the establishing of the "Laboratory for the production of composite materials", as well as being a member of Varna Scientific and Technical Unions and the National Scientific and Technical Society for Defectoscopy. She was a member of the organizing committee and chaired a section of two scientific conferences. The presented data supports the high level of scientific achievements of the candidate in the field of technologies for the production and testing of composite materials.

2. Evaluation of the pedagogical level and activity of the candidate

According to the **Indicator Ж.29**, "Horarium of lectures held at TU of Varna for the last three years", chief assistant Eng. Daniela Todorova Spasova, Ph.D has conducted a total of 195 hours of lectures for the last three years on the disciplines, as follows: "Engineering materials and processing technologies", "Materials science and technology of materials" and "Special technologies in metal casting" for "Bachelor's" and "Master's" degrees for multiple specialties at TU of Varna, which equals of 195 points according to this indicator. In addition, chief assistant Eng. Daniela Todorova Spasova, Ph.D was supervised 7 graduates in the "Bachelor" and 4 graduates in the "Master" degree during the period 2012 - 2017, all of whom successfully defended their diploma theses. She developed or participated in the development of curricula for the disciplines "Materials Science and Materials Technology", "Materials Science Workshop", "Metal Casting", "Metal Casting. Course Project", "Methods and Technologies in Foundry Production" and "Art- of processing the materials". The candidate has also carried out twelve mobilities under the Erasmus program in the period 2016-2023 in numerous European universities. This gives me reason to conclude that the candidate's pedagogical training is also at the required high level.

3. Basic scientific and scientific-applied contributions

In the areas of scientific research and scientific-applied activity, the candidate has indicated a number of scientific-applied and applied contributions, which are as follows: In Area 1, there are five scientific-applied and three applied contributions indicated; in Area 2 the scientific-applied contributions are 4 and applied contributions are two, in Area 3 scientific-applied contributions are two and applied contribution is one, in Area 4 scientific-applied contributions are two and applied is one, in Area 5 scientific-applied contributions are 4 and applied are 3, and in Area 6 the scientific-applied contribution is one, as well as there is one ap-



4. Significance of the contributions for science and practice

In accordance with the minimum requirements for occupying the academic position "Associate Professor" based on the internal document "Regulations for the Terms and Conditions for Occupying Academic Positions (RTCOAP) in TU of Varna", the candidate has presented scientific results that can be summarized in the following groups of indicators:

4.1. Indicator A.1. Dissertation for the award of the educational and scientific degree "Doctor": The candidate has presented a dissertation on the topic "Obtaining complex relief cast composites using the capillary molding method", which was defended on 02.06.2017 before a qualified scientific jury, which brings 50 points to her.

4.2. Indicator B.4. Habilitation work: In this category, the candidate participate in the present competition with 10 publications that are referenced and indexed in world wide-known scientific information databases Scopus and/or WoS and which are equivalent to a habilitation thesis. This brings 239 points to the candidate.

4.3. Indicator Г.7. Scientific publications that are referenced and indexed in the world wide-known databases of scientific information Scopus and/or WoS, which are outside the habilitation thesis. The candidate has one paper, which is follows in that indicator, and this brings to her 13.33 points.

4.4. Indicator Г.8. Scientific publications in non-indexed peer-reviewed journals or in edited collective volumes. In this category, the candidate has indicated participation in 19 publications, which brings to her 201.7 points.

4.5. Indicator Д.12. Citations: The candidate has submitted 10 citations from papers issued in scientific journals, which are referenced and indexed in world wide-known databases with scientific information Scopus and/or WoS. The cited candidate's publications are four in which she is the first co-author. This brings to her 100 points.

According to the five groups of indicators A, B, Г, Д and Ж, I found that the candidate fulfills, and in most cases exceeds, the minimum required number of points needed to occupy "Associate Professor" position, according to RTCOAP of TU of Varna. The attached list of citations of works in which the candidate is the first co-author shows recognition of her works by the international academic community. I believe that the applicant's scientific research and scientific-applied activity meets all requirements of Bulgarian legislation and the internal regulation of TU of Varna. The quantitative indicators of the RTCOAP of TU of Varna for occupying the academic position "Associate Professor" by the applicant are completely covered.

5. Critical remarks and recommendations

I have no significant critical remarks against the main scientific-applied and applied contributions declared by the candidate in order to dispute them. My recommendations to Ch. Assistant Eng. Daniela Todorova Spasova are as follows: 1. To focus her research and scientific-applied activity in more narrow framework; 2. To use the knowledge accumulated and experience gathered from her previous participation in internal scientific projects in order to develop proposals for topics of scientific projects with national and European funding; 3. To aim her publishing activity on articles that are will be published in refereed and indexed in world wide-known databases Scopus and/or WoS scientific journals with higher quartile, such as Q2 and even Q1.

CONCLUSION

In my opinion, the scientific activities of Ch. Assistant Professor Daniela Todorova Spasova, Ph.D are at a fairly good level and to a large extent are dedicated to current topics that fully correspond to the field of the competition. A sufficient number of scientifically applied and applied contributions have been found in the candidate's scientific works presented. The candidate's achievements in her pedagogical activity are also noteworthy. Based on the acquaintance with the presented scientific works, their importance, the scientific-applied and applied contributions contained in them, I find it reasonable to propose Ch. assistant professor Daniela Todorova Spasova, Ph.D to occupy the academic position "Associate Professor" in professional field 5.1 Mechanical engineering, and course "Materials science and technology" of the "Materials science and technology" department of the Technical

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