OPINION

on the materials submitted for participation in a competition for „**Professor**" in the field of higher education 6 Agricultural Science and Veterinary Medicine, professional field, 6.5 Forestry, scientific speciality "Technology, Mechanisation and Automation of the Woodworking and Furniture Industry", in the university course " Technology of Wood Fibre Materials."

In the competition for a professor, announced in the State Gazette, issue 52/21.03.2023 and on the website of the University of Forestry with the code WWII-P-0223-104-75 for the needs of the Department of Mechanical Wood Technology at the Faculty of Forest Industry, as the only candidate participated Assoc. Prof. Viktor Petrov Savov, PhD, Faculty of Forest Industry, Department of Mechanical Wood Technology.

Prepared the opinion: Professor Vassil Jivkov Jivkov, PhD, professional field 5.13 "General Engineering", scientific speciality "Technology, Mechanisation and Automation of Woodworking and Furniture Industry", from the University of Forestry - Sofia.

1. Brief biographical data for the candidate

The candidate Assoc. Prof. Victor Petrov Savov was born on 23.02.1980. In 2002 he graduated as a Bachelor Engineer in "Woodworking and Furniture Manufacturing", and in 2005 as a Master Engineer in "Woodworking and Furniture Manufacturing" at the Forestry University - Sofia. Since 2008 he has been working as an Assistant Professor at LTU and, since 2011, as a Senior Assistant Professor. In 2010 he defended his dissertation entitled: "Investigation of the Influence of Steaming Modes on the Performance of Wood Fibre Boards". Since 2015 he has been an associate professor at the Department of Mechanical Wood Technology, Faculty of Forest Industry.

2. Correspondence of the submitted documents and materials of the applicant according to the Rules of the Development of Academic Staff at the University of Forestry.

The submitted documents and materials of the candidate Assoc. Prof. Viktor Petrov Savov are in accordance with the requirements of Article 65, paragraph 1 of the Regulations of the RAS at the University of Forestry, as well as with the national requirements under Article 2b, paragraphs 2, 3 and 6.

3. Assessment of the candidate's educational and pedagogical activities (work with students and PhD students)

For the academic year 2022/2023, Assoc. Prof. Viktor Savov is teaching the following university courses:

- "Technology of Wood Fiber Materials" - speciality "Wood and Furniture Technology " (TDM), B.Sc. "Bachelor", 3rd year, full-time study, 60 hours of lectures and 44 hours of seminars;

- "Technology of Wood Fiber Materials" - speciality "Wood and Furniture Technology " (TDM), B.Sc. "Bachelor", 3rd year, part-time study, 60 hours of lectures and 22 hours of seminars;
- "Particle Board Technology" - speciality "Wood and Furniture Technology" (TDM), B.Sc. "Bachelor", 3rd year, full-time study, 60 h. lectures and 126 h.;
- "Production of Wood Panels" - speciality " Business Management" (SU), "Bachelor", full-time course, 3rd year, 42 hrs. lectures and 11 hrs. seminars;
- "Technological Design of Woodworking Enterprises" speciality "Wood and Furniture Technology" (TDM), B.Sc. "Bachelor", 1st year, part-time form of study, 7 hours of lectures and 23 hours of exercises;
- "Technological Design of Woodworking Enterprises" speciality "Wood and Furniture Technology" (TDM), Master's degree, 1st year, full-time study, 7 hours of lectures and 23 hours of seminars.;

The candidate Assoc. Prof. Viktor Savov is a supervisor of teaching practical training in "Technology of wood fibre materials" and "Technology of wood particleboard". He was an academic mentor of one student in the project "Student Practices - Phase 1".

From 2011 until now, Assoc. Prof. Savov, under his supervision, has successfully graduated 44 diploma students with Bachelor's and Master's Degrees.

From 2020 Assoc. Prof. Savov is a scientific supervisor of a full-time PhD student Eng. Hristiyan Panchev.

4. Assessment of the candidate's scientific, scientific-applied and publishing activities

The candidate Assoc. Prof. Viktor Savov presents a total of 51 articles, conference papers, textbooks and handbooks published after habilitation for the position of Associate Professor, distributed as follows:
- Monograph - no;
- Monograph chapter - 1 pc.
- University textbook - 1 pc.;
- University handbook - 1 pc;
- Books - no;
- Publications - 48 pcs.
- Projects - 8 pcs.

4.1 Participation in scientific, scientific-applied and educational projects

Assoc. Prof. Viktor Savov has participated in eight scientific, scientific-applied and educational projects as follows:
- National scientific projects funded by the University of Forestry - 4 pcs., one of which he is the head and in 3 is a team member;
- Projects funded by Operational Programmes - 3 pcs, as a member of the working team;
- National research projects funded by the National Research Fund - 1 pc, as a team member.

4.2 Characterization of published scientific results

The applicant Assoc. Prof. Viktor Savov presents a total of 48 publications published in scientific journals and proceedings after habilitation for the position of Associate Professor and a chapter of a multi-authored monograph, distributed as follows:

B4 - habilitation thesis - scientific publications (at least 10) in journals refereed and indexed in world-known databases with scientific information, according to the Law on Academic Staff Development requirements at the University of Forestry and Mechanical Engineering. Habilitation extended summary of scientific contributions is presented. These contributions are reflected in ten scientific publications, refereed and indexed in world databases of scientific information (Web of Science and Scopus); 8 of them are in journals with impact factor.

The total number of points for indicator group B4 is 170 points.

G8 - Scientific publications in non-refereed peer-reviewed journals or edited collective volumes - 14 publications are presented under this indicator.

The total score for indicator G8 is 53.64 points.

G11 - Published chapter of a collaborative monograph - 1 pc (20 points)

In the group of indicators " G ", the candidate scored a total of 245.23 points, which exceeds the required minimum of 200 points according to the Regulations for the Development of Academic Staff at the Forestry University.

Publications can be classified as follows:

A. By importance:

- Publications in peer-reviewed journals with impact factor (Web of Science) - 24 (49%);
- Publications in peer-reviewed and indexed journals in world-known databases of scientific information (Web of Science and Scopus) - 10 (20%);
- Publications in specialised scientific journals not refereed and indexed in world-known databases of scientific information (Web of Science and Scopus) - 8 pcs (16%);
- Publications in proceedings of scientific conferences - 7 (14%).

B. By place of the candidate in the publications:

- ranked first in 14 publications (29%);
- in second place - in 18 publications (37%);
- in third place - in 4 publications (8%);
- next - in 13 publications (27%).

C. By the number of co-authors in the publications:

- single author - 1 pc (2%);
- with one co-author - 7 pcs (14%);
- with two co-authors - 13 pcs (27%);
- with three co-authors - 3 pcs (6%);
- with more than three co-authors - 25 pcs (51%).

D. According to the language of publication:

- in English - 49 (100%).

The candidate Assoc. Prof. Viktor Savov has independently published **one university textbook** [E22.1] and **one university handbook** [E23.1], which are on the course "Technology of wood fibre materials", on which the competition is announced.

4.3 Reflection of Candidate's Scientific Publications in Literature (known citations)

The candidate Assoc. Prof. Viktor Savov encloses a list of 297 known citations of his works by other authors.

According to the type of citations, they are distributed as follows:

D12 - Citations or reviews in scientific publications, refereed and indexed in world-known databases with scientific information or in monographs and collective volumes - 262 pcs (88%)

Including citations in scientific journals with an impact factor - **236** (90%);

D13 - Citations in peer-reviewed monographs and collective volumes - **23** (8%);

D14 - Citations or reviews in non-refereed peer-reviewed journals - **12** (4%).

In indicator **D,** the candidate Assoc. Prof. Viktor Savov obtained **4275 points.**

4.4 Contributions to the candidate's work (scientific, scientific-applied, applied)

For participation in the competition by Assoc. Prof. Viktor Savov submitted 48 publications published in scientific journals, proceedings of scientific forums, and one monograph chapter. In one of the publications (No. 24), I am a co-author with the candidate, and I do not submit it for review. Publications #50 and 51 are university textbook and university handbook and are not evaluated. The contributions can be summarised in the following main areas:

1. Development of modified regimes for the production of wood fibre plates;

2. Proving the performance of lignosulfonates as formaldehyde acceptors;

3. Development of wood fibre boards incorporating recycled, waste raw materials and experimental establishment of the influence of critical factors in their preparation;

4. Determining the influence of critical factors in the preparation of wood fibre boards on their strength performance;

5. Systematization and analysis of the applicability of nanomaterials in the production of wood fibreboard;

The most important scientific, scientific-applied and applied contributions in the proposed for review works of Assoc. Prof. Viktor Savov are the following:

Scientific contributions

1. New modified hot-pressing regimes for the production of wood fibre boards with technical lignins as binders have been developed and experimentally investigated (publications No. 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 17, 19, 20, 21, 22, 38, 44, and 45).

2. New modified adhesive compositions for the preparation of wood fibre boards with the participation of synthetic binders and technical lignins were created and investigated (Nos. 3, 4, 14, 15, 25, 39, and 40).

3.   The action of lignosulfonates as formaldehyde acceptors has been demonstrated (Nos. 14 and 15).

4.   The positive influence of additional heat treatment on the performance of wood fibre boards prepared with lignosulfonate as a binder has been demonstrated (Nos. 10 and 32).

Scientific-applied contributions

1.   The values of the main factors in the use of modified hot-pressing modes for the production of wood fibre boards with technical lignins as binders have been defined, investigated and analysed, and their influence on the strength indices of the boards has been established (Nos. 4 and 21).

2.   The optimum ratios of the components of the adhesive compositions for producing wood fibre boards with synthetic binders and technical lignins have been defined, investigated and analysed (Nos. 3, 13, 14, 15, and 25).

3.   Wood fibre boards with the participation of recycled, waste, and raw materials have been created and experimentally investigated. The influence of main factors in their preparation on their strength indices has been established (Nos. 16, 18, 23, 27, 33, 36, 37, 43, and 46).

4.   The influence of main factors in the preparation of wood fibre boards with the participation of non-wood lignocellulosic raw materials on the performance of wood fibre boards has been established (No. 7, 26, 28, 35, 41, 42, 47, and 48).

Applied contributions

1.   The influence of some factors on the performance of wood fibre boards (Nos. 29 and 31) has been determined.

2.   Systematizing, classifying and analysing the application of nanomaterials in the production of wood fiberboard (№49).

5. Assessment of the applicant's personal candidate

From the materials submitted for the announced competition for the "Professor" position, I believe that Assoc. Prof. Viktor Savov participated with works he authored or with his considerable participation. The candidate is the author of one single-authored publication, the lead author in 14 publications and the second in 18. Since no separation protocols for co-authored papers have been submitted, I assume that contributions and participation are equally divided among the co-authors. In addition, the applicant has self-published one university textbook (No. 50) and one university handbook (No. 51), which are in the course "Technology of wood fibre materials", in which the competition was announced.

I am convinced that the contributions presented by the candidate are his own work. The scientific, scientific-applied and applied contributions achieved are significant for the scientific field in which the competition is announced, namely in the field of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.5. Forestry, scientific speciality "Technology, mechanisation and automation of woodworking and furniture industry" in the university course "Technology of wood fibre materials".

6. Critical remarks

In the scientific works and achievements of the candidate Assoc. Prof. Viktor Savov, I found no significant errors, inaccuracies in the methodology and mistakes in interpreting the results. Almost half of the papers have been published in reputable scientific journals with an impact factor, which guarantees the high quality of the publications.

I have no comments on the research papers and contributions included in the documentation for this competition—my only recommendation to Assoc. Prof. Viktor Savov is to continue to transmit his experience and to develop the scientific potential and infrastructure of the faculty and the university even more thoroughly.

7. Personal impressions

I know personally Assoc. Prof. Viktor Savov since 2004, when he was my student, and later as a colleague-teacher. He has more than fifteen years of work experience at the University of Forestry, where he has proved his qualities as an excellent teacher and scientist. He is a hardworking, precise, proactive, responsive and respected teacher.

On a personal level, I can say that Assoc. Prof. Savov is exceptionally hardworking, efficient, well-mannered and ready to assist his colleagues. The feedback from students about his teaching qualities is excellent. Assoc. Prof. Savov insists on academic ethics, showing respect and deference in his relations with colleagues.

Thanks to the initiative, desire and perseverance of Assoc. Prof. Savov, the Faculty of Forest Industry, acquired its testing laboratory with a modern testing machine, which will be helpful to all colleagues, especially those just beginning their career development.

Assoc. Prof. Savov is a recognisable scientist abroad, as evidenced by his participation in the editorial boards of two journals with impact factor (IF - Web of Science) or impact rank (SJR - Scopus). He has reviewed scientific papers for eight specialised scientific journals with impact factor; for 2020 - 2023 only, he has reviewed 54 publications. The qualities of Assoc. Prof. Victor Savov as an established scientist not only in Bulgaria but also in the world, can serve as impressive indicators for him in the most extensive scientific networks and databases, where his scientific publications and citations as of 25 July 2023 are reflected:

- Scopus (Elsevier) - 28 publications, 564 citations in 304 documents, h-index 13, on the 3-5th place in LTU in h-index.

- Web of Science - 29 publications, 533 citations, h-index 13.

- Google Scholar - 78 publications, 906 citations; h-index 16; i10-index 26.

- ResearchGate - 95 publications, 890 citations, h-index 15, Research Interest Score - 1,367.

8. Conclusion

The achieved scientific, pedagogical and applied results, as well as the presented Reference-Self-assessment for scientific and publication activity of Assoc. Prof. Viktor Petrov Savov indicates that he meets and exceeds all the criteria for holding the academic position of "Professor" in the field of higher education 6. Agricultural Sciences and Veterinary Medicine,

professional field 6.5 Forestry. The total number of points in all indicators is 4935.2, with the minimum requirement according to the Regulations for the Development of Academic Staff at the University of Forestry for the academic position of "Professor" of 600 points (Annex 1.3), which is more than eight times more than the minimum requirements.

In connection with the above, I confidently propose that Assoc. Prof. Dr Victor Petrov Savov be elected as "Professor" in the university course "Technology of Wood Fibre Materials" in the field of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.5. Forestry, scientific speciality "Technology, mechanisation and automation of wood processing and furniture industry".

Prepared the opinion:

/ prof. Vassil Jivkov PhD /

Opinion delivered to: