Europass Curriculum Vitae

PERSONAL INFORMATION

First name(s) / Surname(s)	**CONSTANTIN MOLDOVEANU**
E-mail	office@novaindustrialsa.ro
Nationality	Romanian

OCCUPATIONAL FIELD/STAGES

Work experience

7	2002 - currently
Occupation or position held	General Director
Name and address of employer	NOVA INDUSTRIAL SA Bucharest
Type of business or sector	The company's management in all aspects of business, technical, economical, human, etc.
6	
Occupation or position held	Director of the Electrical Transmission and Distribution Center and Senior Scientific Researcher of 1st degree
Name and address of employer	Romanian Power Grid Company **"**Transelectrica" - Energy Research and Modernizing Institute, ICEMENERG Bucharest
Type of business or sector	Management of the Electrical Research and Engineering Center on issues of electrical transmission and distribution; Coordinating the research centre on issues of studies, researches, electrical engineering and consultancy for high, medium or low voltage equipment in the power field; Project director for more research works and technological engineering.
5	
Occupation or position held	Director of Power Transformers and Electrical Apparatus Department and Senior Scientific Researcher of 1st degree
Name and address of employer	Romanian Electric Power Corporation **(**CONEL**)** - Energy Research and Modernizing Institute, ICEMENERG Bucharest
Type of business or sector	Management of research and technological engineering department on high, medium and low voltage power equipment in the power field; Coordinating the department's activities on issues of studies, research, electrical engineering and consultancy for high, medium or low voltage equipment in the power field; Project director for more research works and technological engineering; Project director for more research works and technological engineering in the power field
4	
Occupation or position held	Head of the Power Transformers and Electrical Apparatus Division and Senior Scientific Researcher of 1st degree (from 1990);
Name and address of employer	Romanian Electricity Authority **(**RENEL**) -** Studies**,** Research and Engineering Group **(** GSCI **)**
Type of business or sector	Coordinating the division's activities on issues of studies, research, electrical engineering and consultancy for high, medium or low voltage equipment in the power field; Project director for more research works and technological engineering in the power field
3	
Occupation or position held	Head of Power Transformer Division Senior Scientific Researcher of 1st degree), 2nd degree respectively (from 1985) within Power Transformers and Electrical Apparatus Laboratory;

Name and address of employer	Romanian of Electrical Energy - MEE - Energy Research and Modernizing Institute, ICEMENERG Bucharest Ministry of Electric Energy
Type of business or sector	Coordinating the division's activities on issues of studies, research, electrical engineering and consultancy for power and distribution transformers; Project director for more research works and technological engineering
2	
Occupation or position held	Senior Scientific Researcher of 3nd degree and scientific researcher
Name and address of employer	Romanian Energy Power Ministry MEE - Energy Research and Modernizing Institute, ICEMENERG Bucharest
Type of business or sector	Research activities and technological engineering in power transformers and high voltage techniques within the High Voltage Engineering Laboratory
1	
Occupation or position held	Junior scientific researcher
Name and address of employer	Romanian Energy Power Ministry - The Electro-energetic and Thermo-energetic Research Institute (ICENERG)
Type of business or sector	Research activities and technological engineering in the field of power transformers and high voltage techniques within the High Voltage Engineering Laboratory

Education and qualification

Title and qualification awarded	**Doctor engineer - Ph.D.,**
Principal subjects/occupational skills covered	**Ph.D. dissertation**: "*Theoretical and experimental contributions regarding the methods of measurement of the partial discharges in transformers*"
Name and type of organisation providing education	Polytechnic Institute of Iasi - Electrotechnical Faculty,
Title of qualification awarded	**Diplomate engineer**
Principal subjects/ occupational skills covered	Electrical Machines and Apparatus Specialty
Name and type of organisation providing education	Polytechnic Institute of Bucharest - Electrotechnical Faculty

International stages

Examples:

Period	**01 June - 30 September 1995 (Hitachi si Tokio)**
Title of qualification awarded	- Current concerns in the field of education and research in Japan; - Scientific research stage on issues: *"Production and analysis of gases dissolved in power transformer oil"*
Name and type of organisation providing education and training	Japan - Japan Society for Promotion of Science (JSPS) + Ibaraky University + Ibaraki Research Institute (the "Memorandum of understanding on the exchange of specialists between the Ministry of Research and Technology of Romania and the Japan Society for the Promotion of Science)
Period	**30 June - 30 July 1981 și 30 June - 30 July 1983 (Paris)**
Title of qualification awarded	Training stages / joint research activity regarding "*The detection of deformations of power transformer windings in operation by diagnosis based on the low voltage impulse (LVI) method and respectively the frequency response analysis (FRA) method*";
Name and type of organisation providing education and training	France: EdF - DER (Direction des Etudes et Recherches d'Electricite de France) based on scientifical cooperation Agreement between EdF and Romanian Energy Power Ministry;

International professional activity

Examples

Year: **1993**

Principal objective: Technical consultancy for Romanian Electricity Authority **(**RENEL**) -** Industrial Center for Electricity Transmission and Distribution (CITDEE) at signing of the contract for the acquisition of three automatic chromatographic analysis systems of the free gases (gas mixture samples taken off the power transformer Buchholz relay) and of the gases dissolved transformer insulating oils

Name and type of international organization: GERMANY Siemens" Society - Karlsruhe

Year: **1988**

Principal objective: Technical consultancy for the Romanian Energy Power Ministry MEE – Industrial Center for production of electrical and thermal energy (CIPEET): representative at the factory acceptance tests (FAT) of one 80 MVA 121/10,6 kV power transformer for Brazi Thermal Power Plant

Name and type of international organization: Ukraine - ZTZ Zaporozhye Power Transformers Factory

Year: **1988**

Principal objective: Technical consultancy for the Romanian Energy Power Ministry MEE - Industrial Center for Electricity Transmission and Distribution - CITDEE: representative at the factory acceptance tests of 2 pcs. ccurrent limiting reactors for 750/400 kV Isaccea substation

Name and type of international organization: Hungary - "Ganz" Budapesta Factory

Year: **1984-1986**

Principal objectives: Technical consultancy for the Romanian Energy Power Ministry MEE - Industrial Center for Electricity Transmission and Distribution – CITDEE: representative at the factory acceptance testing of 6 pcs. AODTTN 417/417/80 MVA 750√1,73/400√1,73/15,75 kV power autotransformers for 750/400 kV Isaccea substation

Name and type of international organization: Ukraine - ZTZ Zaporozhye Power Transformers Factory

Year: **1984-1987**

Principal objective: Technical consultancy for the Romanian Energy Power Ministry MEE - Industrial Center for Electricity Transmission and Distribution - CITDEE: representative at the factory acceptance testing of 3 pcs. RODT 110 MVAr 750 kV shunt reactors for 750/400 kV Isaccea substation

Name and type of international organization: RUSIA - Moscow ELECTROZAVOD factory

SOCIAL SKILLS AND COMPETENCES

Member of professional associations:

- CIGRE Member (International Council on Large Electric Systems) Paris, since 1991;
- Representative of Romania in CIGRE Study Committee B3 "Electrical substations" of CIGRE Paris, from 2020 - 2026 as observer member;
- Representative of Romania in CIGRE Study Committee 12 "Transformers" of CIGRE Paris, during 1992 - 1998 and 2012 - 2020, as observer member;
- Founding member of the National Romanian Committee - CNR of CIGRE, since 2006;
- Founding member of the "CNR-CIGRE" professional association, in 2006;
- Vice Chairman of the "CNR-CIGRE" professional association, since 2010 - 2022;
- Member of the CIGRE International Working Group WG A2.44 "Transformer intelligent condition monitoring";
- Member of the CIGRE International Working Group WG A2.34 "Guide for transformer maintenance";
- Member of the CIGRE International Specialist Working Group WG 12.17 "Particles in oil";
- Member in the "National Romanian Committee of the World Energy Council" CNR- CME 1990-2020;
- President of the MEE -RENEL/ CONEL Romanian Specialist Group "Transformers and Autotransformers" during 1985 - 1989;
- President of the ICEMENERG Specialists Group "Transformers and Autotransformers" during 1985 - 2001;
- Founding member of the Scientific and Technical Association of the Romanian Power Engineers – "Energetica" ASTER.

ORGANISATIONAL SKILLS AND COMPETENCES

1. Management skills and competencies

1.1. Over 40 years of managerial experience regarding all aspects: business, technical, economical, human, etc., in a state-owned company (100%) and respectively, a private-owned company (100%).

2.Technical skills/competences Certificate

2.1. National Energy Regulatory Authority **- ANRE -** Accredited technical expert;
2.2. National Energy Regulatory Authority - **ANR**E - Accredited project verifier;
2.3. National Energy Regulatory Authority **- ANRE -** Authorized Electrician**,** IVA and IVB degrees**;**

3. Experience gained on National Research - Development - Innovations projects (examples):

3.1. Director of research-development-innovation projects:

3.1.1 Project Director ""*Optimizing the operation of existing 400 kV overhead lines in the National Power System, used in interconnection and for power evacuation from the Cernavodă nuclear power plant and the renewable energy plants in Dobrogea, by installing on-line monitoring systems (Smart Grid type)*" Contract no. C76/2023-2026 with CNTEE Transelectrica SA;

3.1.2. Project Director "*Innovative integrated system for the lifetime and risk management of the primary equipment in the high voltage substations*", Cod SMIS: 122587 research project 2020-2023, contract no. C292/2020-2023 with Romanian Ministry of Education and Research & Ministry of European Funds

3.1.3. Technical Director of the project "Integrated system for the dynamic rating of high voltage electric power transmission lines based on the online monitoring of operating and environmental parameters" Cod PN-III-P2-2.1-PTE-2019-0529, Contract no. 38/2020-2022 with Romanian Ministry of Education and Research

3.1.4. **Technical director of the project** „ *Innovative integrated ICT (Information and Communication Technologies) system for real-time control and monitoring of electricity quality and losses on transport and distribution lines in the National Energy System*", Cod SMIS 11564 (Structural funds-O2.2.1, Contract no. 26/2017-2020 with Romanian Ministry of Communications and Information Society & Ministry of European Funds);

3.1.5. **Technical director of the project** "*Integrated monitoring and control system for full real-time estimation of functional condition of assembly electrical networks" /SIMCEC)*", (Program: Partnerships in priority areas, PN-II- PT-PCCA-2013-4-0259), Contract no. 33/2014-2016 with Romanian Ministry of National Education - Executive Unit for Financing Higher Education, Research, Development and Innovation;

3.1.6. **Project Director** for „*Complex system for on and off-line monitoring of high voltage assets of national power system / ACTIV-SMART",* Cod SMIS: CSNR 47527 (Structural funds- O2.3.3), Contract no. 485/2013-2015 with Romanian Ministry of National Education - Intermediate Agency for Research);

3.1.7. **Project Director** for "*Synchronized system of Smart Grid type for complex monitoring of high voltage substations / SINCRO SMART*", Cod SMIS: CSNR 43613 (Structural funds- O2.3.3), Contract no. 475/2013-2015, with Romanian Ministry of National Education - Intermediate Agency for Research;

3.1.8. **Project Director** for "*Equipment for complex monitoring of high voltage substations* **-** *EMCSIT*, Cod PNCD II - AMCSIT 144, Contract nr. 144/2008-2011 with Romanian Ministry of Education, Research and Innovation –INNOVATION Program;

3.1.9. Project Director for "*Development of an expert system for assessing the condition of high power transformers in operation by RVM method*", RELANSIN subprogram 1, Contract no. 444/1999-2000 with Ministry of Education, Research and Innovation;

3.2. Research-Development-Innovation Activity

3.2.1. Project Manager / Director for over 300 research - innovation and technological engineering projects (within the contracts with the Romanian Energy Power Ministry - MEE, The Romanian Industry Ministry, the Romanian Research and Education Ministry, the Industrial Center for Electricity Transmission and Distribution - CITDEE, the Industrial Center for Power Production – CIPEET RENEL, the Romanian Electricity Authority (RENEL), the Romanian Electric Power Corporation (CONEL), Romanian Power Grid Company "Transelectrica", SC Hidroelectrica SA, etc.);

3.2.2. Research project director for developing **NOVA- TRANSPOWER** expert system (Project Director) for the asset management of the primary high voltage electrical equipment: power transformers and the shunt reactors –**TRANSPOWER - PT** module , current transformers - **TRANSPOWER - TC** module , voltage transformers - **TRANSPOWER - TT** module, circuit breakers - **TRANSPOWER - I** – module, disconnectors - **TRANSPOWER - S** -module, surge arresters - **TRANSPOWER - D** -module; - **NOVA HES** – 6 expert system that detects the humidity content in insulating system of power transformers, using 6 methods of diagnosis; **NOVA PREDICT** software which determines the optimum conditions for investigating the technical condition of high voltage electrical equipment;

3.2.3. Project director for developing **NOVA WASTE - MANAGER** software system (Project Director) for the waste management at CNTEE "Transelectrica" SA;

3.2.4. Project director for developing **NOVA POWER CONSTRUCT** software (project Director) for the power construction management at CNTEE "Transelectrica" SA;

3.2.4. Research project director regarding the technical-scientific basis and the development of specialized equipment necessary for electrical engineering and produced by Nova Industrial SA, such as::

- **NOVA TRAFOMON** (patent in 1995) equipment for the complex on-line monitoring of power transformers in operation;
- **NOVA SMT** Equipment for the on-line monitoring of high voltage transformer bushings;
- **NOVA PDC/RVM** equipment for the diagnoses of the humidity content in insulating system of power transformers, using , the polarization and depolarization current measurement (PDC method) and the recovery voltage measurement (RVM method);
- **NOVA ARF** equipment for the diagnosis of the condition from a mechanical point of view of the power transformer windings by frequency response analysis (ARF method);
- **NOVA IJT** equipment for the diagnosis of the condition from a mechanical point of view of the power transformer windings by low voltage impulse test (IJT method).

3.2.5. Research project director **"**The study regarding the elaboration of the strategy regarding the implementation of the Smart Grid concept in CNTEE "Transelectrica" SA - Roadmap ";

3.2.6.- Studies and researches for developing the **Xb** additive necessary for reducing the polar effect of transformer mineral oil and to increase the values of the insulation resistances of the power transformer windings;

3.2.7 Research project director for developing the technology of working and coordination for achieving the necessary installations (as Project Director) for on-site drying/revitalization/ regeneration work of medium and large power transformers insulation (contracts with Romanian Power Ministry):

- **RUTI-ETU** oil treatment plant for degassing, dewatering and filtering of transformer oil (rated flow 16 t/h, filtering la 1-5 μm, maximum drying 5 ppm, maximum 0,2 % degree of degassing , maximum heating 100 °C);
- **RUTI-EVUT** installation for the advanced vacuum of the tank and for capturing through freezing (cryogenic trap) of the vapors (water and light hydrocarbons) extracted from the solid insulation in the drying process;
- **RUTI-IMIT** installation for heating in direct current of the power transformers (maximum power. 400 kVA, 700 Vdc maximum voltage, 1250 A dc maximum current);
- **RUTI-IPAU** installation for dry air generating at a dew point under -50 °C.

3.2.8. Research project director on the lifetime estimation of oil distribution transformers by lightning impulse voltage repeated tests;

3.2.9. Research project director on accelerated thermal aging and the thermal lifetime estimation of oil distribution transformers;

3.2.10. Research project director on theoretical and experimental aspects of partial discharge repeatability measurement and localization of their sources for power transformers; etc.

3.3. Technological development & engineering activity

3.3.1. Project director for "*Design services for the "Realization of the Feasibility Study for the Power Quality Monitoring System (PQMS), of the Technical Specification and the Neutral Technical Project for the realization of the Power Quality Monitoring System (PQMS)) and the Specification for post-warranty maintenance of the Power Quality Monitoring System (PQMS*)", contract no. C262, 2020-2022, Beneficiary: The National Electricity Transmission Company" Transelectrica" SA;

3.3.2. Project director and specialized consultancy in the field of power substations, as authorized technical expert within contracts " *Consultancy in the field of electrical substation*" Contracts C6 / 2011-2014 and C08 / 2015-2018, between Nova Industrial SA and the National Electricity Transmission Company" Transelectrica" SA);

3.3.3. Project Director responsible for the production, supply, testing, commissioning of all monitoring systems and equipment (over five hundred pcs.) - necessary for "*Transelectrica Smart Grid pilot program for on-line monitoring of 400/110 kV Darste, respectively 220/110 kV Gradistea and Mostistea substations*";

3.3.4. Project director and technical expert for works of "Technical expertise and evaluation of the remaining life" at hundreds power transformers and shunt reactors in operation such as: for Nuclearelectrica SA- CNE Cernavoda: 440 MVA 420/24 kV generator power transformers, etc.; for National Power Grid Company "Transelectrica "SA: 400/400/160 MVA 400/231/22 kV and 200/200/60 MVA power autotransformers, 250/250/80 MVA 400/121/20 kV power transformers, 100 MVAr shunt reactors, 10-60 MVA 110/MV power transformers; for Hodroelectrica 216 MVA 242/15,75 kV, 190 MVA 242/15,75 kV, 90 MVA 242/15,75 kV, 90 MVA 121/10,5 kV generator power transformers, for Enel Co, Electrica Co. and other clients10-40 MVA 110/MT power transformers, etc.;

3.3.5. Project director for the elaboration of 36 necessary Internal Technical Norms for CNTEE "Transelectrica" SA, ctr. C16;

3.3.6. Project director "Study on the analysis of the condition of RET equipment with exceeded normal operating time", project no. ctr. C22, C188, C181;

3.3.7. Project director: "Multispectral inspection in (IR) infrared, (UV) ultraviolet and visible spectrum of high voltage overhead power lines or/and substations:", 8990, etc.,

3.3.8. Project director " Study regarding the establishment of the conditions / procedures for the expertise of fixed assets with expired normal operating life ", ctr. 11876;

3.3.9. Project director „Study regarding the analysis of the equipment condition from RET with the normal operation duration exceeded (technical expertise at 29 pieces of power transformers 16 -250 MVA, voltages 110 - 400 kV, respectively at 4 pcs. 110 IV and 400 kV top IO and SF6 circuit breakers) ", ctr. C188;

3.3.10. Project director "Study on the operating behavior of earthing installations in power substations", ctr. C164

3.3.11. Project director "Analysis of 400 kV composite insulators from Bucharest South substation, of 220 kV and 110 kV composite insulators, from the 220/110 kV substation Resita - ST Timisoara , etc. CNTEE "Transelectrica" S.A." ctr. C08;

3.3.12. Project director "Revision PE 126/82 - Regulation of technical operation of electrical equipment in primary distribution", ctr. C 08, order 30133;

3.3.13. Consultancy and technical assistance on evaluations and interpreting the results of tests / analysis / measurements performed in operating power transformers by different service providers;

3.3.14. Consultancy and technical assistance for the reception in the country or abroad of some large power transformers or shunt reactors (for example, reception at Electroputere Craiova of transformers of 440 MVA 24/400 kV and 250/250/80 MVA 400/121/20 kV for Cernavoda Nuclear power plant, reception at the factory from ZTZ Zaporozhye - Ukraine of 6 autotransformers of 417/417/80 MVA 750/√3/400/√3/15,75 kV for 750/400 kV Isaccea substation, etc.

3.3.15. Development of specific operational procedures, technical coordination of working groups and provision of technical assistance for insulation treatment/revitalization works on over 75 power transformers and 110 - 400 kV shunt reactors, works carried out at the location and operation of these primary equipment (station or power plant) Beneficiaries: Transelectrica, Hidroelectrica, Termoelectrica, Electrica, etc.;

3.3.16. Analyzes regarding the behavior of power transformers in operation; damage analysis; establishing the technical conditions necessary to be imposed on suppliers and in operation to improve the quality and availability of this type of equipment.

3.3.17. Assessment of the risk of maintaining in operation the primary high voltage equipment (power transformers, shunt reactors) in the electrical substations at which the state parameters are below the limits allowed by the operating regulations;

3.3.18. Responsible, performer and technical coordinator from the Romanian side for the verifying works before and post mounting, respectively for commissioning, of 7 pcs. 417/417/80 MVA 750/√3/400/√3/15,75 kV autotransformers and 7 pcs. of 110 MVAr 750 kV shunt reactors in 750/400 kV Isaccea substation;

3.3.19. Coordinator responsible from MEE - GSCI for assimilation in manufacturing in Romania and certification of the quality of power transformers (440 MVA 415/24 kV, respectively 60/30/30 MVA 110 / 10.5 / 6.3 kV and 60/30/30 MVA 110/24 / 6.3 kV for group No. 1 from Cernavoda NPP);

3.3.20. Responsible coordinator on behalf of the Ministry of Electric Energy - GSCI for the assimilation in manufacturing in Romania and the quality certification of power transformers (440 MVA 415/24 kV, respectively 60/30/30 MVA 110/10.5/6.3 kV and 60/30/30 MVA 110/24/6.3 kV for group no. 1 at CNE Cernavoda);

3.3.21. Specific activities as a member and/or as the leader group of specialists in power transformers' field, of the Romanian Energy Power Ministry - MEE/Romanian Electricity Authority - RENEL: analysis of the technical documents of the system designers or equipment suppliers; drawing the beneficiary's views and assisting him in the technical-economical confrontations with the service or equipment suppliers; control to the suppliers for power or distribution transformers and, respectively, shunt reactors during reception phase, mounting or commissioning control of high power transformers or shunt reactors, recommendations of power transformer and shunt reactor manufacturers for the technical attestation as MEE/RENEL suppliers; failure analysis;

etc.

4. OTHER SKILLS AND COMPETENCES (examples):

4.1. Certified as **technical expert** by the Romanian Energy Regulatory Authority - ANRE

4.2. Certified as **project verifier** by the Romanian Energy Regulatory Authority - ANRE

4.3. Certified as **electrician IVA and IVB degree** (the maximum degree) by the Romanian Energy Regulatory Authority - ANRE

5. SCIENTIFIC PAPERS AND PRESENTATIONS (examples):

Publications - Author or co-author of over 125 technical-scientific works (books and papers) published in the country and abroad, many presented at international conferences, 10 inventions and 4 innovations, respectively.

5.1. Author or co-author of brochures / technical books published in the countryor abroad

5.1.1. C. Dupont (BR), C. Beauchemin (CA), L. Cheim (US), N. Fantana (DE), C. Kane (US), R. Skrzypek (DE), J. Wetzer (NL), J. Borghetto (IT), P. Boss (CH), G. Buchgraber (AT), G. Buckley (AU), M. Bukvic (MK), T. Chiulan (RO), G. Csépes (HU), P. da Costa Silva (BR), R. da Fonte (BR), H. da Silva (BR), R. da Silva (BR), P. de Oliveira Turchiari (BR), A. de Pablo (ES), M. Foata (CA), W. Gil (PL), A. Gomes (BR), T. Gradnik (SI), E. Iraburu (ES), P. Jarman (UK), M. Jensen (DK), F. Johnsen (NO), M. Kadowaki (JP), S. Keitoue (HR), M. Koch (AT), A. Mcgrail (US), E. Mackenzie (UK), **C. Moldoveanu** (RO), K. Najdenkoski (MK), T. Noonan (IE), M. Paulino (BR), L. Peh (NZ), P. Picher (CA), G. Russell (AU), M. Ryadi (FR), T. Saha (AU), F. Scatiggio (IT), J. Silveira (BR), M. Soares (PT), I. Solteiro (BR), K. Takano (JP), J. Velek (CZ), K. Viereck (DE), A. Vita (BR) - „***Guide on transformer intelligent condition monitoring (TICM) systems***", CIGRE 2015 technical brochure no 630/2015 (Final report of WG CIGRE A2.44), 140 pages.

5.1.2. C. Rajotte (CA), M. Foata (CA), P. Jarman (UK), F. Larese (FR), P. Lorin (CH), B. Pahlavanpour (UK), J.P. Patelli (FR), J. Velek (CZ), R. Willoughby (AU), R. Barrento (PT), P. Boman (US), I. Diaconu (RO), A. Drobyshevski (RU), Y. Ebisawa (JP), T. Fagarasan (RO), N. Fantana (DE), H. Gago (ES), J. Gebauer (DE), P. Gervais (CA), M. Krüger (AT), G. Lawler (IR), R. Maina (IT), **C. Moldoveanu** (RO), P. Mueller (CH), D. Olan (CA), M. Pena (BR), E. Perez-Moreno (ES), S. Quintin (ES), V. Samoilis (GR), F. Simon (FR), A. Shkolnik (IS), B. Sparling (CA), P. Warczynski (PO) - "*Guide for Transformer Maintenance*", CIGRE 2010 Technical Brochure No.445 (Final report of WG CIGRE A2.34), 120 pages.

5.1.3. J. Aubin, G.I. Antonov, W. Chunhua, J. Diesendorf, J. Gonzalez, P.V. Goosen, P.N. Jarman, G. Jorendal, C. Krause, C. Boisdon, S. Letaidier, H. Lohmeyer, M. Ikeda, T. Buchacz, **C. Moldoveanu**, T.I. Morozova, K. Newman, T.V. Oommen, M. Oserwaser, G. Praxl, J.B. Sund, C. Vincent - „*Effect of particles on transformer dielectric strength*" , CIGRE 2000 Technical Brochure No. 157 (Final report of WG CIGRE 12.17), 144 pages.

5.1.4. C. Moldoveanu, V. Manitiu, M.R. Marinescu, M. Palici " Fault detection of the internal structure of the power transformers and autotransformers subject to electro-dynamic stress", Technical brochure Published by MEE - ICEMENERG, 1987, 107 pages.

5.1.5. C. Moldoveanu, G. Fischer – "Fault detection via the analysis of the gases dissolved in oil to the power transformers in operation", Technical brochure published by MEE - ICEMENERG, 1987, 106 pages.

5.1.6. C. Moldoveanu, V. Manitiu - " The control of the temporary, accidental or periodical overload capacity of the power transformers subject to electro-dynamic stress", Technical brochure published by MEE - ICEMENERG, 1982, 63 pages.

5.1.7. C. Moldoveanu, G. Balan - "Fault detection in the power transformers coiling via the measurement of the intensity of the partial discharges", Technical brochure published by MEE - ICEMENERG, 1977, 72 pages.

5.2. Author or coauthor of technical reports within the official international contacts	**5.2.1.** C. Moldoveanu: "*Expert Systems for On and Off - line Monitoring of Large Power Transformers*", Scientific report for the Japanese Society for the Promotion of Science, 1995, 72 pages. **5.2.2**. C. Moldoveanu, V. Manitiu : "*La defectoscopie de la structure interne des transformateurs et autotransformateurs de puissance lors des contraintes electrodynamiques*", Scientific report for Electricite de France-DER, 1984, 105 pages. **5.2.3**. C. Moldoveanu: "*Erreurs possibles dans l'estimation par la methode de la variation de l'impedance de court-circuit, de l'etat des transformateurs de puissance apres court-circuit*", Scientific report for Electricite de France_DER, 1981, 13 pages. **5.2.4.** C. Moldoveanu, V. Manitiu : "*Caracterisation du point de vue thermique de la qualite des transformateurs de distribution dans l'huile*", Scientific report for Electricite de France, 1981, 13 pages.
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6. AUTHOR OR COAUTHOR OF INVENTIONS (PATENT CERTIFICATE IN ROMANIA) (examples):	**6.1. C. Moldoveanu**, V. Brezoianu, S. Zaharescu, A. Vasile, V. Ursianu, B. Toader, F. Goni, P. Curiac, I. Ionita "Method for on-line monitoring of high voltage power line operating parameters, SMART GRIDS integrable "-Romanian patent no. 130811/2024. **6.2. C. Moldoveanu,** V. Brezoianu, A. Vasile, M. Avrămescu, S. Zaharescu, I. Ioniţă, « Intelligent device and method for monitoring and recording of disturbances at power transformers in power transmission and distribution systems" - Romanian patent no. 131069/2023. **6.3. C. Moldoveanu**, V. Brezoianu, A. Vasile, M. Avrămescu "Method and intelligent system for online measuring and monitoring, in real time, of produced/transported/distributed/supplied/consumed electricity and its quality" - Romanian patent no. 130811/2023. **6.4. C. Moldoveanu**, V. Brezoianu., V. Ursianu, A. Vasile, S.D. Grigorescu „*Method and system for complex on-line monitoring of high voltage susbstations",* Romanian patent no. 125932/2012 **6.5.** S.D.Grigorescu, C. Vlaicu C. **Moldoveanu** „*Method and apparatus for continuous monitoring of power transformers*" Romanian patent no. 117220 C1/2002 **6.6**. D. Barbulescu, **C. Moldoveanu** „*Method and installation for measurement of partial discharge intensity appeared in the insulation of high voltage equipment*", Romanian patent no. 70.96175; **6.7.** B. Mathe, **C. Moldoveanu** „Installation for partial discharge testing of resin cast instrument Transformers", Romanian patent no. 79.956/1974; **6.8**. B. Mathe, **C. Moldoveanu** „*Welding transformer*", Romanian patent no. 71.844/1972; **6.9. C. Moldoveanu**, N. Ciurez, N. Lemnaru „*Pressure transducer*", Romanian patent no. 69.255/1971.
7. AUTHOR OR CO-AUTHOR OF PATENT APPLICATION (TO BE APPROVED AND PUBLISHED) (exemple):	**7.1. C. Moldoveanu,** V. Brezoianu, A. Vasile, I. Ioniţă Method and integrated system for on-line monitoring and diagnosis of primary electrical equipment in high-voltage power stations Patent application no a 2023 00241
8. AUTHOR OR CO-AUTHOR INNOVATIONS CERTIFIED IN ROMANIA (examples):	**8.1. C. Moldoveanu**, C. Stanila, T. Serban, Iv. Moldoveanu *„Technology and equipment for measurement of total gas content, dissolved gases in transformer oil, during the oil treatment – CGU – 0.05 RUTI* absorptiometer *type"* Certificate of the Romanian Ministry of Electric Energy no. 4591; **8.2. C. Moldoveanu**, C. Stanila, T. Serban *„ Equipment for determination of transformer oil resistivity during the oil treatment RU – 200 RUTI type"* Certificate of the Romanian Ministry of Electric Energy no. 4590; **8.3. C. Moldoveanu**, V. Manitiu, C. Stamatin-Michiu, T. Serban, I. Tituleasa, I. Negulescu *„Technology and apparatus for determination of the water content in solid insulation samples at power transformers and shunt reactors"* Certificate of the Romanian Ministry of Electric Energy no. 4102; **8.4. C. Moldoveanu**, V. Manitiu, R.M. Marinescu „ *Method for diagnosis of the internal mechanical condition of the power transformer stressed at electrodynamical efforts"* Certificate of the Romanian Ministry of Electric nr. 1094;
9. TECHNICAL CHAIRMAN OF INTERNATIONAL CONFERENCES (examples):	**9.2.1. "International Conference on Condition Monitoring, Diagnosis and Maintenance - CMDM"**: a) Edition I: Radisson Blu Hotel, September 19 - 23, 2011, Bucharest, Romania; b) Edition II: Radisson Blu Hotel, September 2 - 5, 2013, Bucharest, Romania; c) Edition III: Athénée Palace Hilton Hotel, October 5 -8, 2015, Bucharest, Romania; d) Edition IV: Radisson Blu Hotel, September 25 - 27, 2017, Bucharest, Romania; e) Edition V : Radisson Blu Hotel, September 9 - 11, 2019, Bucharest, Romania; f) Edition VI : Hilton Hotel, 11th 13th October 2021, Bucharest, Romania;

10. RECOGNITION IMPACT ACTIVITY (examples):	**9.2.2. "CIGRE Regional South-East European Conference (RSEEC)"** a) Edition I: Hilton Hotel, October 10 - 12, 2012, Sibiu, Romania; b) Edition II: Timisoara Hotel, October 8 - 10, 2014, Timisoara, Romania; c) Edition III: UPB, September 25 - 27 2017, Bucharest, Romania; d) Edition IV: UPB, October 3-5, 2018, Bucharest, Romania; e) Edition V: UPB, October 12-15, 2020, Bucharest, Romania;
10.1. Diplomas	**10.**1.1. The Council on Large Electric Systems - CIGRE, Paris „ **Distinguished Member**" in acknowledgement of his long-standing collaboration to the work of the Association, 2014;
10.2. Medals	**10.2.1.** Patent no. 125932 / 30.08.2012„Method and system for complex on-line monitoring of high voltage susbstations" was rewarded with the **bronze medal** at the **International Exhibition iENA Nuremberg - International Trade Fair Ideas - Inventions - New Products 2012 (Germany).** **10.2.2.** Medal in recognition of the valuable support accorded in increasing the visibility of the Romanian National Committee of the Word Energy Council, in country and abroad
10.3. Interviews in magazines	**10.3.1.** Elena Ratcu: **"Soul interview with Mr. Dr. Ing. Constantin Moldoveanu - General Director of NOVA Industrial Co"** ***Mesagerul Energetic magazine, Aprilie 2014, pag. 43-51;***
10.4. Quotes in books:	**10.4**.1. Elena Ratcu: book "**Energy seniors**", AGIR publishing house , vol 1., 2015; **10.4.2.** CNR-CIGRE: „**History of the Romanian National Committee CIGRE**", 2020 www.cigre.org.ro › index.php › cigre-paris › istoric**;** **10.4.3**. M.L. Goia, V. Vernescu, Z. Vasiliu, D. Zlatanovici Cartea „The history lived in ICEMENERG 1960-2007**",** SemnE publishing house, 2019;
10.5. Quotations in journals or volumes of conference proceedings (situation at January 25, 2021)	**10.5.1.** Source**: https://ieeeexplore.ieee.org/document/5638936:** Paper: „*Intelligent system for real-time monitoring of high voltage substations*": 3 paper citations; 822 Full Text Views; **10.**5.2. Source: https://ieeeexplore.ieee.org/document/5638936: Paper: „*Smart Grids: Romanian Experience in on-line monitoring and condition assessment of high voltage substations*" 2 paper citations; 305 Full Text Views; **10.5.3**. Source: https://www.researchgate.net/publication/319219170_OHLM_-_Integrated_solution_for_real-time_monitoring_of_overhead_transmission_lines: Paper: „*OHLM – Integrated Solution for Real-time Monitoring of Overhead Transmission Lines",* IEEE - ESMO 2016" 2 paper citations,3 references: **10.5.4** Source: https://ieeexplore.ieee.org/document/8759792 Paper: "*Requirements of a real time monitoring and analysis system of power losses in electrical transmission and distribution systems*" 54 Full Text Views; **10.55.** Source: https://ieeexplore.ieee.org/document/8893621 Paper*: "Cybersecurity concerns on real time monitoring in electrical transmission and distribution systems (SMART GRIDS)" ;* 71 Full Text Views; Etc. * . *