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International Journal of Electrical and Computer Engineering

IJECE

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International Journal of Electrical and Computer Engineering (IJECE)

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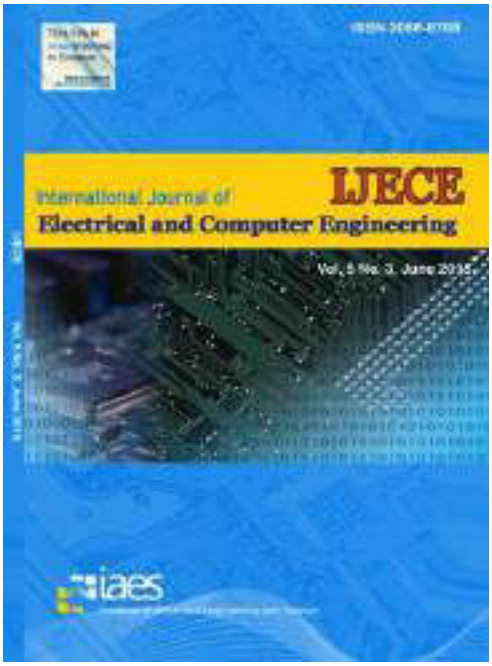

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We are glad to announce that the Editors and the Publisher of IJECE are choosing best papers for every year since 2015 issues. Best paper candidates may be nominated for the Annual Best Paper Awards by any researcher working in the field. This includes active researchers in topics relevant to the IJECE, the IJECE Authors, Reviewers, Editorial Board, Associate Editors, Managing Editor and Editor-in-Chief. The nomination letter must be emailed to the Annual Best Paper Award Committee (ijece@iaesjournal.com, cc: info@iaescore.com) before September 30, 2019. Letters should briefly outline the reason for nomination with respect to the judging criteria. Judging Criteria: Papers will be judged for contribution and impact to the area of the IJECE.

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Electrical: electrical engineering materials, electric power generation, transmission and distribution, power electronics, power quality, power economic, FACTS, renewable energy, electric traction, electromagnetic compatibility, high voltage insulation technologies, high voltage apparatuses, lightning detection and protection, power system analysis, SCADA, electrical measurements, etc;

Electronics: electronic materials, microelectronic system, design and implementation of application specific integrated circuits (ASIC), VLSI design, system-on-a-chip (SoC) and electronic instrumentation using CAD tools, digital signal & data processing, , biomedical transducers and instrumentation, medical imaging equipment and techniques, biomedical imaging and image processing, biomechanics and rehabilitation engineering, biomaterials and drug delivery systems, etc;

Telecommunication: modulation and signal processing for telecommunication, information theory and coding, antenna and wave propagation, wireless and mobile communications, radio communication, communication electronics and microwave, radar imaging, distributed platform, communication network and systems, telematics services and security network, etc;

Control: optimal, robust and adaptive controls, non linear and stochastic controls, modeling and identification, robotics, image based control, hybrid and switching control, process optimization and scheduling, control and intelligent systems, artificial intelligent and expert system, fuzzy logic and neural network, complex adaptive systems, etc;

Computer and Informatics: computer architecture, parallel and distributed computer, pervasive computing, computer network, embedded system, human-computer interaction, virtual/augmented reality, computer security, software engineering (software: lifecycle, management, engineering process, engineering tools and methods), programming (programming methodology and paradigm), data engineering (data and knowledge level modeling, information management (DB) practices, knowledge based management system, knowledge discovery in data), network traffic modeling, performance modeling, dependable computing, high performance computing, computer security, human-machine interface, stochastic systems, information theory, intelligent systems, IT governance, networking technology, optical communication technology, next generation media, robotic instrumentation, information search engine, multimedia security, computer vision, information retrieval, intelligent system, distributed computing system, mobile processing, next network generation, computer network security, natural language processing, business process, cognitive systems, etc.

Paper Submission

Authors are invited to submit their articles properly formatted as per the author guidelines through our on-line system. The manuscript will be subjected to a full review procedure and the decision whether to accept it will be taken by the Editor based on the reviews.

Article processing

All submitted articles will be initially subjected to editorial procedures, if found suitable for publishing will be sent to reviewers for peer review. IJECE adopts double blind peer review system.

Abstracting and Indexing

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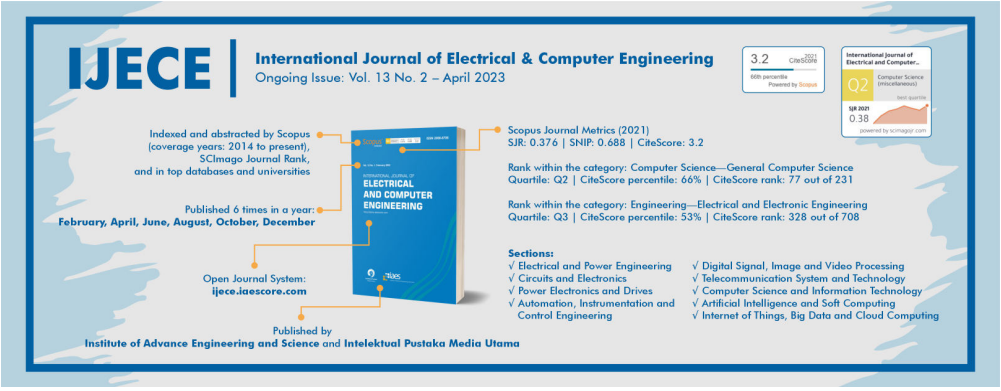

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Authors must strictly follow **the guide for authors**. Please read these instructions carefully and follow them strictly. In this way you will help ensure that the review and publication of your paper is as efficient and quick as possible. The editors reserve the right to reject manuscripts that are not in accordance with these instructions. No changes in the author list will be permitted after a manuscript has been accepted.

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Announcements

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Dear Sir/Madam,

Due to huge regular papers submission, we apologize that our journal does not accept any papers suggestion from other conference organizers. We sincerely apologize for any inconvenience. Critical suggestions are welcome for improvement of the contents and journal policies.

Your attention and cooperation is very highly appreciated.

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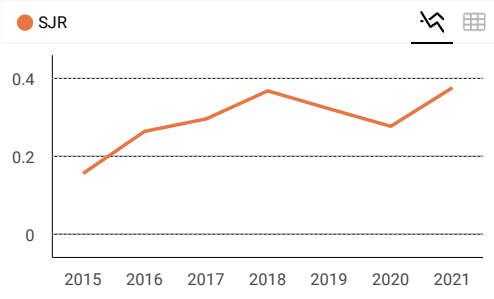

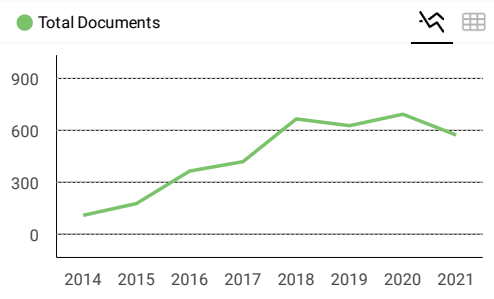

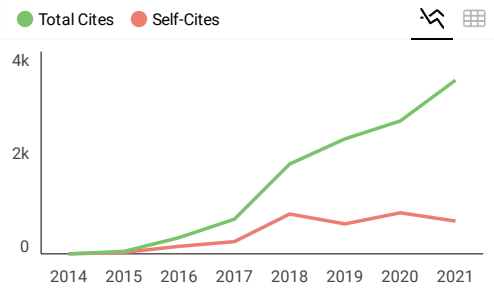

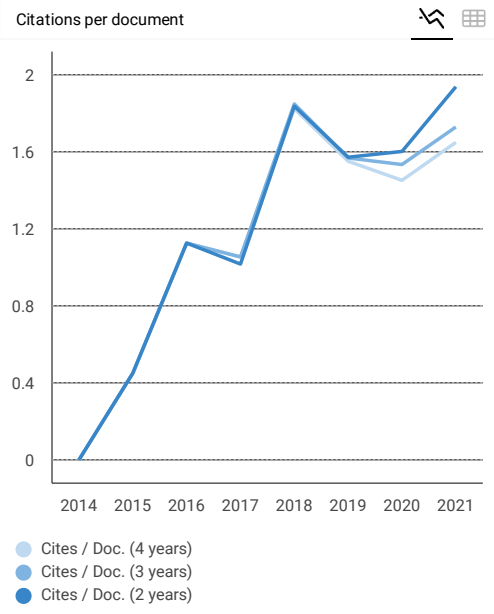

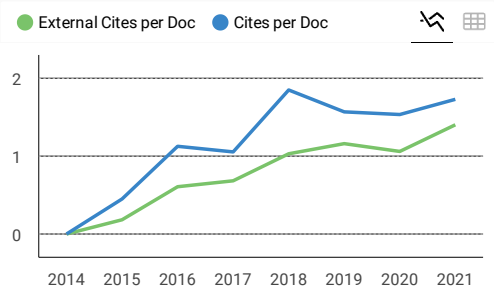

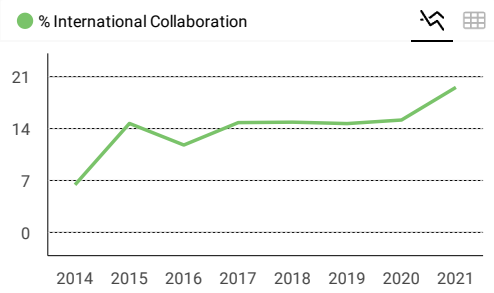

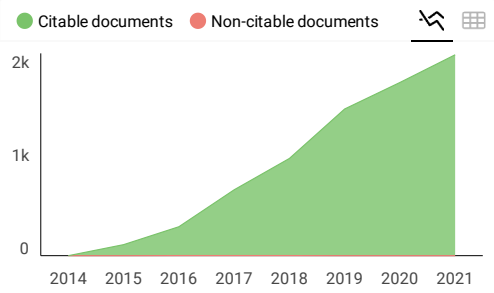

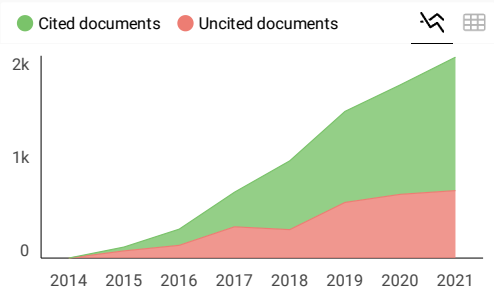

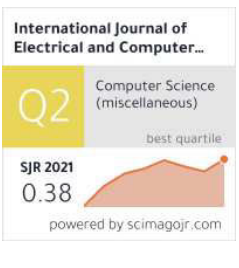

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reply

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Best regards,
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... 5 months ago

Same

A **amad rayan** 7 months ago

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M **mag** 2 years ago

Dear T. Sutikno and IJCEC Editorial Office,

I submitted my paper(under id=24838) to this journal before more than 3 months and there is no reply to any email I sent to your journal.
I need to check my paper status (accepted or rejected) since I'm a postgraduate student and I restricted with a limited time.
the other question is this journal still Scopus since there is no update in the cite score since 2019.
Best Regards
Thank you

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Mag,
Thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. To see the current journal's index status, please consult Scopus database.
Unfortunately, we cannot help you with your request concerning your paper, we suggest you visit contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

G

Ghufarn essam drewll 2 years ago

Hello. Does this journal accept research papers type review

reply

A

amad rayan 7 months ago

Hello.the same question Does this journal accept research papers type review ?

SCImago Team

Melanie Ortiz 2 years ago

Dear Ghufarn,
Thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

Z

Zinara 2 years ago

Hello, I submitted my paper to this journal in 2020 but status still the same "Active (has manuscript)". What should I do? Should I wait? My paper submission is #1570682879

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Zinara,
thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

M

Mag 2 years ago

Dear Sir / Madam on this journal editor
I sent my paper before more than 2 months, I don't receive any acceptance or rejection decision about my paper
How long does the review process take?

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Mag,
thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

H

Huda Khazie 2 years ago

Dear Sir / Madam on this journal editor

I tried to publish my Paper in your journal when I registered and do anything the system give me an error
when I tried to upload the paper so please help me.

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Huda,
thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

S

Sourav Sinha 2 years ago

I am Sourav Sinha, author of paper id #22165, titled "Antenna Design

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Sourav, thanks for your participation! Best Regards, SCImago Team

S

suhad 2 years ago

please is this journal indexed in scopus for the year 2021?

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Suhad,
Thank you very much for your comment.
All the metadata have been provided by Scopus /Elsevier in their last update sent to SCImago, including the Coverage's period data. The SJR for 2019 was released on 11 June 2020. We suggest you consult the Scopus database directly to see the current index status as SJR is a static image of Scopus, which is changing every day.
For further information, please contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

L **lenovo uae** 2 years ago

I appreciate the efforts you people put in to share blogs on such kind of topics, it was indeed helpful. Keep Posting!

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Sir/Madam, thanks for your participation! Best Regards, SCImago Team

E **El Ayachi** 2 years ago

Hi,
Many days ago, I submitted a paper to the journal (IJECE) using the EDAS platform.
However, till now, the paper status is the same: pending (no manuscript).
What does is it mean this state?
Do you think the paper will be soon considered, or the submission is missing something?
I can see and download the pdf manuscript-file that I have uploaded ...
I

Thank you for your comments.

reply

Rajendra Kumar 2 years ago

Hi El Ayachi ,

Have u got solution to it , I am facing same problem.

Pls suggest .

Thanks

SCImago Team

Melanie Ortiz 2 years ago

Dear El Ayachi,
thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

A **Ahmad Al-Jarrah** 2 years ago

What is/are the used media for publish this journal, is it published in print and electronic media? or just electronic?
On your web site, there is only one ISSN, where on the journal web site, there are two ISSN.

Thanks

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Ahmad,

Thank you for contacting us.
SJR is a portal with scientometric indicators of journals indexed in Scopus. All the metadata (Title, ISSN, Publisher, Category, etc.) have been provided by Scopus /Elsevier. We suggest you contact Scopus support regarding this matter here:

https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards,
SCImago Team

R **Rusul Altaie** 2 years ago

Dear sir

The Journal sent me the acceptance of my paper and they asked me to send them the FEES to publish it.
I sent them fees through their own Email but they did not respond to me.
My question how much time that paper may be published.

Paper ID: 22348

Authors:Rusul Altaie

Title: Restoration of Blurred Noisy Images Based on Guided Filtering and Inverse Filter.
Section: Digital Signal, Image and Viedo processing.

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Rusul,
thank you for contacting us. Please see comments below.
Best Regards, SCImago Team

N **Nikhath Tabassum** 2 years ago

Dear Editor,
Could you please provide the steps to submit the revised manuscript, as the steps mentioned in the journal website is only for new submission.

Best Regards

reply

M **Murugiah** 2 years ago

I'm also facing the same issue, Have you found a way to submit your revised paper on the same paper ID number through EDAS online system?

A **Arnold Ojugo** 2 years ago

From the manuscript tracking system, you can submit your articles for consideration. Afterwards, you can log-unto the platform (MTS) from time to time to track the stage and processing of your manuscript. When reviews have been made, and you have revised your manuscript as detailed in the review...you can go to the same place, you will see three tabs (Summary Review Editing)
1. Kindly select the Review tab
2. You will see the Editor Decision Tab
3. Browse and select the revised paper
4. Upload

I hope this helps. Cheers

SCImago Team

Melanie Ortiz 2 years ago

Dear Nikhath,
thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

R

Rusul 2 years ago

Hi

Do you have a Western Union method to pay for acceptable research fees?

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Rusul, thank you very much for your comment. Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff so they could inform you more deeply. Best Regards, SCImago Team

L

Latha 2 years ago

Dear T. Sutikno and IJCEC Editorial Office,

One month onwards, I didn't find any updates in your journal for accepted papers after EDAS login provided but not working properly when I tried to Register.

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Latha,
thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

R

Rusul 2 years ago

Do you have a Western Union payment method for fees of accepted paper?

reply

R

Rusul H. Al-taie 2 years ago

Dear Sir

Is it possible to add an author to the research before it is published?
What are the fees for 11 pages of the article? How are the fees sent?

Thank you

Best Regards,

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Rusul,
thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

R

Riddhi 2 years ago

Hi,
I have the following questions if you could answer them point wise.

1) The official website shows that registrations are closed, but the EDAS website is allowing me to create a new account and register? Could you kindly explain this discrepancy?

2) I wish to publish an original research on neural networks and computer vision in IJECE. The track of 'soft computing' that is mentioned on the EDAS website after logging in uses a term called 'review manuscript due'. Could you explain what this term means?

3) Once the paper is submitted, what is generally the review period to get notified for acceptance or rejection?

(I have already asked these questions on email around a week back, but didn't get any response. I was hoping to hear back here.)

Thank you.
Awaiting your response at the earliest.

Riddhi.

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Riddhi, thank you very much for your comment. Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff so they could inform you more deeply. Best Regards, SCImago Team

P

Peera 3 years ago

All jornal of IAES are slow and they never respon to email

reply

A

Ahmed Adeeb Jalal 2 years ago

They did not respond to email, because they are mostly busy. But, The response will be within about two months to accept or reject.
I have already published two papers with them, and they look very cooperative in that picture. So, those efforts determine the credibility of the Organization and of the values it enshrines.

IAES Editorial Office 3 years ago

International Journal of Electrical and Computer Engineering 0.322 Q2 19 629 1331 15003 2075. Your calculation for citation number from the published articles in 2016-2018 of the IJECE in 2019 is 2075 is not true, it is should 2227 (not 2075). You can check on scopus dot com

reply

SCImago Team

Melanie Ortiz 3 years ago

Dear Editorial Team,

Thank you for contacting us.

As you probably already know, SCImago calculates the scientometric indicators based on the data sent by Scopus. Keep in mind that these data are a static image of Scopus database and that this one increases it's documents daily. The SJR indicator is calculated equally with a recursive algorithm that takes into account the data sent by Scopus.
The SJR indicator is performed on the calculation of citations received by journals over a period of 3 years, giving greater weight to citations from highly prestigious journals (those with high citation rates and low self-citation) using the Google PageRank algorithm.

For further information related to the data sent by Scopus, we suggest you contact Scopus Support directly here:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/

Best Regards, SCImago Team

halima 3 years ago

please is this journal indexed in scopus for the year 2020?

reply

IJECE Editorial Office 3 years ago

Yes, IJECE is indexed by Scopus in 2020. You can check on scopus dot com

SCImago Team

Melanie Ortiz 3 years ago

Dear Halima, thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you consult the Scopus database directly. Keep in mind that the SJR is a static image (the update is made one time per year, next one throughout June 2020) of a database (Scopus) which is changing every day.
Best Regards, SCImago Team

wahab 3 years ago

Dear sir
I would like to ask about the fees of publishing and the time elapsed for accepting and publishing,my paper that may be send talk about deep learning

Thanks in advance

reply

Dr Ali 3 years ago

USD 290 for 8 pages and eacg =h extra page USD 45

SCImago Team

Melanie Ortiz 3 years ago

Dear Wahab,
thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

A

Atheel 3 years ago

I submit my paper in this journal from a lot of 3 months ago and there is no any reply from the journal. My question is this journal still Scopus since there is no update in the cite score since 2018.

reply

I

IJECE Editorial Office 3 years ago

Paper ID: 21045, Entitled: Fuzzy Sliding Mode Controller with Fuzzy Estimator for Full Vehicle Active Suspension System Optimized by ABC Algorithm
Authors: Atheel K. Abdul Zahra, Turki Y. Abdalla

A Decision has been make since 2 Feb 2020, but no response from authors side

Yes, Scopus still uses CiteScore 2018 that it was announced on June 2019. CiteScore 2020 should be announced as soon in this month (June 2020)

SCImago Team

Melanie Ortiz 3 years ago

Dear Atheel, thank you very much for your comment.

Unfortunately we cannot help you with your request. We suggest you to consult the Scopus database directly. Keep in mind that the SJR is a static image (the update is made one time per year, in June 2020) of a database (Scopus) which is changing every day.
Best Rregards, SCImago Team

A

Ali 3 years ago

this journal is not ISI indexed. how did you validate this journal?
my article is accepted in this journal and they asked me for publication fee. and that fee is not a few. is costs near $500 for me. and is too much. Is it worth publishing in this journal?

reply

T

T. Sutikno 3 years ago

Publication is not USD500 (but USD295).
http://ijece.iaescore.com/index.php/IJECE/about/submissions#authorFees

I think that it is black campaign.

Or you use third party service?
Who did ask you to pay USD500?

Is your paper too long (more than 8 pages), and it covers extra fee for 4-5 pages?

S **Sanjoy Kumar Debnath** 3 years ago

This only for scopus

SCImago Team

Melanie Ortiz 3 years ago

Dear Ali, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. We also suggest you to consult the Scopus database directly. Remember that the SJR is a static image of a database (Scopus) which is changing every day. Best regards, SCImago Team

F **FZ** 3 years ago

Hi,
Please Inform me about the Impact Factor of the journal??

reply

SCImago Team

Melanie Ortiz 3 years ago

Dear user, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

M **Mokhtar** 3 years ago

Dear Sir Elena Corera,
My question is What is the Impact factor (IF) in 2018 for this Journal (IJECE)indexed SCOPUS? Who is the difference between IF and CiteScore 2018: 1.63, SNIP 2018: 1.144 and SJR 2018: 0.368 ?

thank you very much...

reply

I **IJECE Editorial Office** 3 years ago

Please take a look at scopus dot com directly, that Elsevier still use CiteScore 2018, SNIP 2018, and SJR 2018. Please take a look at: https://www.scopus.com/sourceid/21100373959. For your information, CiteScore 2018, SNIP 2018 and SJR 2018 use announced in June 2019. We should wait a moment for CiteScore 2019, SNIP 2019, and SJR 2019 will appear in scopus dot com in this month (June 2020)

SCImago Team

Melanie Ortiz 3 years ago

Dear Mokhtar, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

D **Dr_basem** 3 years ago

I want to publish my paper in this journal ,What is the review time and article publication fees and publication time.Kindly let me know

reply

I **IJECE Editorial Office** 3 years ago

Please take a look at: http://ijece.iaescore.com/index.php/IJECE/about
Example:
Peer Review Process
(http://ijece.iaescore.com/index.php/IJECE/about/editorialPolicies#peerReviewProcess)
This journal operates a conventional single-blind reviewing policy in which the reviewer's name is always concealed from the submitting author. Authors should present their papers honestly without fabrication, falsification, plagiarism or inappropriate data manipulation. Submitted papers are evaluated by anonymous referees for contribution, originality, relevance, and presentation. Papers will be sent for anonymous review by at least two reviewers who will either be members of the Editorial Board or others of similar standing in the field. In order to shorten the review process and respond quickly to authors, the Editors may triage a submission and come to a decision without sending the paper for external review. The Editor shall inform you of the results of the review as soon as possible, hopefully in 8-12 weeks. The Editors' decision is final and no correspondence can be entered into concerning manuscripts considered unsuitable for publication in this journal. All correspondence, including notification of the Editors' decision and requests for revisions, will be sent by email.

SCImago Team

Melanie Ortiz 3 years ago

Dear user,
thank you for contacting us.
Sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

M **Madhu** 3 years ago

Hello sir,
I want to publish my paper in this journal ,What is the review time and article publication fees and publication time.Kindly let me know

reply

N **navya krishna** 4 years ago

What is the acceptance rate of this journal?

reply

R **Radhwan Hussein Abdulzhraa Al-Sagheer** 4 years ago

HELLO
The Journal sent me the acceptance of my my paper and they asked me to send them the FEES to publish it.
I sent them fees and sent them notice through the system of the Journal and through their own e miles but they did not respond to me.
pleas help me

Paper ID: 12914

Authors:Radhwan Hussein AL-Sagheer

Title:Impact Of Crack Length Into Pipe Conveying Fluid Utilizing FFT Computer Algorithm

Section:Telecommunication_and_Information_Technology

reply

T. Sutikno 3 years ago

I just read your comment in 1 year ago.

Your paper was published in this journal. Please take a look at:
http://ijece.iaescore.com/index.php/IJECE/article/view/12914

Radhwan Hussein AL-Sagheer, you should give positive comment by reply your previous post, not only give negative comment. We have more thank 3000 submitted papers, so we must manage this journal carefully

IJECE Editorial Office 3 years ago

Paper ID: 12914, Entitled: Impact of Crack Length into Pipe Conveying Fluid Utilizing Fast Fourier transform Computer Algorithm was published on August 2019 (http://ijece.iaescore.com/index.php/IJECE/article/view/12914)

Nada 3 years ago

How much yoy paid?

SCImago Team

Melanie Ortiz 3 years ago

Dear user,
thank you for contacting us.
Sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage. You can see the updated journal's information just above .
Best Regards, SCImago Team

aditi 4 years ago

are u able to publish now..

navya krishna 4 years ago

Radhwan Hussein, how much time had it took for getting acceptance?Thanks in advance

Khairun Saddami 4 years ago

Radhwan Hussein AL-Sagheer, you have to be patient till next issue is published. Sometimes it need some times to published.

Ammar Issa 4 years ago

Dear Elena, do you know what happen for the website of the journal. I can not access to the website of the journal.

reply

SCImago Team

Elena Corera 4 years ago

Please, contact International Journal of Electrical and Computer Engineering, you are contacting Scimago Journal and Country Rank.
Best,
SCImago Team

S **Su** 4 years ago

Hello, i submitted this journal on 18th March, 2018. I cound not log in my registered account. I tried to contact the publisher so many times. I did not get any response. Please help me. My paper id is #9048

reply

SCImago Team

Elena Corera 4 years ago

Dear Su,

we are so sorry, but we cannot help you with your request. We are an institution absolutely different from the journals, so we cannot provide you any information different from what you can find in their websites.
I hope someone could help you with your questions.

Best regards,
SCImago Team

A **Ahmad** 4 years ago

How long it will take the published paper in this journal to appear in scopus database?
Thanks

reply

SCImago Team

Elena Corera 4 years ago

Dear Ahmad,

thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/

Best Regards,
SCImago Team

C **cherki zeynab** 4 years ago

Participation and publication in this newspaper

reply

D **Dr Bashar M. Nema** 4 years ago

Dear Sir
My question how much time that paper may be accepted
Sincerely

reply

Z **zainab zainab mohammed** 4 years ago

hi, p;ease I need help please , this journal accepted my paper and I the editor of this journal send me email tell me problem for my submit incomplete please how solve my problem

SCImago Team

Elena Corera 4 years ago

Dear Dr. Bashar, we suggest you locate the author's instructions on the journal's website. Best Regards, SCImago Team

L

Linda 4 years ago

How can i join for reviewing my paper?

reply

SCImago Team

Elena Corera 4 years ago

Dear Linda, we suggest you contact the journal directly. Best Regards, SCImago Team

Leave a comment

Name

Email
(will not be published)

I'm not a robot

reCAPTCHA
Privacy - Terms

Submit

The users of Scimago Journal & Country Rank have the possibility to dialogue through comments linked to a specific journal. The purpose is to have a forum in which general doubts about the processes of publication in the journal, experiences and other issues derived from the publication of papers are resolved. For topics on particular articles, maintain the dialogue through the usual channels with your editor.

Source details

International Journal of Electrical and Computer Engineering

Scopus coverage years: from 2014 to Present

Publisher: Institute of Advanced Engineering and Science (IAES)

E-ISSN: 2088-8708

Subject area: Computer Science: General Computer Science | Engineering: Electrical and Electronic Engineering

Source type: Journal

View all documents > | Set document alert | Save to source list | Source Homepage

3.2

SJR 2021
0.376

SNIP 2021
0.688

CiteScore | CiteScore rank & trend | Scopus content coverage

Improved CiteScore methodology

CiteScore 2021 counts the citations received in 2018-2021 to articles, reviews, conference papers, book chapters and data papers published in 2018-2021, and divides this by the number of publications published in 2018-2021. Learn more >

CiteScore 2021

$$3.2 = \frac{8{,}184 \text{ Citations } 2018 - 2021}{2{,}559 \text{ Documents } 2018 - 2021}$$

Calculated on 05 May, 2022

CiteScoreTracker 2022

$$3.6 = \frac{9{,}212 \text{ Citations to date}}{2{,}562 \text{ Documents to date}}$$

Last updated on 05 January, 2023 • Updated monthly

CiteScore rank 2021

Category	Rank	Percentile
Computer Science General Computer Science	#77/231	66th
Engineering Electrical and Electronic Engineering	#328/708	53rd

View CiteScore methodology > | CiteScore FAQ > | Add CiteScore to your site

http://ijece.iaescore.com | ISSN 2088-8708, e-ISSN 2722-2578
International Journal of Electrical and Computer Engineering (IJECE)

Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation

Waluyo Waluyo, Siti Saodah, Eltha Hidayatullah

Abstract

Partial discharge is a phenomenon of electron ionization occurs due to concentrated electric field in a different edge plane. This phenomenon will be investigated by an electric field measurement in a measuring point. The internal partial discharge will give the insulation damage effect on a generator stator winding due to void existence. This manuscript presents the measurement results of the on-line internal partial discharge on the stator winding insulation of 68.75 MVA generator. It used the resistant temperature detector method and CM2000^{TM}. The results were classified into three conditions based on the voids in the generator stator insulation, the internal delamination and the surface discharge.

Keywords

partial discharge; on-line; stator; winding insulation; generator

Full Text:

PDF

DOI: http://doi.org/10.11591/ijece.v6i5.pp2088-2095

International Journal of Electrical and Computer Engineering (IJECE)
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International Journal of Electrical and Computer Engineering (IJECE)
Vol. 6, No. 5, October 2016, pp. 2088~2095
ISSN: 2088-8708, DOI: 10.11591/ijece.v6i5.10066

Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation

Waluyo[1], Siti Saodah[2], Eltha Hidayatullah[3]
[1,3]Department of Electrical Engineering, National Institute of Technology (Itenas), Bandung, Indonesia
[2]Department of Energy Conversion, Bandung State Polytechnic (Polban), Bandung, Indonesia

Article Info

Article history:

Received Feb 4, 2016
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Keyword:

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On-line
Partial discharge
Stator
Winding insulation

ABSTRACT

Partial discharge is a phenomenon of electron ionization occurs due to concentrated electric field in a different edge plane. This phenomenon will be investigated by an electric field measurement in a measuring point. The internal partial discharge will give the insulation damage effect on a generator stator winding due to void existence. This manuscript presents the measurement results of the on-line internal partial discharge on the stator winding insulation of 68.75 MVA generator. It used the resistant temperature detector method and CM2000^{TM}. The results were classified into three conditions based on the voids in the generator stator insulation, the internal delamination and the surface discharge.

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Email: waluyo@itenas.ac.id

1. INTRODUCTION

High voltage electric generators are essential components of reliable electric power generation system. They must operate continuously and so must be very reliable because a fault in a high voltage generator could compromise the power supply. The continuous operation is critical, so that the on-line diagnosis is the best preventive measure. Furthermore, the faults are largely caused by insulation breakdowns in the stator winding, so that the common method of on-line diagnosis is partial discharge (PD) detection in the stator winding [1].

Generator insulation systems, however perfect their initial state, inevitably degrade in service. Heat, thermal cycling, bar forces, vibration, mechanical shock, shrinkage of support structures, such as wedges and spaces, and the presence of high electric stress, act and interact to impair the integrity of the dielectric systems. At some stages, partial discharges will start and begin to increase, providing an additional erosive aging factor. This usually occurs at abraded outer shielding, in cavities or delaminations, or in the end-turn structure [2].

Partial discharges (PDs) are small electrical sparks resulting from the electrical breakdown that occur when void exist within on the surface or in other highly non-uniform electric field of high voltage insulation of stator windings in generators and motors. These PD pulses can occur because of the manufacturing and installation processes, thermal deterioration, winding contamination or stator bar movement during operation. If the void within an organic solid or liquid, the PD will degrade the organic material and may eventually cause the failure of the electrical insulation. As the insulation degrades, the number and magnitude of the PD pulse will increase. Although the magnitude of the PD pulses cannot be directly related to the remaining life of the winding, the doubling PD pulse magnitudes approximately every

6 months, rate of PD pulse activity increase rapidly, or the PD levels are highly compared to other similar machines, this is an indicator that visual inspections and/or other testing methods are need to confirm the insulation condition [3],[4].

Partial discharges (PDs) have been recognized as harmful ageing process for electrical insulation at the beginning of the last century when the HV technology was introduced for the generating and transmission of electrical power. Partial discharges are consequence of local electrical stress concentrations in the insulation or on the surface of the insulation. Generally, such discharge appears as pulse having a duration of much less than 1 μs [5].

Partial discharge comes from different factors, such as thermal, electrical field, environmental ambient and mechanical vibrations. Defects identified by partial discharge measurements are base wedges and bar vibration, slot discharges, broken conductors, contamination of damage of end-winding, discharges between phases as a result of vibration [6].

More than ten years, an extensive research project was undertaken to develop a superior partial discharge test turbine generators. The results were the turbine generator analyzer test, which was designed to be performed by non-specialized generator station staff without a generator outage. The main technical advantage of this test was that false indications of deteriorating insulation were virtually eliminated. The main difficulty in performing an on-line PD test was not in detecting the PD signals, but rather distinguishing the PD from electrical noise. The noise was found to be very erratic overtime, and some time as much as 1000 times higher than generator PD signals. The trend in results from the on-line PD test will give sufficient warning to permit timely modification of generator operation or implementation of relatively inexpensive stator winding maintenance. The on-line PD testing facilitated extending winding life and reduced overall maintenance costs by avoiding in service failures and resulting premature rewinds [7].

The statistical analysis of the data base was the distribution of Q_m as a function of winding age. The PD results in the data base from machines that were from 1 to more 50 years old showed no consistent trend, which was surprising because one would normally assume that older windings would be more deteriorated and thus have higher PD levels. The inconsistent pattern OPD versus winding age may include the observation that manufacturers of machines have a learning curve to climb as the adopt new design and manufacturing techniques or that utilities are continuously oscillating between proactive and breakdown maintenance strategies, depending on management policies. An analysis of the statistical distribution of PD for several manufacturers was also performed. The cause of the differences between manufacturers was unknown, but it might be due to different manufacturing processes, electric stress design levels and assembly methods [8].

PD and /or EMI monitoring of hydrogen-cooled generators having tight windings, with or without contamination, does not generally yield additional information on the insulation condition. EMI indications of core-edge and end-winding discharges could not be confirmed by inspection. EMI is effective in identifying problems outside the winding, such as those relating to the iso-phase bus duct components or the exciter. The interpretation of both PD and EMI signatures requires the skill of a trained insulation expert [9].

An effective on-line PD monitoring system must adequately filter and the impact of noise and disturbances in order to provide valid results. The noise and disturbances from the power system and harmonics could influence the quality of PD signals. Absolute humidity should be included in all trend analysis, especially if surface PD monitored for as long as 30 years with the same method of noise and disturbance separation. The on-line partial discharge testing has become a recognized, proven tool to help maintenance engineers identify which stator windings need off line testing, inspection and /or repairs [10].

Matlab Simulink based model has been introduced to generate the pulse and detect it. One sinusoidal ac cycle was taken and divided into 8 segments and the number of pulses appearing for each segments was found by Matlab program. The results for PD pulse count for 5 kV and 10 kV. The calibrating circuit was modeled in Matlab Simulink to create desired output PD pulses with required the charge levels as 5 pC, 10 pC, 50 pC, 100 pC and 500 pC. The calibrator circuit was connected across the object and output pulses were similar to the calibrating pulses as required. The physical model of calibrator was made and output wave forms were observed on DSO. The output was similar to the simulation results [11].

It has been presented the modern OLPD testing and monitoring technology. It was also explained some partial discharge sensor options, namely high voltage coupling capacitor sensors, high frequency current transformer sensors, Rogowski coil sensors and transient earth voltage sensors. The significant cost and operational benefits could be gained from complete power generation, industrial and petrochemical industry MV networks. The data from continuous CM technology can be used to support CBM schemes and to direct preventive maintenance interventions to repair plat or cables ahead of insulation failure from PD activity [12].

It has been presented some PD detection methods, namely electrical, chemical, acoustic and optical methods of the sensor types. The problems associated with PD for the high voltage equipment and high

voltage power systems have not been ignored and will never be ignored by high voltage system designers and maintenance engineers. PD identification and PD monitoring make economic sense low and many years to come [13].

A positive PD is generated by electrons initiated by collision detachment of negative ions in a high electric field region. Thus, the positive PD generation depends on whether or not negative ions exist around the particle tip. On the other hand, negative PD is generated by an initial electron derived from the field emission from the electrode surface [14]. Partial discharge measurements on operating machines can be influenced by conditions such as humidity, temperature, terminal voltage and load [15].

This research was to analysis and classifies the condition based on the amount of charges per cycle of partial discharge. The partial discharge that monitored was occurred in the 68.75 MVA generator stator winding insulation.

2. RESEARCH METHOD

The used measuring method in this research was On-line partial discharge (PD) measurement using resistance temperature detector (RTD) method. This method was to measure the partial discharge that occurred in the generator stator insulation. The illustrated diagram of the measurement is shown in Figure 1 below.

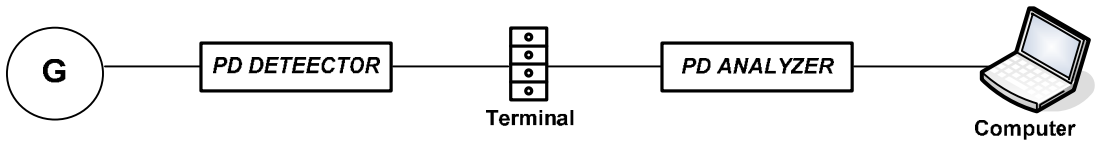


Figure 1. Diagram of partial discharge measurement

The partial discharge measurement used CM 2000^{TM} that connected using a cable from CM2000^{TM} to RTD at the generator and ground. The measurement data sampling collection was carried out automatically using a computer and PD monitor *software* that provided with CM2000.

Diagnosis of *partial discharge*:

- The measurements were carried out using through the RTD (Resistance Temperature Detector) as a sensor mounted on the generator stator windings.
- The used measuring instrument was Toshiba CM2000 that connects the cable probes from CM2000 to the RTD of generator stator windings.
- The partial discharge magnitudes were measured in millivoltage (mV).
- The data collection was performed automatically using the computer and monitor PD software that available on the CM2000.

2.1. The terms those need to be considered when testings:

PD testings should be done in a thermally stable condition.

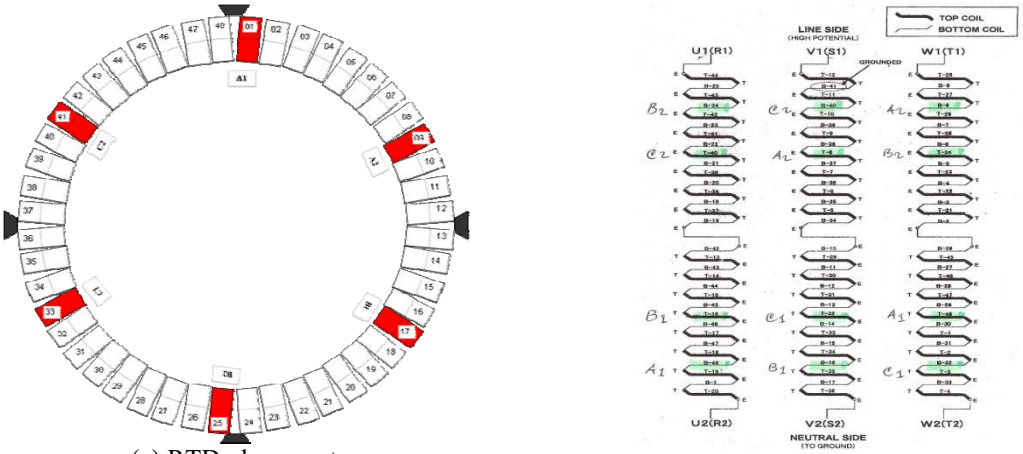
This meant that the stator winding temperature did not change during testings. Temperature stability was obtained at the of the generator with the same load in a certain time period or until the temperature did not change.

1. PD testings should be done fastly.
   If the testings are done fastly, the probability of temperature change will be minimized. The temperature change will influence the *comparability* and accuracy of testin results. This case will become be important when it is carried out the testings with load variation, such as *full load* and *no load tests* after the load is released.
2. The load and the temperature does not change more than a few percent.
   When collecting data / partial discharge test, the test should be performed under the same conditions (load and temperature).
3. If the test conditions change, (eg, cooling air humidity), will affect the level of partial discharge and need to be considered in the analysis of partial discharge.
4. When comparing the quantity of partial discharge testing, it is kept in mind the type of used insulation. The different types of insulation are used, it will produce different discharge levels.

The results of partial discharge testing on generators that are not in synchronous condition with networks, they will be different from the generator in synchronous condition with the network. The partial discharge in generators that are not in synchronous condition with the network will be higher.

The first equipment used in the measurement was RTD PT 100 (resistance temperature detector). RTD or also called as resistance thermometers is a temperature sensor that utilize change of electrical resistance in a certain material to change the temperature. RTD referred to a measure of positive temperature coefficient which means that the resistance will increase with the temperature. PT 100 is a platinum material with condition at 0^{o}C temperatures has a resistance of 100 ohms. RTD is used in generators to monitor winding temperature changes due to load current variations. Six pieces of RTD were placed between the top-bottom coils so that the change in each coil could be detected.

Figure 2(a) shows the locations of RTD on the generator stator winding. It is indicated in symetrical among them. Figure 2(b) shows the position RTD on the generator stator winding. This figure is the extraction in the sheet of Figure 2(a). The stator winding of phase R (U) was placed and sensed by the RTD probes of B2, C2, B1 and A1. While, the stator winding of phase S (V) was placed and sensed by the RTD probes of C2, A2, C1 and B1. Finally, the stator winding of phase T (W) was placed and sensed by the RTD probes of A2, B2, A1 and C1.



(a) RTD placement (b) RTD positions

Figure 2. RTD installation and position on the generator stator winding

Table 1 lists the placement of RTD positions. RTD A1 was installed on R and T phases, RTD A2 was installed on T and S phases and RTD B1 was installed on S and R phases. For same sequence, RTDs of B2, C1 and C2 were installed on R and T phases, T and S phases and S and R phases respectively.

Table 1. Placement of RTDs

RTDs	Placement			
	Position	Slot	Type	Phase
A1	Centre	1	Middle	R, T
A2	Exciter	9	Long	T, S
B1	Centre	17	Middle	S, R
B2	Exciter	25	Long	R, T
C1	Centre	33	Middle	T, S
C2	Exciter	41	Long	S, R

Figure 3(a) shows the typical RTD with cable. The equipment was used in the electric generator for partial discharge detections. The second used equipment was CM2000^{TM} analyzer of partial discharge measurement system, Figure 3(b) which served to monitor the partial discharge that might occur in the stator generator. Finally, the support tools were BNC coaxial cables including probes with length of 5 meters, as shown in Figure 3(c).

(a) RTD with cable (b) CM2000™ (c) Coaxial cable and BNC probe

Figure 3. CM2000™ analyzer of partial discharge measurement system and auxiliary cables

The measurement of partial discharge in high voltage equipment is very important because of the obtained data and their interpretation can be determined a reliability of equipment caused by aging and the risk of failure can be analyzed. The partial discharge test specifications depends on the type of test equipment and insulation materials used in the construction of equipment. The existence of partial discharge in the insulation material can be determined by the method of analysis of the magnitude of the partial discharge. This analysis is one of them can be done by using CM2000 analyzer. It should be noted that this analysis should be careful and always be compared with the data state at an earlier time. The partial discharge data can be good information for the condition of the generator stator winding and thus it can be made of data trends.

Table 2. Interpretation of Partial Discharge [16]

No.	PD Measurement results	Interpretation	Remarks
1	40 mV	Danger, action required	Action should be taken
2	30 mV	Detailed analysis to be done	Analysis trend, PD polarity, and history to isolate cause of PD
3	20 mV	PD detected	Monitor time trend
4	0 mV	No problem found	No action required

3. MEASUREMENT RESULT DATA AND DISCUSSION

The generator technical data were 3 phase, 50 Hz frequency, 11,800 Volt, 3000 rpm rotation speed, 68,750 kVA capacity, 0.8 power factor lagging, B insulation class and mica tape with epoxy resin insulating material.

This measurement was performed once a month in a period of 12 months, using six RTD (Resistance Thermal Detector) sensors as the detection tool. The purpose of this measurement to determine the magnitude of the partial discharge that occurs in the generator stator winding insulation. The easurement results are shown in Table 3.

Table 3. The measurement of partial discharge

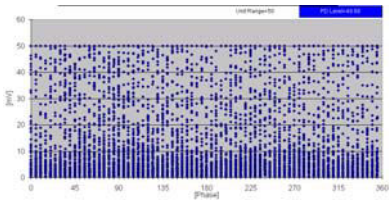
Month	RTD					
	A1	A2	B1	B2	C1	C2
1	25.85	289.50	48.72	58.49	79.59	19.59
2	38.82	224.18	28.28	43.72	58.54	20.32
3	29.53	394.51	10.01	59.96	58.83	20.13
4	40.60		29.44	0.01	50.01	
5	45.37			55.19	41.38	
6	40.29			79.56		
7	289.63			300.13		
8	287.67			389.99		
9	0.01			43.84		
10	83.28			99.39		
11	2.04	4.78	4.51	15.00	3.27	7.64
12	5.40	10.07	5.98	43.30	5.96	49.80

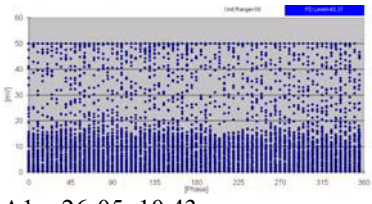
The partial discharge voltages those were measured from the RTD sensor represented the conversion of the temperature scale into the amount of voltage. This could be done with the aid of analyzer that could help analyze the partial discharge that occurs in the stator winding voltage generator. The values those occurred during the 12 months fickled.

1. In the first sensor (A1), the maximum voltage of partial discharge was occurred in the seventh month (289.63 mV) and the minimum voltage of partial discharge was occurred at month of nine (0.01 mV).
2. In the second sensor (A2), the maximum voltage of partial discharge was occurred in third month (394.51 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (4.78 mV).
3. In the third sensor (B1), the maximum voltage of partial discharge was occurred in the first month (48.72 mV) and the minimum voltage of partial discharge was occurred in the elevent month (4.51 mV).
4. In the fourth sensor (B2), the maximum voltage of partial discharge was occurred in the eighth month (389.99 mV) and the minimum voltage of partial discharge was occurred in the fourth months (0.01 mV).
5. In the fifth sensor (C1), the maximum voltage of partial discharge was occurred in the first month (79.59 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (3.27 mV).
6. In the sixth sensor (C2), the maximum voltage of partial discharge was occurred at twelfth month (49.80 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (7.64 mV).

The trend data of partial discharge measurement results in the generator stator winding appears that most of the partial discharge activity tent to increase, especially in the month of seventh and eighth.

Based on the direct measurements, it was classified into three conditions based on the amount of charges per cycle. Figure 13 shows the partial discharge occurs those caused by internal void in the generator stator insulation. These cases were indicated by the amount of charge occupied on the positive parts of cycles those have almost same amount of those on the negative ones.


A1 – 24-04; 13.39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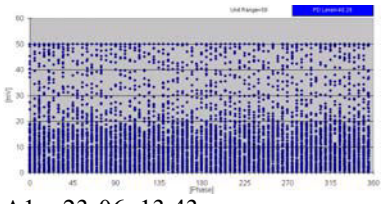
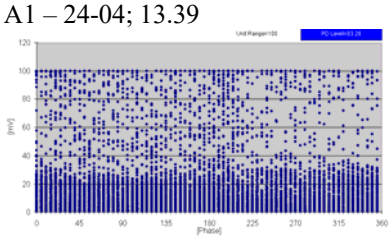
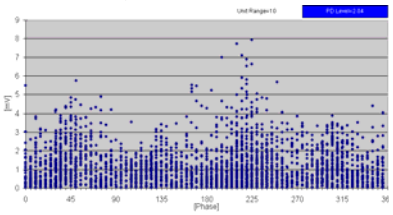
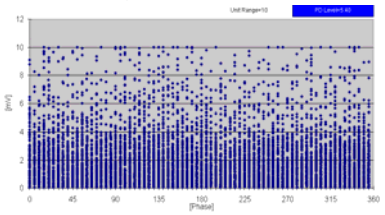
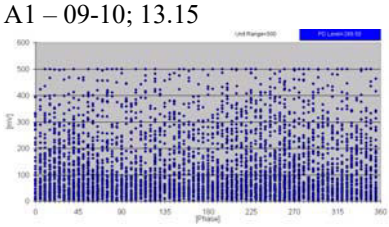
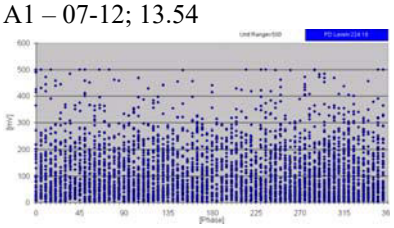

A1 – 23-06; 13.43

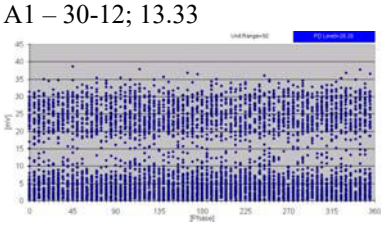

A1 – 09-10; 13.15

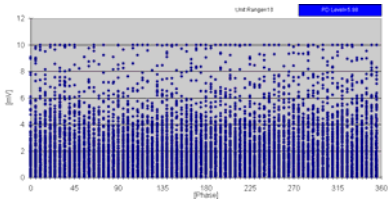

A1 – 07-12; 13.54

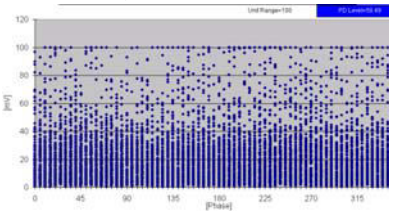

A1 – 30-12; 13.33

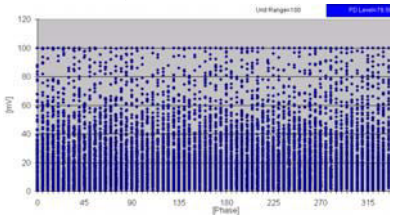

A2 – 29-01; 10.40


A2 – 24-02; 10.55


B1 – 24-02; 11.03


B1 – 30-12; 14.05


B2 – 29-01; 10.56


B2 – 23-06; 13.58

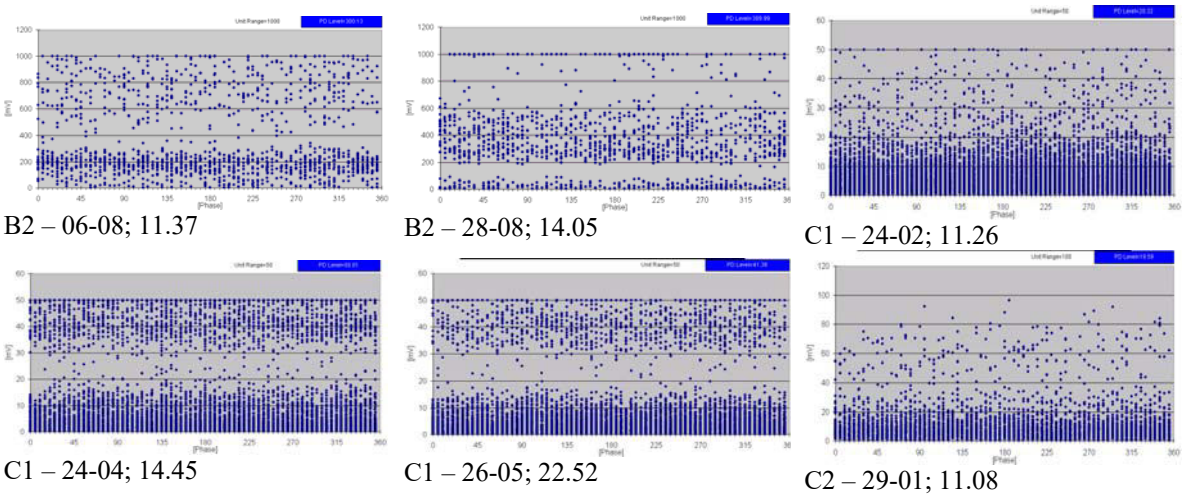


Figure 13. The measurement results those the positive and negative cycles have almost same charges

The second condition, as shown in Figure 14, indicated the internal delamination. In the internal delamination, the insulation would be separated from the copper conductor; therefore it would be weakly bonded, overheating, and so forth. This case could be seen from the most charge was on the negative cycles was more dominant than on the negative cycle ones.

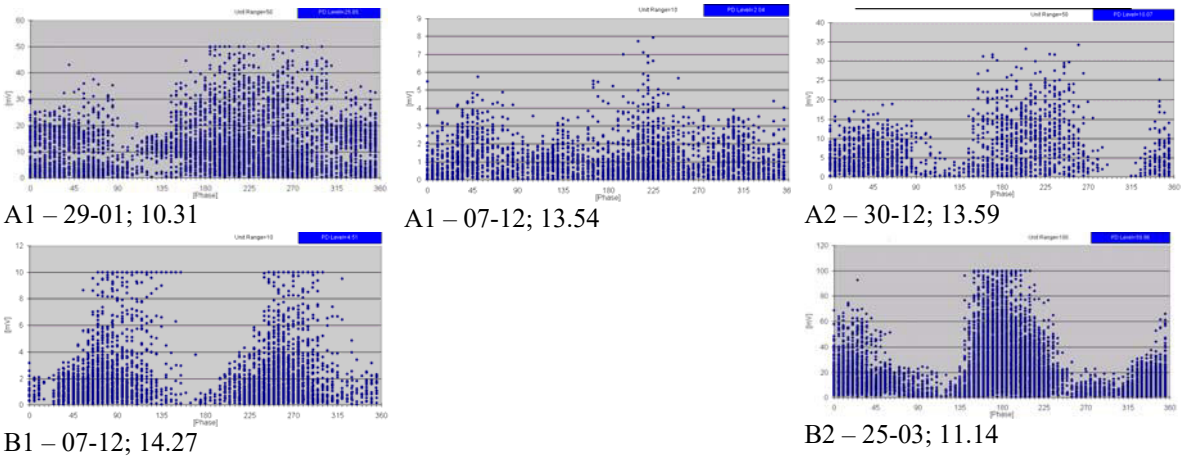
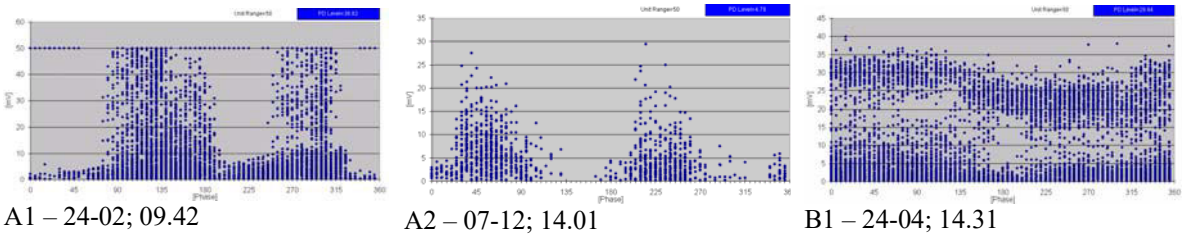
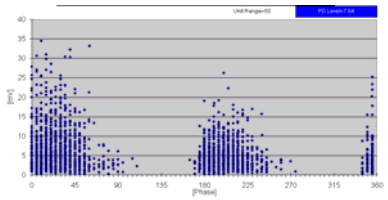


Figure 14. The measurement results those the charge on the negative cycles were more dominant than those on the negative ones

The third condition of measurement indicated the surface discharges. This phenomenon was caused by semi conductive a material (paint) was damage and loose its capability, as shown Figure 15.





C2 – 07-12; 14.56

Figure 15. This phenomenon was caused by semi conductive a material (paint)

4. CONCLUSION

Based on the measurement for 12 months, the partial discharge occurs in the generator unit 2 was almost caused by the internal void in the generator insulation. This case was indicated by the charge on the positive cycles almost same with on the negative once. The greatest energy of partial discharge was occurred in third month, and followed by one in eighth months. These cases indicated the discharge occurs, therefore the condition of the stator winding insulation has changed from the normal condition.

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