

(2021-22)

Home > Current Advances in Mechanical Engineering > Conference paper

# Innovative Methods of EDM Electrode Manufacturing: A Review

S. D. Mohanty, S. S. Mahapatra, R. C. Mohanty, J. Mohapatra, S. K. Khuntia & S. Nayak

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diverse fields of engineering. With change in demand in the industry, it is very essential to bring about adaptations in the system which would improve the performance of EDM.

Electrode used in EDM plays the most vital role in machining. In the review paper, research work related to the manufacturing of electrodes for EDM applications using some innovative methods have been discussed. The manufacture of electrodes has been broadly divided into the following categories: use of casting and machining in electrode manufacturing, use of powder metallurgy in electrode manufacturing, use of rapid prototyping technologies in

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## **Current Advances in Mechanical Engineering** pp 849–858

# Analysis of Effect of Processing Factors on Surface Roughness and Sintered Density of Powder Composites

[S. K. Khuntia](#) , [B. B. Pani](#), [S. Nayak](#), [S. D. Mohapatra](#)

Conference paper | [First Online: 19 March](#)

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## Abstract

A parametric description on surface roughness and sintered density for composites produced via powder metallurgy technique has been given here. This technique has been used to produce composites from low carbon content ferrous powders, which have been taken as matrix, and high carbon content rapidly solidified alloyed ferrous powders, which have been taken as reinforcement. Low carbon content ferrous powders have been annealed at 700 °C for two hours, and high carbon content rapidly solidified alloyed

  
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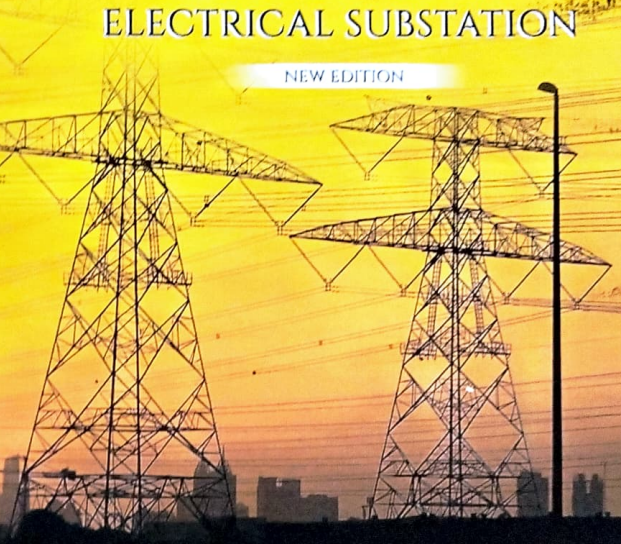


# HANDBOOK ON INSTALLATION COMMISSIONING AND TESTING OF ELECTRICAL SUBSTATION

NEW EDITION

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AND TESTING OF  
ELECTRICAL SUBSTATION

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### About the Book:

This handbook comprises five volumes which highlight the installation, commissioning and testing of electrical machines, instruments and equipments used in substation design and operations. In today's energy crisis, growing demand and a discussion on energy efficiency, it is becoming increasingly crucial how a power grid runs from the power plant for transmission and distributions. Power generating firms are now realising that the substations do play just a big part in ensuring the power station meets all modern desires. Substations are needed since these are the key components of the modern power system and electrical infrastructure. Proper installation will achieve the best results from the production capability of the machine. This can only be accomplished if several important steps are implemented and some precautions are taken. Local codes may suggest different requirements but those given in this Volume must be satisfied as much as possible. Human safety and equipment safety must be the first considerations when performing the installation procedures. Electrical Installation Safety is the number one concern when performing the electrical connection of equipment; therefore, check every step at least once after it has been taken. Transformers are the heart of the modern power systems. Electrical transformers are equipment that modifies the voltage level but not the frequency of electricity being transferred from one circuit to another. Electrical equipment maintenance and overall safety are receiving more and more attention. Many communities are enacting regulations and codes requiring periodic inspection and testing of large electrical facilities within their jurisdictions; the federal government has passed laws requiring substation maintenance; and insurance companies are basing premiums on the quality of a facility's maintenance program and equipment condition.



Bibhu Prasad Ganthia



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# 12

## *Greenhouse Effect by Investigating an Internal Combustion Engine (IC Engine) Using Argemone Mexicana (Waste Plant) Biodiesel Blends*

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### 12.1 Introduction

A review of the world energy utilization highlights that a significant fraction of the aggregate energy consumed is obtained from the burning of fossil fuels. These fossil fuels like coal, natural gases and petrochemical sources are largely used in compression ignition (CI) engines, electric power production, transportation, industry, and agriculture. These sources will be consumed shortly due to limited reserve and current usage rates [1]. Among the fossil fuels, fluid petroleum-based powers contribute the maximum owing to their inborn physiochemical and burning properties. The best possible alternative to fossil fuels is biodiesel, which is a clean burning fuel and can be obtained from vegetable oils (edible and non-edible) of plant origin, tree-borne oil seeds, and waste cooking oil. The utilization of edible oil is of great concern being a food material. So, it is defended to utilize non-edible oil for the making of biodiesel. Numerous plant species are present in our country which bear seeds from which we can obtain vegetable oils. It is shocking that, despite their potential, only 6% is utilized. Non-edible oils like Mahua, Jatropha, Karanja, Neem, Polanga, Simarouba, Soapnut, etc., are the different feed stocks available in India [2]. In our country biodiesel can substitute for diesel since huge garbage areas, unutilized open space and country territories are available for cultivation of biodiesel plants. This encouraged recent interest in unconventional sources for petroleum-based fuels.

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Home > Computer Science > Information Science > Library Administration

Book PDF Available

Electronic Library administration in scientific epoch

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Abstract and Figures

The library environment is changing at a very fast rate keeping pace with the development and application of Information Communication Technology in libraries. Users' inclination has also increased tremendously towards ICT based information resources and services. Accordingly, a new type of library resources in the form of electronic resources has entered into the collection of libraries irrespective of types and sizes. These e-resources have occupied a major portion of library collection and budget of almost all big libraries. Although there are many advantages of electronic resources over their print counterparts, a lot of challenges are there to manage and administer the electronic resources in libraries. At this juncture, Mr. Abinash Dash, Dr. Brundaban Nahak and Mr. Basanta Kumar Das have taken efforts in bringing out an edited volume on "Electronic Library Administration in Scientific Epoch" that focuses on library administration, particularly electronic library administration in scientific information age

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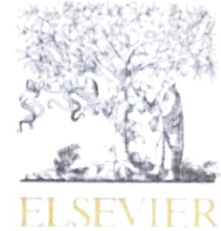
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### CERTIFICATE OF PARTICIPATION

This certificate is awarded to Prof./Dr./Mr./Mrs./Ms. **A.N. Salah, H. Mehdi, A. Mehmood, A.W. Hashmi, C. Malla and R. Kumar** for participating and presenting a paper titled “**Optimization of process parameters of friction stir welded joints of dissimilar aluminum alloys AA3003 and AA6061 by RSM**” on the 1<sup>st</sup> International Conference on Applied Research and Engineering organized by the Department of Mechanical Engineering, Cape Peninsula University of Technology, Cape Town, Western Cape on the 26-28 November 2021 in which participants from different countries registered and presented.

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