# بسم الله الرحمن الرحيم

# الآيــــــة

# قال تعالى :

(( أَفَمَنْ أَسَّسَ بُنْيَانَهُ عَلَى تَقُورَى مِنَ اللَّهِ وَرِضُوانٍ خَيْرٌ اللَّهِ مَنْ أَسَّسَ بُنْيَانَهُ عَلَى شَفَا جُرُفٍ هَارٍ فَانْهَارَ بِهِ فِي أَمْ مَنْ أَسَّسَ بُنْيَانَهُ عَلَى شَفَا جُرُفٍ هَارٍ فَانْهَارَ بِهِ فِي نَارٍ جَهَنَّمَ وَاللَّهُ لَا يَهْدِي الْقَوْمَ الظَّالِمِينَ))

صدق الله العظيم الاية (109) سورة التوبة

#### **Dedication**

To

Our parents

Teachers

Engineers all over the World

People Who live genuis lives by adding new discoveries

All living Beings.

#### Acknowledgement

First of all we thank God for all the knowledge, science has given to the humankind and precious gifts.

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#### **Abstract**

The application of using capacitors became commonplace in improving the distribution voltage. They play an important role in reducing the resulting decline in regular voltage losses, capacitors help in improving the electrical capacity of the power generated coefficient, which reflects directly on the quality of the voltage and electric current, and lead capacitors cheap as a means to reduce the loss of productivity and costs, through compensated mega watts quality. The purpose of this study is to briefly review the use of capacitors in voltage distribution improvement.

#### المستخلص

أصبح تطبيق استخدام المكثفات شائعا في تحسين توزيع الجهد الكهربائي. فهي تلعب دوراً هاماً في تقليص الخسائر الناتجة عن انخفاض نظامية الجهد ، والمكثفات تعين على تحسين معامل القدرة الكهربائية للطاقة المتولدة مما ينعكس مباشرة على جودة الجهد والتيار الكهربائي، وتؤدي المكثفات كوسيلة رخيصة إلى الحد من الخسائر والتكاليف الإنتاجية من خلال تعويضها بجودة القدرة الفعلية. والغرض من هذه الدراسة هو استعراض وجيز لاستخدام المكثفات في تحسين توزيع الجهد الكهربي.

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#### **List of Abbreviations**

AC - Alternative Current.

DSG - Dispersed Storage and Generation.

Pf - Power Factor.

C.B - Circuit Breaker.

ATP - Alternative Transients Programme.