

# الآية

: قال تعالى

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُوراً وَقَدَرَهُ مَنَازِلَ ( )  
لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْحِسَابَ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ  
( يَفْصِلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ ) 5

صدق الله العظيم  
(سورة يونس الآية 5)

## ***Dedication***

**To my father .....**

**To my mother.....**

**To my sisters and my wife.....**

**To my brothers.....**

## ***Acknowledgment***

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***Abstract (in English)***

The aim of this study is to detect some defects of high tension electrical transformers. In this testing infrared cameras were used (thermaCam Sc300) with high sensitivity (0.95) to measure small temperature differences. This inspection performed at night (lower temperature and good vision by infrared camera) to avoid external effects such as sunlight and ambient air temperatures.

In this study, the overloading and overtemperature areas in addition to checks for how the cooling is working on transformer and for oil level inside transformer oil tank were Identified.

### **الملخص:**

تهدف هذه الدراسة الى الكشف عن بعض عيوب المحولات الكهربائية ذات الضغوط العالية بالتصوير الحراري، وتم في هذه الدراسة استخدام إحدى كمرات الأشعة تحت الحمراء البعيدة (ThermaCam sc 3000) ذات الحساسية العالية (95, .) لحساب درجات الحرارة المختلفة, و قد اجري الفحص في الفترات المسائية ( ذات درجات الحرارة المنخفضة والرؤية الواضحة بالاشعة تحت الحمراء) للحد من المؤثرات الخارجية .

تم التعرف في هذه الدراسة على مناطق التحميل الزائدة **والمقاومات العالية ذات درجات الحرارة المرتفعة** بالإضافة الى التدقيق عن عمل تبريد المحولات ومستوى الزيت داخل خزان التبريد.