

Fakulti: FAKULTI KEJURUTERAAN ELEKTRIK	
Nama Matapelajaran: Makmal Tahun 4	Semakan : 1
Kod Matapelajaran : SEE 4722	Tarikh Keluaran : 2007
	Pindaan Terakhir : 2007
	No. Prosedur : PK-UTM-FKE-(0)-10



SEE 4722

FAKULTI KEJURUTERAAN ELEKTRIK
UNIVERSITI TEKNOLOGI MALAYSIA
KAMPUS SKUDAI
JOHOR

INSTITUT VOLTAN DAN ARUS TINGGI (IVAT) STUDENT PACK (Experiment 10)

AC Voltage Distribution over a String of Suspension Insulators

Disediakan oleh : Dr. Mohamed Afendi b.	Disahkan oleh : Ketua Jabatan
Nama : Mohamed Piah	Nama :
Tandatangan :	Tandatangan :
Cop :	Cop :
Tarikh : August 2007	Tarikh :

1. LIST OF COMPONENTS AVAILABLE

- a) High Voltage Construction Kits
 - High voltage transformer
 - Measuring capacitor
 - Connectors and Accessories
 - Measuring system
- b) Sphere Gaps for measuring breakdown voltage
- c) Cap and Pin Glass Insulators
- d) P-Spice for computation analysis

2. PROBLEM-SOLVING TIME-LINE

Activities	Week 1	Week 2	Week 3	Week 4
1) Understanding/Identify/Brainstorming				
2) Design/Simulation/Experiments				
3) Hardware Development/Testing				
4) Measurements/Data Analysis				
5) Presentation/Report Writing				

3. REPORT WRITING

- a) Other than the general guide specified by the Laboratory Coordinator, your report for this laboratory must also include;
 - Computer simulation results if available.
 - Photographs of the system set-up.
 - Photographs of your group members during hands-on session.

- The group shall submit a write-up on the topic of *High Voltage Insulators of Transmission Line System* (2 pages) to the facilitator on the **second week** of the laboratory.
- In the report, you have to consider only the voltage distribution measurements and the system efficiency of cleaned and contaminated insulators.

4. REFERENCES

- i) *Standard Terminologi Relating to Electrical Insulation*. ASTM D1711.
- ii) M.S. Naidu and V. Kamaraju (2004). *High Voltage Engineering*. Mc. Graw Hill.
- iii) E. Kuffel and W.S. Zaengl. *High Voltage Engineering, Fundamentals*. Pergamon Press.
- iv) J.S.T. Looms (1990). *Insulators for High Voltage*. Peter Peregrinus Ltd.
- v) Useful information related to high voltage engineering is available at <http://www.nikhef.nl/~enrichn/highvolt/notes.html>
- vi) More information on Insulator News and Market Report can be obtained at <http://www.inmr.com/>
- vii) Surface tracking and leakage current phenomena is available at <http://www.geocities.com/afendi63>