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## TO STUDY AND ANALYSIS OF RTV SILICONE RUBBER INSULATOR OPERATED WITH VARIOUS TEMPERATURE

Dr. S. K. Mahobia <sup>\*1</sup>

<sup>\*1</sup>Assistant Professor, Department of Physics, Rewa Engineering College, Rewa (M.P.), India



### Abstract:

*The insulator are most important equipment in transmission Line, Distribution Line and electrical power plant. In this way the insulator are used with pin, insulator and pin are mounted on the frame, which is connected with the Grid power supply. The insulator has to separate of electrical power supply and structure, in this way we are used the high quality insulator.*

**Keywords:** RTV; Leakage Current; RTV Silicone Rubber Coating; Pollution Performance.

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### 1. Introduction

We are used the various type insulator such as RTV, Natural Silk Insulation Materials, laminated wood Insulation Materials. Then we to do testing of insulator warius temperatures with respect to Time.



Figure 1: Insulator

## 2. Testing Process Using Various Insulation Materials

Table 1: Temperatures using of Natural Silk Insulation Materials and Initial Temperature are 32°C

Sr. No.	Time in minutes	Temperature (°C) of Insulator on Final stage
1	5	60
2	10	65
3	15	70
4	20	77
5	25	82

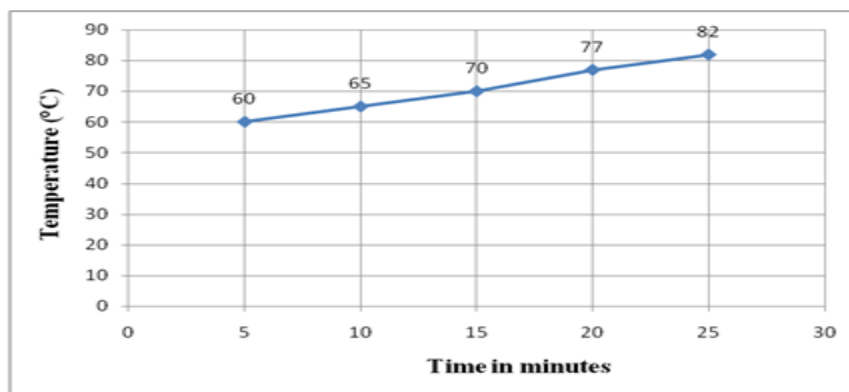


Figure 2: Temperatures using of Natural Silk Insulation Materials and Initial Temperature are 32°C

Table 2: Temperatures using of Natural Silk Insulation Materials and Initial Temperature are 42°C

Sr. No.	Time in minutes	Temperature (°C) of Insulator on Final stage
1	5	62
2	10	67
3	15	73
4	20	82
5	25	85

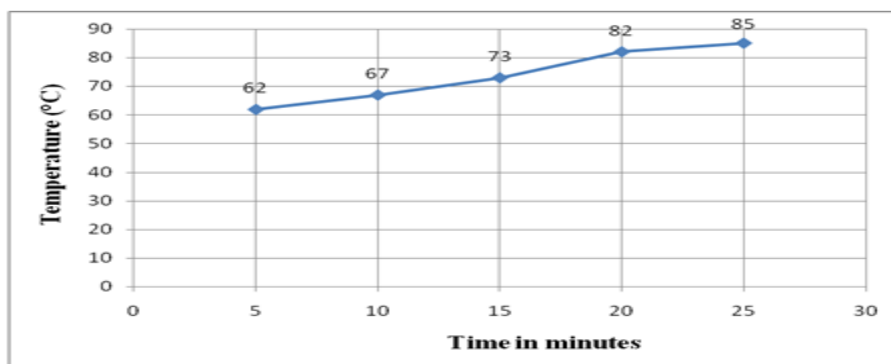


Figure 3: Temperatures using of Natural Silk Insulation Materials and Initial Temperature are 42°C

Table 3: Temperature using of laminated wood Insulation Materials and Initial Temperature are 32°C

Sr. No.	Time in minutes	Temperature (°C) of Insulator on Final stage
1	5	61
2	10	67
3	15	73
4	20	78
5	25	89

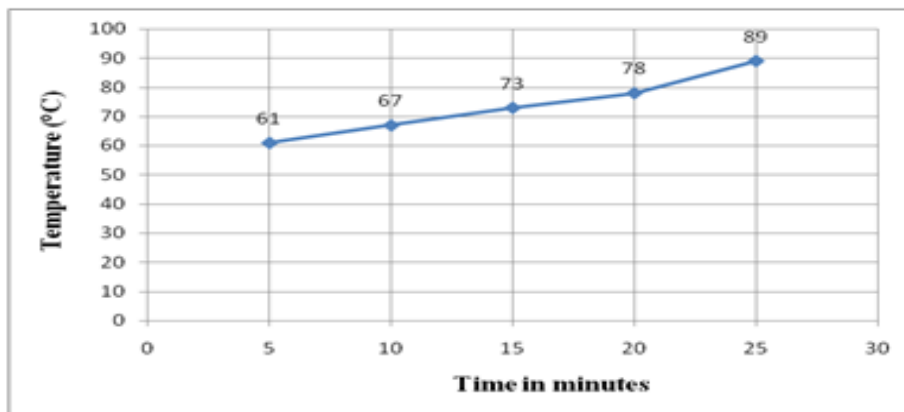


Figure 4: Temperature using of laminated wood Insulation Materials and Initial Temperature are 32°C

Table 4: Temperature using of laminated wood Insulation Materials and Initial Temperature are 42°C

Sr. No.	Time in minutes	Temperature (°C) of Insulator on Final stage
1	5	64
2	10	70
3	15	77
4	20	82
5	25	90

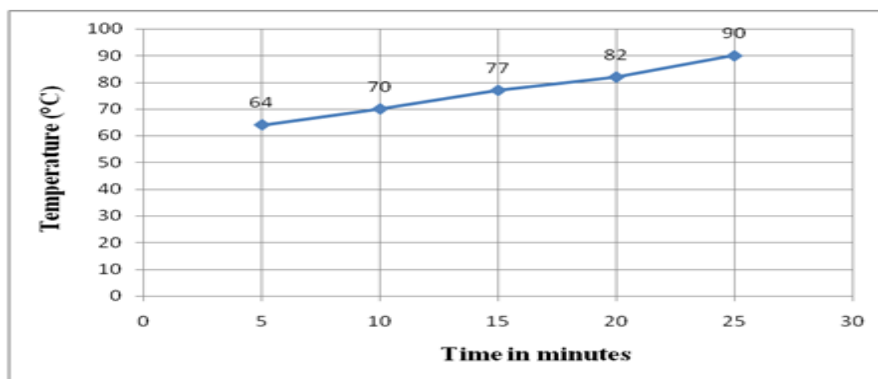


Figure 5: Temperature using of laminated wood Insulation Materials and Initial Temperature are 42°C

Table 5: Temperature using of RTV Silicone Rubber insulator Materials and Initial Temperature are 32°C

Sr. No.	Time in minutes	Temperature (°C) of Insulator on Final stage
1	5	52
2	10	57
3	15	64
4	20	64
5	25	64

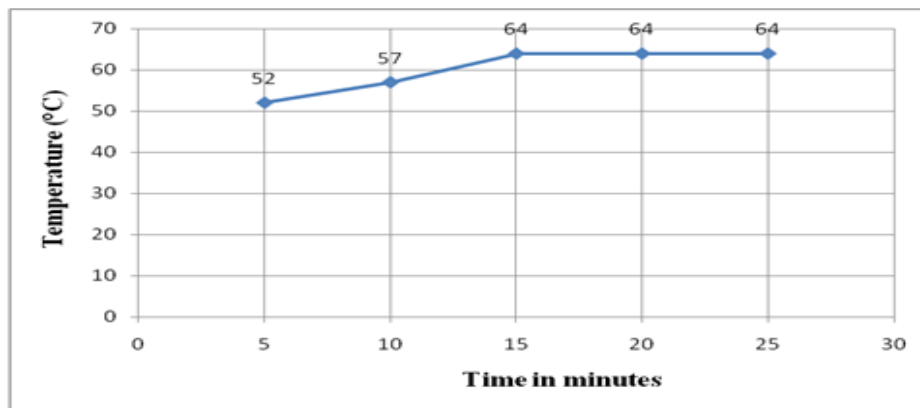


Figure 6: Temperature using of RTV Silicone Rubber insulator Materials and Initial Temperature are 32°C

### 3. Conclusion

Testing performance are done with help of digital Temperature measurement device and testing setup. We are obtaining the various temperatures with respect to time (in minutes). After this finally we obtain the stable temperature as 64°C Between the from 15 to 25 minutes, which are showing in table 5.

### References

- [1] E.A. Cherney, “RTV Silicone - A high tech solution for a dirty insulator problem”, IEEE Electr. Insul. Mag., Vol. 11, No. 6, pp. 8- 14, 1995.
- [2] L. Wang and Z. Xu, “Development of RTV Silicone Coatings in China:” IEEE Electr. Insul. Mag., Vol. 24, No. 2, pp. 28-41, 2008.
- [3] M. Marzinotto, A. El-Hag, L. Meyer, JM. George, S. Li and I. Ramirez, “RTV Silicone Rubber Pre-coated Ceramic Insulators for Transmission Lines”. Dielectr. Electr. Insul. Vol. 20, No.1, pp, 237-244, 2013.
- [4] H. Griffith, N. Haud, P. Sarkar, spark arc Models of the Flashover of Lightly Polluted Insulators, IEEE Trans. DEI , Vol. 19, No. 4, 2012, pp. 1318-1324.
- [5] G. Zhicheng, Y. Mao, Influence of Sugar as a Contaminant on outdoor Insulation Characteristics of Insulators in Substation, Vol. 17, No. 2, 2010, pp. 417-424.
- [6] P. Juniko, WSEAS Transactions on Systems, Volume 9, Issue 4, 2010, pp. 442-452.