G K Agrawal Resume (Biodata)

Date 27 Nov 2020 In Brief

- B.Sc. (PCM) 1973,
- B Tech. (Elect.) in 1977 from HBTI Kanpur
- College **Gold Medalist**, **1st rank** in the college in B.Sc. (1973)
- **8th rank in the University** in BSc (1973) (**In spite of Hearing problem from the age of 14 years**)
- **Highest marks** in Physics and chemistry in BSc (1973)
- **Five papers published**
- **Inventor of 3 patents** for the company (patent granted)
- **37 years of experience in product development** in **electronics, power electronics** and power system based **control system.**
- More than 50 numbers of **electronic circuits / modules developed** for **big projects** for industrial and power system application
- Number of control system designed for power system and industrial system application
- **Number of very big products developed**.
- Now retired in Sep 2015 and sharing knowledge and experience gained in the past.
- Now a YouTuber and sharing my industrial experience, about 380 videos, about 3.4L subscribers and 27 Millions views.

Video of the tutorials can be watched at (press ctrl + click to follow link)

https://www.youtube.com/channel/UCO31rZS4_EDYJ8CGXiRZdxg

Experience with no record

About 5000 Hrs. experience of tuition to Physics and Math students (JEE, PMT, PUC, Diploma) (1974-1977)

NAME G K Agrawal (Gopal Krishna Agrawal)

Born on 2 Sep 1955 at Hardoi (UP)

QUALIFICATIONS

Major	**Year**	**Class**	**Board/ University**
B.SC (PCM)	1973	1st	Kanpur University (1st Rank in college, 8th Rank in University, Highest marks in Physics and chemistry)
B.Tech. (Electrical)	1977	1st	H.B.T.I. Kanpur

OTHERS MAJOR COURSES ATTENDED

1. German Language course (G1) Nov-Dec 1978 At Max Muller Bhavan Pune
2. Reliability and quality control, 5 days, at S.Q.C. Bangalore
3. HVDC course at I.I.Sc. conducted by IEEE power engineering society (1983)
4. General quality management program for other function, 6 days (1985), by CQA BHEL Hyderabad
5. Fiber optic and their applications, 10 days, (1986) at IIT Chennai
6. Workshop on Power system modeling and simulation at CPRI Bangalore, 2 days (1990)
7. Workshop on power system stability and control, 2 days (1992) by CPRI Bangalore
8. Contract management, 3 days, (1995) by HRDI BHEL New Delhi
9. TQM awareness course, conducted by Bench markers Inc. Bangalore (1996)
10. Emotional Intelligence, 2 days, By Para design power, Bangalore (2000)
11. Information technology. By SSI Bangalore, 1 day (2000)
12. Stress preventation and treatment, 2 days (2000)

13. Stress preventation and treatment by National academy of Naturopathy and yoga Bangalore 2 days (2003)

14. Decision making by Ashoka institute of management Bangalore, 2 days (2003)

15. Design of embedded system with microcontroller, by BHEL Hyderabad 6 days (2003)

16. Kalpana Shakti aur kriyasshilta, by CETC Bangalore (2002)

17. Hindi workshop (2002)

18. Workshop on EMC at SAMEER, Chennai 3 days (2004)

19. Vigilance awareness, by Retd. DGP Dr. C L Ramakrishnan at Bangalore, 3 days (2004)

20. Intellectual property right (Patent and copy right), By Asst. controller of patent Chennai, At Bangalore, 1 day (2005)

21. Tutorial on AC/DC harmonics filter, by LIN JIANG ABB Sweden at Bangalore (2005)

22. Information security management system (2006)

23. Managerial effectiveness at Bangalore by VTF Hyderabad, 3 days (2008)

24. Knowledge of business environment, 2 days (2008)

25. Leadership effectiveness (2009), by Dr. K N Viwanath, Administrative staff college of India Hyderabad.

PROFESSIONAL EXPERIENCE

Total 37 years (May 1978- Sep 2015), Worked at Electronics division BHEL Bangalore in engineering department and worked on electronic cards, power electronics, control system, traction, power factor, reactive power, SVC, HVDC, thyristor control, series compensator, flicker and unbalance load control for ARC furnace Harmonic filter analysis, traction control for electric train etc.

MAJOR PRODUCT/ PROJECT COMPLETED

1. Design of Control circuits for speed control of the D.C. Motor using Thyristor. Final year B.Tech. Project.

2. Design of Solid State Reactive Power Factor controller for capacitor switching. New product to BHEL.

    1. Solid State alarm annunciator. New product to BHEL.

    2. Design of logic modules, delay modules etc.

3. Development of the optical triggering technology used for High voltage Thyristor valve. First time in India.

4. Pulse width modulator based G.T.O. Controlled regulator for speed control of the motors/voltage control .New product to BHEL (1983-84)

5. Sequence controller for 11 KV Static VAR Compensator (SVC).

   This equipment is used in SVC systems to switch ON/OFF automatically various equipments in desired sequence.

6. Development of Base electronic panel for NHVDC project, first time in India. (New technology)

7. Development of Thyristor monitoring for NHVDC project. First time in India (New Technology).

8. Development of the Valve Electronics for NHVDC project, First time in India (New Technology).

9. Design of the Base electronics and Valve mini simulator

10. Design of 3Kv inpulse generator New product to BHEL

11. Controller for SVC system suitable for balanced load for Vaizag steel plant.

12. Development of controller for SVC system suitable for unbalanced load for Alloy steel plant Durgapur. First time in India. New product to BHEL.

13. Development of the controller for SVC system suitable for AC Arc Furnace application. First time in India (New product to BHEL).

    The electric arc furnace is used in steel plants to melt scraps. The furnace creates problems like unbalance in power system, harmonics, flicker etc. To contain these problems, SVC is used. The controller so designed is one of the equipment required in the SVC system. The controller is used to control P.F., unbalance and flicker automatically in system with the help of thyristor-controlled reactor. In one of the project this controller is used to control 100MVAR reactor in 220KV system.

    This controller was developed at the cost of 15L, which avoided importing of controller costing about more than 2 Crores. This controller was a big projects and required numbers of PCB development.

14. Development of controller for SVC system for DC ARC FURNACE. New product to BHEL

This product is used for SVC system required in DC arc furnace type load. The controller designed in this project will control thyristor-controlled reactor, which helps in controlling P.F. and voltage fluctuation in the power system.

15. Design of 7 kV Impulse generator for capacitive load. New product to BHEL

    This impulse generator is used to apply switching inpulse across capacitive load. The generator can provide variable output up to 7KV.

16. Development of controller for Controlled shunt reactor (First time in India) New product to BHEL

    Controlled shunt reactor (CSR) is basically high impedance transformer. Impedance of the transformer can be controlled using thyristor switches. It is possible to control the voltage and P.F. of the line by connecting CSR across the line. The controller will measure various parameter of the line and control the CSR to improve voltage/P.F. profile.

17. Development of controller for Flexible AC transmission system (FACT) First time in India New product to BHEL (Part time only)

18. EMTP system study for harmonics for high current (12kA to 55kA) rectifier for 3 contracts.

19. Power factor improvement for the industrial LT loads.

20. Number of electronic modules was developed for above projects.

PAPERS PUBLISHED

1. "Protection of HVDC thyristor valve". Three days conference on power system protection. Jan. 11-13, 1988 – CPRI Bangalore.

2. "Design and testing of thyristor valve for Indian National HVDC Experimental line Project". SEPOPE Brazil August 21-25, 1989.

3. "Thyristor valve for National HVDC Experimental line project". 2nd International Seminar on Industrial Electronics and control and Instrumentation September, 1989 New Delhi IEEMA.

4. "Design and testing of SVC controller". CBIP Seminar at Jabalpur sep 1993

5. Reactive power controller in BHEL Journal

PATENTS GRANTED

1. DC/AC Arc furnace digital model for digital simulation study.
   Patent no 919/Del/1999 Patent date 3/3/2008

2. High voltage high-energy variable surge generator device.
   Patent no 783/Del/1999 Patent date 15/3/2009

3. Control system for regulated compensator of surplus reactive capacity of transmission lines.
   Patent no 1481/Del/1998 Patent date 18/1/2009

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Twitter https://twitter.com/gkagrawal1955

WordPress https://letusshareknowledge.wordpress.com

Facebook https://www.facebook.com/gopalkrishna...

Math Puzzles https://www.youtube.com/channel/UCFP6UNkt0Ut0mWPHPQhfayg

Membership https://www.youtube.com/channel/UCO31rZS4_EDYJ8CGXiRZdxg/join